UNITED STATES SPECIAL OPERATIONS COMMAND

FISCAL YEAR (FY) 2005

BUDGET ESTIMATES

RDT&E, DEFENSE-WIDE

FEBRUARY 2004

ORGANIZATIONS

AFSOC	Air Force Special Operations Command
NAVSPECWARCOM	Naval Special Warfare Command
TSOC	Theater Special Operations Command
USASOC	United States Army Special Operations Command
USSOCOM	United States Special Operations Command
ARSOA	Army Special Operations Aviation
160th SOAR	160th Special Operations Aviation Regiment

ACRONYMS

A2C2S	Army Aviation Command & Control System
ACTD	Advanced Concepts Technology Demonstration
ADRAC	Altitude Decompression Sickness Risk Assessment Computer
ADP	Automated Data Processing
AGE	Arterial Gas Embolism
ALE	Automatic Link Establishment
ALGS	Autonomous Landing Guidance System
ALGL	Advanced Lightweight Grenade Launcher
ALLTV	All Light Level Television
AMP	Avionics Modernization Program
ASD	Assistant Secretary of Defense
ASDS	Advanced Sea, Air, Land Delivery System
ASE	Aircraft Survivability Equipment
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
BALCS	Body Armor Load Carriage System
BFT	Blue Force Tracking
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
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
CDR	Critical Design Review

ACRONYMS

CESE	Civil Engineering Support Equipment
CINC	Commander in Chief
COIL	Chemical Oxygen Iodine Laser
COMSEC	Communications Security
CONOPS	Concept of Operations
COTS	Commercial-Off-The-Shelf
COW	Cost of War
CPAF	Cost Plus Award Fee
CS	Combat Swimmer
CSAR	Combat Survivor Evader Locator
CSEL	Combat Search and Rescue
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
DERF	Defense Emergency Response Fund
DIRCM	Directional Infrared Countermeasures
DMCS	Deployable Multi-Channel SATCOM
DMS	Defense Message System
DMT/DMR	Distributed Mission Training/Distributed Mission Rehearsal
EA	Evolutionary Acquisition
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EFP	Explosively Forced Penetrator
EGLM	Enhanced Grenade Launcher Module
EMD	Engineering and Manufacturing Development
ESA	Enhanced Situational Awareness
ETI	Evolutionary Technology Insertion
EW	Electronic Warfare
EWAISF	Electronic Warfare Avionics Integrated Systems Facility
FAA	Federal Aviation Administration

ACRONYMS

FCD	Field Computing Devices
FCT	Foreign Comparative Testing
FLIR	Forward Looking Infrared Radar
FOL	Family of Loud Speakers
FW	Fixed Wing
GBS	Global Broadcasting System
GDS	Gunfire Detection System
GEO	Geological
GFE	Government Furnishment Equipment
GOTS	Government-Off-the-Shelf
GPS	Global Positioning System
GSK	Ground Signal Intelligence Kit
H-SUV	Hardened-Sport Utility Vehicle
HF	High Frequency
HLA	High Level Architecture
HMMWV	High Mobility Multi-purpose Wheeled Vehicle
HPFOTD	High Power Fiber Optic Towed Decoys
HPS	Human Patient Simulator
HRLMD	Hydrographic Reconnaissance Littoral Mapping Device
HSR	Heavy Sniper Rifle
IBS	Integrated Broadcast Service
IDAP	Integrated Defensive Armed Penetrator
IDAS	Interactive Defensive Avionics Subsystem
IDS	Infrared Detection System
ILM	Improved Limpet Mine
IMFP	Integrated Multi-Function Probe
INOD	Improved Night/Day Observation/Fire Control Device
INS	Inertial Navigation System
IPT	Integrated Product Team
IR	Infrared
IRCM	Infrared Countermeasures
ISR	Intelligence Surveillance and Reconnaissance
ISSMS	Improved SOF Manpack System

ACRONYMS

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
JMPS	Joint Mission Planning System
JSTAR	Joint Surveillance and Target Attack Radar System
JOS	Joint Operational Stocks
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
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
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
MBMMR	Multi-Band/Multi-Mission Radio
MCAR	MC-130 Air Refueling

ACRONYMS

MCADS	Maritime Craft Air Drop System
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
NOSC	Network Operations Systems Center
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

ACRONYMS

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
PLTD	Precision Laser Targeting Device
PM	Program Manager
PM-MCD	Project Manager for Mines, Countermeasures and Demolitions
POBS	PSYOP Broadcasting System
PSYOP	Psychological Operations
PTLD	Precision Target Locator Designator
RAA	Required Assets Available
RAMS	Remote Activated Munitions System
RIB	Rigid Inflatable Boat
RMWS	Remote Miniature Weather System
RSTA	Reconnaissance Surveillance Target Acquisition
RW	Rotary Wing
SAFC	Special Applications for Contingencies
SAHRV	Semi-Autonomous Hydrographic Reconnaissance Vehicle
SATCOM	Satellite Communication
SCI	Sensititive Compartmented Information
SBIR	Small Business Innovative Research
SBR	System Baseline Review
SDS	Sniper Detection System
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SIGINT	Signals Intelligence
SIPE	Swimming Induced Pulmonary Edema
SIRFC	Suite of Integrated Radar Frequency Countermeasures
SIRCM	Suite of Infrared Countermeasures
SLAM	Selectable Lightweight Attack Munition

ACRONYMS

SLEP	Service Life Extension Program
SMG	SOF Machine Gun
SMRS	Special Mission Radio System
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
SOFPARS	SOF Planning and Rehearsal System
SOFTAPS	SOF Tactical Advanced Parachute System
SOFTACS	SOF Tactical Assured Connectivity System
SOJICC	Special Operations Joint Interagency Collaboration Center
SOLL	Special Operations Low Level
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
SYDET	Sympathetic Detonator
TACLAN	Tactical Local Area Network
TDFD	Time Delay Firing Device

ACRONYMS

TEI	Technology Exploitation Initiative
TF/TA	Terrain Following/Terrain Avoidance
TRS	Tactical Radio System
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
VESTA	Vibro-Electronic Signature Target Analysis
VHF	Very High Frequency
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

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 2003	FY 2004	FY 2005
22	1160401BB	Spec Operations Technology Development	2		19.274	13.109
23	1160407BB	SOF Medical Technology Development	2		5.182	2.162
57	1160402BB	Spec Operations Advanced Technology Development	3		105.320	48.803
149	0301318BB	Humint [2]	7			
151	0301555BB	Classified Programs [2]	7			
152	0301556BB	Special Programs [2]	7			
167	0304210BB	Special Applications for Contingencies	7	22.782	23.764	20.758
196	1160279BB	Small Business Innovative Research	7	11.546	13.498	
197	1160401BB	Spec Operations Technology Development	7	17.914		
198	1160402BB	Spec Operations Advanced Technology Development	7	80.719		
199	1160404BB	Spec Operations Tactical Systems Development	7	254.715	298.825	311.966
200	1160405BB	Spec Operations Intelligence Systems Development	7	6.670	47.084	25.015
201	1160407BB	SOF Medical Technology Development	7	3.317		
202	1160408BB	SOF Operational Enhancements [1]	7	86.902	81.683	57.643

[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:	**484.565**	**594.630**	**481.817**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160401BB	17.914	19.274	13.109	13.710	14.440	15.272	17.494	Cont.	Cont.
S100, SO TECHNOLOGY BASE DEV	17.914	19.274	13.109	13.710	14.440	15.272	17.494	Cont.	Cont.

Note: In FY 2003 this program element was budgeted for in Budget Activity 7. Beginning in FY 2004, this program element has been moved into Budget Activity 2.

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.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development

B. Change Summary Explanation:

	FY2003	FY2004	FY2005
Previous President's Budget	18.006	9.715	13.142
Current President's Budget	17.914	19.274	13.109
Total Adjustment's	-.092	9.559	-.033
Congressional Program Reductions		-.211	
Congressional Rescissions	-.028		
Congressional Increases		10.225	
Reprogrammings	-.064		-.033
SBIR Transfer		-.455	

FY03
Decrease of $.064 million reflects USSOCOM realignment of resources to support higher command priorities.

FY04
Reflects $10.225 million for Congressionally added programs as follows:
- SPIKE Urban Warfare System ($3.000)
- Sensors for Autonomous Navigation ($2.550
- Automated Assembly ($2.550)
- Image Fusion Common Aperture System Development ($2.125)

FY05
Decrease of $.033 million is based on current inflation factors.

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2	Special Operations Technology Development/Project S100

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOF Technology Base Development	17.914	19.274	13.109	13.710	14.440	15.272	17.494
RDT&E Articles Quantity							

Note: In FY 2003 this program element was budgeted for in Budget Activity 7. Beginning in FY 2004, this program element has been moved into Budget Activity 2.

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.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

- 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 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 the 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:

- Shoulder Fired Smart Round (SPIKE) Urban Warfare System. Congressional add for a man-portable fire-and-forget rocket for anti-material use. Possible maritime platform applications.

- Sensors for Autonomous Navigation. Congressional add that will demonstrate a sensor suite for autonomous vehicle navigation.

- Automated Assembly (of Electro-Optic Sensors and Devices). Congressional add to apply reconfigurable robotic assembly techniques to improve design of components and assembly of electro-optic devices.

- Image Fusion Common Aperture Systems Development. Congressional add for development of a common aperture for the dual band systems (intensified and thermal).

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

- Knowledge Superiority. Congressional add for knowledge superiority for transitional warfighter.

- Large Format Uncooled Infrared Sensors. Congressional add for development of larger format arrays to enhance surveillance systems.

- Imaging Auto Sensors For Autonomous Vehicles. Congressional add to incorporate unique microelectronics and opto-electronic processing in low cost micro-sensors.

- Shortwave Infrared Imagers. Congressional add to develop large area focal plane arrays and cameras for unattended sensors and navigation in difficult terrain.

- Night Vision Fusion & Rapid Transmission. Congressional add to integrate near infrared and long wave infrared sensors coupled to a covert long range communications device.

B. Accomplishments/Planned Program

	FY03	FY04	FY05
SOF Command, Control, Communications, Computers, and Intelligence (C4I) Technologies.	1.123	2.550	3.180
RDT&E Articles Quantity			

FY03 Continued development of FY02 efforts. Continued Color Night Vision Fusion, Reconnaissance Technologies, Undersea Master Communications Node, and Enhanced Situational Awareness. Completed PSYOP Extended-Range Broadcast and Man-Portable Counter Mortar System.
FY04 Continue development of FY03 efforts. Initiate Antenna Enhancements and Small Hand-held Night Vision Devices.
FY05 Continue development of FY04 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. Planned efforts include illumination technologies for tagging and tracking.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

	FY03	FY04	FY05
SOF Mobility Technologies	1.502	2.161	3.080
RDT&E Articles Quantity			

FY03 Continued development of FY02 efforts. Continue Night Vision Windshield, Small Versatile Maritime Craft, and Tactile Sensors. Completed Restricted Line-of-Site Personnel Locator and Conformal Load-Bearing Antenna.
FY04 Continue development of FY03 efforts. Continue Night Vision Windshield, Small Versatile Maritime Craft, and Tactile Sensors. Initiate implementation of Hypersteriopsis for Improved Target Identification on AC-130 Gunships and Maritime Shock Mitigation.
FY05 Continue development of FY04 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.

	FY03	FY04	FY05
SOF Weapons Technologies	.881	.874	1.817
RDT&E Articles Quantity			

FY03 Continued development of FY02 efforts. Continued the development of the SOF Demolitions Kit Enhancements and Universal Initiator. Completed Enhanced Small Arms Technology.
FY04 Continue development of FY03 efforts. Continue Universal Initiator and SOF Demolitions Kit Enhancements.
FY05 Continue development of FY04 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 technology thrust areas.

	FY03	FY04	FY05
SOF Sustainment Technologies	.341	1.516	1.600
RDT&E Articles Quantity			

FY03 Continued development of FY02 efforts. Continued Special Tactics Rappel/Fast Rope and GEO Survey Kit. Completed Active Noise Cancellation and Accurate Tactical Navigation System.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

FY04 Continue development of FY03 efforts. Initiate the Special Reconnaissance Simulator.
FY05 Continue development of FY04 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 technology thrust areas.

	FY03	FY04	FY05
Concept Exploration Studies	.740	.667	.783
RDT&E Articles Quantity			

FY03 Continued to conduct concept studies to explore/validate projects which support USSOCOM desired operational capabilities. Completed Shock Mitigation Maritime Studies. Initiated Low Cost Autonomous Attack System AC-130 concept to address SOF aircraft using a small UAV for armed reconnaissance, Mission Configurable Modified SOF Combatant Craft Study and ASDS Optics Study.
FY04 Continue to conduct concept studies to explore/validate projects which support USSOCOM desired operational capabilities.
FY05 Continue to conduct concept studies to explore/validate projects which support USSOCOM desired operational capabilities.

	FY03	FY04	FY05
Technology Development Exploitation	.560	.418	.600
RDT&E Articles Quantity			

FY03 Continued to exploit technologies to meet critical SOF capability objectives. Initiated Virtual Periscope Study for algorithm development of above water data collection from below the surface, Technology Roadmaps for the technology thrust areas, and a multi-frequency underwater secure homing system for combat swimmers.
FY04 Continue to exploit technologies to meet critical SOF capability objectives. Continue Technology Roadmaps for technology thrust areas. Initiate a study to evaluate a new and revolutionary flameproof textile material.
FY05 Continue to exploit technologies to meet critical SOF capability objectives. Continue Technology Roadmaps for technology thrust areas.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

	FY03	FY04	FY05
Classified	1.186	1.206	2.049
RDT&E Articles Quantity			

FY03 Details provided under separate cover.
FY04 Details provided under separate cover.
FY05 Details provided under separate cover.

	FY03	FY04	FY05
SPIKE Urban Warfare System	3.321	2.899	
RDT&E Articles Quantity			

FY03. This initiative was a congressional plus-up. Continued to develop technologies for SPIKE, and refine the guidance system for more accurate prosecution of hardened targets. Work continued to refine target tracking sub-system and warhead development.
FY04. This initiative is a congressional plus-up. Continue development of FY03 efforts and work toward conducting live fire test.

	FY03	FY04	FY05
Sensors for Autonomous Navigation		2.465	
RDT&E Articles Quantity			

FY04 This initiative is a congressional plus-up. This program will demonstrate a sensor suite for autonomous vehicle navigation across difficult terrain, both day and night, and in a wide range of environmental conditions.

	FY03	FY04	FY05
Automated Assembly of Electro-Optic Sensors and Devices		2.465	
RDT&E Articles Quantity			

FY04 This initiative is a congressional plus-up. Improve design of components and assembly of electro-optic devices for robotic assemblies to reduce cost and enhance performance.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

	FY03	FY04	FY05
Image Fusion Common Aperture Systems Development		2.053	
RDT&E Articles Quantity			

FY04 This initiative is a congressional plus-up. This development effort will be the first common aperture which allows a natural bore sight for the dual band systems (intensified and thermal).

Knowledge Superiority	FY03	FY04	FY05
RDT&E Articles Quantity	1.612		

FY03 This initiative was a congressional plus-up. Improved methods and tools used to increase operational efficiency and performance while providing access to tactical data.

Large Format Uncooled Infrared Sensors	FY03	FY04	FY05
RDT&E Articles Quantity	.949		

FY03 This initiative was a congressional plus-up. Developed larger format arrays to enhance surveillance systems. Issues to be addressed include uniformity of very thin layers over a large area, deposition and processing of thin micro-support structures, and understanding fundamental issues associated with semi-crystalline and amorphous infrared materials.

Imaging Auto Sensors For Autonomous Vehicles	FY03	FY04	FY05
RDT&E Articles Quantity	1.614		

FY03 This initiative was a congressional plus-up. Developed and designed miniature sensor packages to incorporate parallel processing which significantly increases processing power that supports autonomous vehicles. This development explored low cost micro-sensors with a focused effort to incorporate unique microelectronics and opto-electronic processing.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2				Special Operations Technology Development/Project S100

Shortwave Infrared Imagers	FY03	FY04	FY05
RDT&E Articles Quantity	1.614		

FY03 This initiative was a congressional plus-up. Developed large area Short Wave Infrared focal plane arrays and cameras for unattended sensors and navigation in difficult terrain. Expanded the camera's capability by extension of the spectral response to full 1.0 to 2.0 micron spectral region and expansion of the array size to 480 x 640 and 960 x 1280 elements, providing a low cost, large area array for a wide range of systems.

Night Vision Fusion & Rapid Transmission	FY03	FY04	FY05
RDT&E Articles Quantity	2.469		

FY03 This initiative was a congressional plus-up. Developed novel lens assemblies which are smaller and lighter and prototype night vision systems and assemblies for a variety of warfighter applications including reconnaissance, battlefield imaging, situational awareness, and night sights.

C. Other Program Funding Summary: None.

D. Acquisition Strategy: N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160407BB Special Operations Forces (SOF) Medical Technology Development

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160407BB	3.317	5.182	2.162	2.171	2.211	2.298	2.370	Cont.	Cont.
S275, SOF MEDICAL TECHNOLOGY	3.317	5.182	2.162	2.171	2.211	2.298	2.370	Cont.	Cont.

Note: In FY 2003 this program element was budgeted for in Budget Activity 7. Beginning in FY 2004, this program element has been moved into Budget Activity 2.

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:

	FY03	FY04	FY05
Previous President's Budget	3.339	1.961	2.167
Current President's Budget	3.317	5.182	2.162
Total Adjustments	-0.022	3.221	-0.005
Congressional Program Reductions		-0.057	
Congressional Increases		3.400	
Reprogrammings	-0.022		-0.005
SBIR Transfer		-0.122	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160407BB Special Operations Forces (SOF) Medical Technology Development

Funding:

FY04

Reflects $3.400 million for Rebreather, a Congressionally added program.
- SBIR (-$.077M)
- Congressional Sectionals (-$.036M)

FY05
Decrease of $.005 million is based on current inflation factors.

Schedule: N/A.

Technical: N/A.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

Cost ($ in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOF Medical Technology		3.317	5.182	2.162	2.171	2.211	2.298	2.370
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; and (3) develop CD-ROM and internet compatible automated programs to support SOF medical personnel information needs while operating in austere locations and medical interviews in multiple foreign languages.

- Decompression procedures for SOF diving operations will: (1) decrease the decompression obligation in SOF diving operations through the use of surface-interval oxygen breathing; and (2) investigate pre-oxygenation requirements for high-altitude SOF parachute operations.

- 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.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

- Medical sustainment training techniques will: (1) examine novel ways of providing and documenting medical sustainment training for SOF corpsmen and physicians; and (2) develop a system for constantly upgrading the medical expertise of SOF medical personnel by incorporating new research reports and clinical information into a CD-ROM based computer system which can be used by medical personnel in isolated duty circumstances.

- Thermal protection will evaluate the efficacy of current thermal protective measures in maintaining combat swimmer 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) develop a quantitative test for night vision suitable for screening SOF candidates and study ways to enhance unaided night vision; and (6) study pharmacologic measures to prevent acute mountain sickness in high altitude SOF operations.

B. Accomplishments/Planned Program

	FY03	FY04	FY05
Ongoing Studies	.741	.798	.918
RDT&E Articles Quantity			

FY03 Completed ongoing studies as follows: Impact of Breathing Gas Mixtures on Decompression Sickness (DCS) in CV-22, LASIK in Special Operations BUD/S, SOF Committee on Tactical Combat Casualty Care, Combat Casualty After-Action Review, Antibiotic Prophylaxis, and Operational Medicine CD-ROM upgrade. Continue ongoing studies as follows: Treatment Standards for DCS/Arterial Gas Embolism (AGE), Bronchoalveolar Lavage in SIPE, Cardiopulmonary Function in SIPE, ASDS/UBA, SOF Mission Related Performance Measures Upgrade, Decompression Computer Diving Surveillance and Configuration Management Program, and Polymer Splint.
FY04 Complete ongoing studies as follows: Effects of Post-Stress Carbohydrate Administration on Recovery, Treatment Standards for DCS/AGE, Bronchoalveolar Lavage in SIPE, Cardiopulmonary Function in SIPE, ASDS/UBA, SOF Mission Related Performance Measures Upgrade, and Effects of Low-Grade Hypoxia at Night in SOF Aircraft Operations. Continue ongoing studies as follows: Evaluation of HydroTech Aqua Heat System during SEAL Delivery Vehicle (SDV) Operations, Medical Support of High Speed Boat (HSB) Shock Mitigation, Stress Fractures in BUD/S Training, Computer-Assisted Thermal Protection Training in SOF, Polymer Splint, Development of Algorithms for Remote Triage, Decompression Computer Diving Surveillance and Configuration Management Program, and Evaluation of Nasal Ketamine for Pain Control.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

FY05 Complete ongoing studies as follows: Evaluation of HydroTech Aqua Heat System during SDV Operations, Stress Fractures in BUD/S Training, Computer-Assisted Thermal Protection Training in SOF, Tympanic Membrane Injuries, Evaluation of Nasal Ketamine for Pain Control, Medical Support of HSB Shock Mitigation, Polymer Splint, and Decompression Computer Diving Surveillance and Configuration Management Program. Continue ongoing studies as follows: Hypoxic Exposures to Improve Performance at Altitude, Comparison of Wavefront-Guided Photo-Refractive Keratectomy (PRK) and LASIK/LASER Epithelial Keratomileusis (LASEK), SOF Performance Enhancing Drug Protocols, Cold Sterilization, Development of Algorithms for Remote Triage, and Combat Casualty Care Research After-Action Review.

	FY03	FY04	FY05
New Studies	1.103	1.097	1.244
RDT&E Articles Quantity			

FY03 Initiated new studies as follows: Evaluation of HydroTech Aqua Heat System during SDV Operations, Medical Support of High Speed Boat Shock Mitigation, Development of Algorithms for Remote Triage, Stress Fractures in BUD/S Training, Computer-Assisted Thermal Protection Training in SOF, Full Face Purging Procedures for the MK25 UBA, Effects of Low Grade Hypoxia at Night in SOF Aircraft Operations, Evaluation of Nasal Ketamine for Pain Control, and Effects of Post-Stress Carbohydrate Administration on Recovery.
Completed new studies as follows: Full Face Purging Procedures for the MK25 UBA.
FY04 Initiate new studies as follows: Hypoxic Exposures to Improve Performance at Altitude, Comparison of Wavefront-Guided Photo-Refractive Keratectomy (PRK) and LASIK/LASER Epithelial Keratomileusis (LASEK), SOF Performance Enhancing Drug Protocols, Cold Sterilization, Tympanic Membrane Injuries, and Combat Casualty Care Research After-Action Review.
FY05 Initiate new studies as follows: Combat Casualty Care Pain Management Protocols, Efficacy of Dehydro-Epi-Androsterone (DHEA) Administration to Protect Soldiers against Stress-Induced Deficits in Memory and Cognition, Protocols and Techniques for New Equipment and Technologies within SOF, Hypobaric Medicine, Performance Enhancements, Chemical/Biological Markers, Medical Research and Development Enhancements for Non-Medical Systems, Remote Telemetry Patient Monitoring/Casualty Assessment, Rapid Diagnostic Systems, Casualty Retrieval Devices, Advanced Combat Casualty Care Procedures, Blunt Trauma Injuries, Improved Tourniquets, Interactive SOF Medical Distant Learning, and Graduate Research. Complete new studies as follows: Graduate Research.

	FY03	FY04	FY05

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

Rebreather	1.233	3.287	
RDT&E Articles Quantity			

FY03 This initiative was a Congressional Plus-Up. Continued development of a closed circuit UBA control unit, and novel oxygen and carbon dioxide sensors based on new technologies.
FY04 This initiative is a Congressional Plus-Up. Continues development of underlying technologies that will support the Advanced Technology underwater breathing apparatus project.

	FY03	FY04	FY05
SO Medical Diagnostic System	.240		
RDT&E Articles Quantity			

FY03 This initiative was a Congressional Plus-Up. Initiated a program of Knowledge Based Rules to assist in providing SOF medics with an automated diagnostic decision tree. Complete integration of diagnostics included Gastrointestinal, Respiratory, Dermatology and Musculoskeletal/Sports Medicine algorithms, and incorporation into a hand-held device.

C. Other Program Funding Summary. None.

D. Acquisition Strategy. N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 3	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations (SO) Advanced Technology Development

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160402BB	80.719	105.320	48.803	71.194	54.841	20.333	21.563	Cont.	Cont.
S200, SO SPECIAL TECHNOLOGY	80.719	105.320	48.803	71.194	54.841	20.333	21.563	Cont.	Cont.

Note: In FY 2003 this program element was budgeted for in Budget Activity 7. Beginning in FY 2004, this program element has been moved into Budget Activity 3.

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 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:

	FY03	FY04	FY05
Previous President's Budget	79.550	67.017	48.925
President's Budget	80.719	105.320	48.803
Total Adjustments	1.169	38.303	-0.122
Congressional Program Reductions		-1.167	
Congressional Rescissions			
Congressional Increases		42.925	
Reprogrammings	1.169	-0.945	-0.122
SBIR		-2.510	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 3	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations (SO) Advanced Technology Development

Funding:

FY03
- Reprogrammed additional funds into the Gunship Advanced Concept Technology Demonstration (ACTD).

FY04
- Reflects $42.925 million for Congressionally added programs as follows:
  - Rotary Wing Unmanned Aerial Vehicle ($15.300)
  - Affordable Access to Night Vision ($1.700)
  - Dual Band Universal Night Sight ($1.700)
  - Light Reconnaissance Vehicle ($2.400)
  - SOF Unmanned Vehicle Technology Integration ($2.800)
  - Special All Terrain Vehicle ($2.125)
  - Advanced Target ID for AC-130U Gunships ($3.850)
  - Dominant Vision ($4.800)
  - Naval Special Warfare Craft ($3.000)
  - Synthetic Aperture Radar (Millimeter FLIR) ($4.250)
  - SOCOM Multipurpose Antenna, X-Band (SMAX) ($1.000)
- Reprogrammings to Advanced Seal Delivery System (-$1.000) and into the Gunship ACTD ($.055) resulted in a net decrease of $.945.

FY05
Decrease of $.122 million is based on current inflation factors.

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 3	Special Operations Special Technology Project S200

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Special Operations Special Technology	80.719	105.320	48.803	71.194	54.841	20.333	21.563
RDT&E Articles Quantity							

Note: In FY 2003, this program element was budgeted for in Budget Activity 7. In FY 2004, this program element was moved into Budget Activity 3.

A. Mission Description and Budget Item Justification: This project conducts rapid prototyping and Advanced Technology Demonstrations (ATDs). It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces (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.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
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- SOF Sustainment 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) Advanced Concept Technology Demonstration (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, 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” Advanced Concept Technology Demonstration (ACTD). Design, fabricate and demonstrate military utility of space based and advanced global reach broadcasts.

- PSYOP Modernization. This initiative will explore emergent technologies available in the marketplace to modernize the PSYOP Broadcast System (POBS) and the PSYOP Print System (PPS).

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
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Additionally, the project executes the following efforts added by Congress:

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

- Robot Reconnaissance & Surveillance. Evaluate emerging ground robotic platforms and payloads for special operations utility.

- Foreign Language Translator. Develop, demonstrate, and evaluate advanced hand-held voice-response translation device with on-board high-speed processing and speech algorithms.

- Adaptive Deployable Sensor Suite. Fabricate and evaluate network-based sensors and sensor architectures.

- Affordable Access to Night Vision Equipment. Provide calibration, standardization and characterization of night vision capabilities to 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 a prototype manned vehicle for internal transport in the CV-22.

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

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

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

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 3	Special Operations Special Technology Project S200

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

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

- Synthetic Aperture Radar Millimeter 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.

B. Accomplishments/Planned Program

	FY03	FY04	FY05
SOF Command, Control, Communications, Computers, and Intelligence (C4I) ATDs	2.192	1.789	2.450
RDT&E Article Quantity			

FY03 Continued development and evaluation of FY02 efforts. Continued development of Night Vision Electro-Optic Enhancements, Low Probability of Intercept/Detection (LPI/D) Imagery Forwarding, Tactical Personal Computer, Antenna Enhancements, Communications for Robotics, Burst Communications and LPD Antenna, and Global Broadcasting System/Joint Broadcasting System. Initiated Tactical Systems Specific Emitter Identification.
FY04 Continue the development and evaluation of FY03 efforts. Initiate Night Vision Compatible Head Mounted Display, Enhanced Tactical Antenna Suite, Reconnaissance Technologies, and Software Definable Receiver Size Reduction.
FY05 Continue development and evaluation of FY04 efforts. Continue to exploit emerging technologies to conduct Advanced Technology Demonstrations (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.

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	FY03	FY04	FY05
SOF Mobility ATDs	1.180	2.260	3.121
RDT&E Article Quantity			

FY03 Continued SDV Airdrop and SOF Robotics. Initiated Conformal Load Bearing Antenna. Completed Vehicle Camouflage system.
FY04 Continue development and evaluation of FY03 efforts.
FY05 Continue development and evaluation of FY04 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.

	FY03	FY04	FY05
SOF Weapons ATDs	.938	2.225	3.169
RDT&E Article Quantity			

FY03 Continued development and evaluation of FY02 efforts. Continued development of Anti-Materiel Payload Rifle, Underwater Adhesives, and Remote Operated Small Arms Mount.
FY04 Continue development and evaluation of FY03 efforts. Initiate the NSW Combatant Craft Weapons, Enhanced Small Arms Technologies, and SOF Combat Weapon Shot Counter.
FY05 Continue development and evaluation of FY04 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. Planned efforts include Enhanced Signature Suppression for lightweight machine guns and Enhanced Performance for long range ammunition.

	FY03	FY04	FY05
SOF Sustainment ATDs	.757	2.000	1.468
RDT&E Article Quantity			

FY03 Continued development and evaluation of FY02 efforts. Continued Intrusion Sensor System, Military Free Fall Advanced Navigation System and Battery Recharging System. Completed Equipment Waterproofing.
FY04 Continue development and evaluation of FY03 efforts. Initiate development of Directional Axial Magnetic Propulsion System.
FY05 Continue development and evaluation of FY04 efforts. Continue to exploit emerging technologies to conduct ATD's that provide SOF

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
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with increased survivability, performance and countermeasures technologies. Continue evaluation of alternative power sources. Planned efforts include the All Terrain and All Environment Kit to Negotiate Obstacles.

	FY03	FY04	FY05
Technology Exploitation Initiative (TEI)	.639	.600	.850
RDT&E Article Quantity			

FY03 Exploited emerging technologies to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas. Initiated Directional Axial Magnetic Propulsion System. Completed SOF Visualization to develop and demonstrate C3 software tools, NSW Combatant Craft Weapon exploitation initiative, and Polymer Ammunition.
FY04 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 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.

	FY03	FY04	FY05
Advanced Tactical Laser (ATL) Advanced Concepts Technology Demonstration (ACTD)	46.924	51.507	28.649
RDT&E Article Quantity			

FY03 Continued the development of the ATL ACTD system. Completed the Systems Engineering Management Plan and Integrated Technical and Management Plan. The System Baseline Review established the technical baseline for the ATL system, allowing us to allocate performance requirements and system integration constraints to the various ATL ACTD system components. Began design of the system hardware for the Laser device (e.g, fluid supply system, resonator cavity and optics, and energy flow path elements), surveillance and beam control (e.g., acquisition system, laser beam turret, beam control mirrors and sensors and software), and the hardware/software for the operator workstation. Conducted system/subsystem design experiments in the laser, optical control, aircraft integration and battle management control system. In the fourth quarter, completed most subsystem Preliminary Design Reviews (PDR) of the ATL hardware and software. The PDR is an intermediate review to verify that the subsystem components and requirements allocations will allow the ATL system to continue to meet program objectives. Extensive work was accomplished to analyze and assess the ATL system lethality vs. the design reference mission targets.
FY04 Complete the design and begin the build-up of the ATL ACTD system. Continue system/subsystem design experimentation and analysis. Accomplish the subsystem and system Critical Design Reviews, the final reviews of the system component designs before assembly

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
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and check out. Procure long-lead components and begin acquisition and delivery of ATL ACTD system hardware and software. Begin the Military Utility Assessment using ATL simulations and/or component hardware testing in conjunction with military exercises.
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 modification of the ATL ACTD host aircraft. Begin ground test of the Integrated Battle Management and Optical Control Systems. Begin ground assembly, integration and test of the high-power flight test laser module. Complete modifications of the integration and test facilities.

	FY03	FY04	FY05
Psychological Operations (PSYOP) "Global Reach" ACTD		2.850	2.935
RDT&E Article Quantity			

FY04 Exploit mature and evolving technologies to address specific PSYOP deficiencies and provide the Combatant Commander with organic rapid-response PSYOP assets to meet evolving mission needs. The ACTD will transform current PSYOP capabilities in two major areas: 1) extension of PSYOP broadcast range (AM/FM/TV/digital) in a standoff mode to reach target audiences deep in hostile territory or denied areas, and 2) automation (software & hardware) of the PSYOP planning and analysis process. Specifically, the ACTD will manage the design, engineering and technical integration of multiple technologies for both UAV payload and a PSYOP Planning and Analysis Tool.
FY05 Continue management of the design, engineering and technical integration of multiple technologies culminating with a military utility assessment for both a UAV payload and a PSYOP Planning and Analysis Tool. In addition, focus on additional technologies to reach target audience through various scatterable media. Multiple solutions may include hardened and air-droppable satellite radios, miniaturized AM/FM broadcast transmitters, miniaturized loudspeakers, and media such as Internet broadcast and cellular telephones.

	FY03	FY04	FY05
PSYOP Modernization			4.891
RDT&E Article Quantity			

FY05 Explore emergent technologies 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 which will 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.

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	FY03	FY04	FY05
Classified	.661	.600	1.270
RDT&E Article Quantity			

FY03 Details provided under separate cover.
FY04 Details provided under separate cover.
FY05 Details provided under separate cover.

	FY03	FY04	FY05
Rotary Wing Unmanned Aerial Vehicle (UAV)	20.985	14.788	
RDT&E Article Quantity	4		

FY03 This initiative was a Congressional Plus-Up. Fabricated four additional air vehicles (two Maverick and two Hummingbird) payloads and Miniature Ground Control Stations. Conducted maturation flight tests and participated in Joint Exercises.
FY04 Continue to identify and develop SOF-unique capabilities on the baseline aircraft developing CONOPS and payloads that address critical needs of the SOF warfighter.

	FY03	FY04	FY05
Robot Reconnaissance & Surveillance	.951		
RDT&E Article Quantity			

FY03 This initiative was a Congressional Plus-Up. Evaluated emerging ground robotic platforms and payloads for special operations utility.

	FY03	FY04	FY05
Foreign Language Translator	.950		
RDT&E Article Quantity			

FY03 This initiative was a Congressional Plus-Up. Developed, demonstrated, and evaluated advanced hand-held voice-response translation device with on-board high-speed processing and speech algorithms.

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	FY03	FY04	FY05
Adaptive Deployable Sensor Suite	4.542		
RDT&E Article Quantity			

FY03 This initiative was a Congressional Plus-Up. Fabricated and evaluated network-based sensors and sensor architectures.

	FY03	FY04	FY05
Dominant Vision		4.641	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Development effort will explore Advanced Situational Awareness and Sensor Fusion Technologies for enhancement of AFSOC platform's ability to navigate and identify targets through adverse weather and obscured visual situation. Analysis of Multi-spectral and Hyper-spectral techniques will be evaluated.

	FY03	FY04	FY05
Affordable Access to Night Vision (NV) Equipment		1.642	
RDT&E Article Quantity			

FY04 This initiate was a Congressional Plus-up. Support a pilot project that will provide calibration, standardization, and characterization of NV capabilities for the SOF community.

	FY03	FY04	FY05
Advanced Target ID for AC-130U Gunship		3.721	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Development effort will continue to explore Vibro Electronic Signature Target Analysis (VESTA) and Passive Acoustic Reflective Device (PARD) technologies for enhancement of the AC-130U Gunship target acquisition capabilities. Enhancements to the Gunships' ability to align the weapons at night and over water are also being evaluated.

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	FY03	FY04	FY05
Dual Band Universal Night Sight (DUNS)		1.642	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Technology will demonstrate an integrated image intensified and long-wave infrared fused system within the same aperture.

	FY03	FY04	FY05
Synthetic Aperture Radar (Millimeter FLIR)		4.108	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. The Synthetic Aperture Radar provides a ground map plan position indicator view, which can be changed to a high resolution image using synthetic aperture radar techniques that will allow for unassisted instrument landings and target classification capabilities. Technology will demonstrate and integrate package on a light twin civil aircraft suitable for use on a C-130 or rotary wing platform.

	FY03	FY04	FY05
Light Reconnaissance Vehicle		2.319	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Development of a lightweight, manned vehicle for SOF.

	FY03	FY04	FY05
SOCOM Multipurpose Antenna, X-Band (SMAX)		.969	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. The SMAX is an innovative antenna derived from the Navy's Cooperative Engagement Capability design. It is a hybrid steered antenna that provides a low profile for easy mounting on a C-130 or CV-22 along with light civil aircraft and rotary wing assets.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 3	Special Operations Special Technology Project S200

	FY03	FY04	FY05
SOF Unmanned Vehicle Technology Integration		2.707	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Support unmanned vehicle development and integration efforts at the Prototype Maintenance Facility supporting Special Operations Technology Development and Special Operations Advanced Technology Development projects.

	FY03	FY04	FY05
Special All Terrain Vehicle		2.053	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Technology development effort will obtain and modify commercial personal mobility vehicles to produce diesel fueled militarized prototypes for initial evaluation by SOCOM.

	FY03	FY04	FY05
Naval Special Warfare Craft		2.899	
RDT&E Article Quantity			

FY04 This initiative was a Congressional Plus-up. Explore technologies to support future combatant craft development.

C. Other Program Funding Summary: None.

D. Acquisition Strategy. N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 0304210BB Special Applications for Contingencies (SAFC)

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE0304210BB	22.782	23.764	20.758	20.700	20.680	24.870	25.385	Cont.	Cont.
9999.PR SAFC	22.782	23.764	20.758	20.700	20.680	24.870	25.385	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:

	FY03	FY04	FY05
Previous President's Budget	22.817	24.587	24.511
Current President's Budget	22.782	23.764	20.758
Total Adjustments	-0.035	-0.823	-3.753
Congressional Program Reductions		-0.261	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-0.035		-3.753
SBIR Transfer		-0.562	

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 0304210BB Special Applications for Contingencies (SAFC)

Funding:

FY03
- Funds were reprogrammed to support higher command priorities.

FY04
- Funds were reduced for congressional pro rata reductions in the FY 2004 Appropriations Conference Report and for program share of Small Business Innovative Research calculation.

FY05
- Funds were transferred to support the Defense Human Intelligence Program (-$3.7M). Funds were also adjusted based on current inflation factors (-$.053M).

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Applications for Contingencies/Project 9999

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Special Applications for Contingencies	22.782	23.764	20.758	20.700	20.680	24.870	25.385
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

	FY03	FY04	FY05
SAFC	22.782	23.764	20.758
RDT&E Articles Quantity			

FY03 Developed, deployed and evaluated selected unmanned delivery platforms and mounted or deliverable ISR sensor systems. Developed, deployed and evaluated advanced auto-pilot technologies. Performed research on advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Developed and evaluated a common ground station. Researched and assessed emerging ISR technologies. Researched, evaluated and integrated red force tagging, tracking and locating capabilities to enable remote and stand-off emplacement. Conducted Federally Funded Research and Development in support of a Joint Staff approved requirement for data mining.

FY04 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.

FY05 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

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Applications for Contingencies/Project 9999

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.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
SAFC	18.166	18.133	16.184	16.144	16.152	18.447	18.849	N/A	N/A

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 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			SPECIAL APPLICATIONS FOR CONTINGENCIES PE0304210BB/C3I								
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 FY04	Date FY04	Cost FY05	Date FY05			To Complete	Total Program
UAV Capability Development	MIPR	NAVAIR	9.850	6.800	Dec-03	9.800	Dec-04			Cont.	Cont.
Remotely Delivered Sensor and Networking Development	MIPR	NAVAIR	8.145	9.900	Dec-03	9.800	Dec-04			Cont.	Cont.
TT&L R&D	MIPR	Various	1.991	2.500							
FFRDC Support to SOJICC	MIPR	MITRE CECOM	1.001								
FFRDC Support to SOJICC	MIPR	MITRE ESC	0.330								
Technical Collection R&D	MIPR	ASD C3I	1.152	2.100							
NRT Contingency		Various	0.313	2.464	TBD	1.158	TBD				
Subtotal Product Dev			22.782	23.764		20.758				Cont.	Cont.
Remarks:											
Subtotal Spt			0.000	0.000		0.000		0.000			Cont.
Remarks:											
Subtotal T&E			0.000			0.000		0.000			Cont.
Remarks:											
Subtotal Management			0.000	0.000		0.000		0.000		Cont.	Cont.
Remarks:											
Total Cost			22.782	23.764		20.758		0.000		Cont.	Cont.

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Project Number and Name 9999.PR SAFC

Fiscal Year	2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
UV, ISR and TT&L Capabilities development	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△
UV, ISR and TT&L technology integration & testing	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△
UV, ISR and TT&L prototype demonstrations	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△
UV, ISR and TT&L combat evaluation	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity	Program Element Number and Name			Project Number and Name				
RDT&E/7	PE0304210BB/C3I-SAFC			Project 9999/SAFC				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
SAFC Technology Development	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160279BB Small Business Innovative Research (SBIR)

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160279BB	11.546	13.498						Cont.	Cont.
S050, SBIR	11.546	13.498						Cont.	Cont.

A. Mission Description and Budget Item Justification:

The Small Business Innovative Research (SBIR) program element consists of a highly competitive three-phase award system which provides qualified small business concerns with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. SBIR is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2001. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Awards are up to $.100M with a maximum six-month period of performance. Phase II projects expand the results of, and further pursue, the developments of Phase I. Awards are up to $.750M with a maximum two-year period of performance. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. DOD publishes government agency proposal projects twice per year for a consolidated DOD Request for Proposal. USSOCOM then awards its proposed SBIR projects.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160279BB Small Business Innovative Research (SBIR)

B. Program Change Summary:

	FY2003	FY2004	FY2005
Previous President's Budget	12.620		
President's Budget	11.546	13.498	
Total Adjustments	-1.074		
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR Transfer	12.620	13.498	

Funding:
FY03
Funding was adjusted to correct errors in the original SBIR calculation.

Schedule: None.

Technical: None.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
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)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160404BB	254.715	298.825	311.966	190.438	85.036	60.730	43.209	Cont.	Cont
3129 MC-130H COMBAT TALON			23.920						
3284 SOF AIRCRAFT DEFENSIVE SYSTEM	49.950	56.261	58.041	46.858	17.557	6.051	6.286	Cont.	Cont
3326 AC-130U GUNSHIP	36.292	1.186	1.288	2.534	2.580	2.684	2.767	Cont.	Cont.
D476 PSYOPS ADV DEV	.988	2.195	.357	1.456	6.704	1.350	2.366		
D615 SOF AVIATION	22.970	44.554	29.198	28.649	23.410	10.697	6.815		
S0417 UNDERWATER SYSTEMS ADV DEV	27.483	16.711	2.395	2.216	1.662	.385	1.489		
S1684 SOF SURFACE CRAFT ADV SYSTEMS	.949	1.421			1.335	18.785	9.295		
S350 SOFPARS	1.617	2.516	6.916	3.832	3.757	3.868	3.967		
S375 WEAPONS SYSTEMS ADV DEV	4.158	7.299	5.758	4.401	.386	.587	.256		
S625 SOF TRAINING SYSTEMS	.169	13.537	4.765	11.203	4.489	5.111	1.165	Cont.	Cont.
S700 SO COMMUNICATIONS ADV DEV	2.107	6.819							
S800 SO MUNITIONS ADV DEV	7.155	.003	.215	.816		.482			
S900 SO MISCELLANEOUS EQUIPMENT ADV DEV	1.464								
SF100 AVIATION SYSTEMS ADV DEV	66.944	67.713	103.982	59.662	23.156	10.730	8.803		
SF200 CV-22	32.469	78.610	75.131	28.811					

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

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:

	FY2003	FY2004	FY2005
Previous President's Budget	287.621	255.981	253.588
Current President's Budget	254.715	298.825	311.966
Total Adjustments	-32.906	42.844	58.378
Congressional Program Reductions	-0.428	-3.286	
Congressional Rescissions	-25.000		
Congressional Increases		53.700	
Reprogrammings	-7.478	-0.509	
SBIR			

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

Funding:

FY03

- Congress rescinded $25 million from this program element in the FY 2004 Appropriations Conference Report.
- Reprogrammings to higher command priorities to support the War on Terrorism and from the Air Force and Navy to reflect proper execution of Congressional adds resulted in a net decrease of $7.478M.

FY04

Reflects $19.700 million for Congressionally added programs as follows:

- Project SF100 – Digital Auto Flight Control System ($4.200).
- Project S1684 – MKV Computer Upgrades ($1.000).
- Project S375 – Gunshot Detection System ($2.500).
  Lightweight Counter-Mortar Radar ($1.000).
- Project S625 – ST Air-Ground Interface Simulator ($4.200).
- Project S700 – Material Improvement & Corrosion Control ($2.550)
  Multi-Band Multi-Mode Radar ($4.250)

Also reflects a transfer from the Navy for Project SF200.PR (CV-22) ($34.000).

Congressional Reductions: Sections 8094 and 8126 (-$6.279)

FY05

- Project 3284: The Low Band Jammer, the Towed Decoy, and the DIRCM Multi-Spectral Missile Warning System modification efforts were restructured to reflect the most recent cost estimates (+$15.8 million, +$16.0 million, and +$6.0 million, respectively).
- Project D615: The MH-60 Service Life Extension Program (SLEP) was increased by $3 million to reflect the latest schedule, and the MH-47/MH-60 Vertical Lift Terrain Following/Terrain Avoidance modification was decreased by $11.1 million to support higher command requirements.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

- Project S350: The SOFPARS program was increased to begin the development of the Theater Special Operations Commands' command and control nodes, as well as to begin the development and modification of automated tools to meet ground mission planning requirements (+$3.6 million).
- Project S375: Funds were added to develop a laser targeting device capable of providing the geo-location of a target to support the delivery of global positioning system guided munitions (+$3.0 million).
- Project SF100: Various C-130 modification efforts were decreased to support higher command priorities (-$3.7 million), and the CAAP program was decreased to reflect an FY 2003 acceleration (-$6.6 million).
- Project SF200: The CV-22 RDT&E effort was restructured beginning in FY 2003 to better reflect execution of the Block 10 development and integration effort (+$33.7 million).

Schedule:

- Project 3284: Low Band Jammer and Towed Decoy: These programs are tied together to make the program executable. The program rebaselined aircraft from AC-130H to MC130E to use the E model first because of ease of installation. The H model already has a low band jammer. The milestone C (production) and IOC decision were both moved forward one year.

- Project SF100: CAAP buys back one year of a two year AMP schedule slip due to AMP restructure and adds RDT&E funds to the AMP/CAAP program to minimize the 24+ month schedule slip.

Technical:

- Project SF100: DIRCM Laser: An inherent design defect was discovered and deemed not cost effective. Cost and schedule impact was considered impractical. Therefore, the effort was cancelled and the lasers will not be put on the large lamp based system of SOF C-130 DIRCM.

- Project 3326: AC-130U+4: In order to complete production costs (spares, trainers, etc) of the new 30mm gun, development of enhanced survivability systems was delayed. Enhanced survivability schedules were incompatible with the Plus 4 production schedule.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	MC-130 Combat Talon II/Project 3129	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
			23.920				
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 10 C-130H2 aircraft to an MC-130H Combat Talon II configuration. These aircraft provide low level infiltration, exfiltration, and resupply of special operations forces and equipment in hostile/denied territories. Aircraft will also refuel SOF helicopters.

B. Accomplishments/Planned Program

		FY 2003	FY 2004	FY 2005
System Development and Engineering				23.920
RDT&E Articles Quantity				

FY05 Begin development of Electro-Optical/Infrared command sensor and nonrecurring engineering for the 10 C-130H2 aircraft being modified to MC-130H Combat Talon II.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Procurement	7.804	8.772	82.079	82.348	247.014	191.821	19.350	Cont.	Cont.

D. Acquisition Strategy. Program procures Talon II systems and installs these in conjunction with the C-130 Avionics Modernization/Common Avionics Architecture for Penetration (AMP/CAAP) modifications (program will not procure systems replaced by AMP/CAAP). Objective is to open the aircraft once to install the MC-130H Talon II plus ten and AMP/CAAP systems.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	MC-130 Combat Talon II/Project 3129	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
			23.920				
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 10 C-130H2 aircraft to an MC-130H Combat Talon II configuration. These aircraft provide low level infiltration, exfiltration, and resupply of special operations forces and equipment in hostile/denied territories. Aircraft will also refuel SOF helicopters.

B. Accomplishments/Planned Program

		FY 2003	FY 2004	FY 2005
System Development and Engineering				23.920
RDT&E Articles Quantity				

FY05 Begin development of Electro-Optical/Infrared command sensor and nonrecurring engineering for the 10 C-130H2 aircraft being modified to MC-130H Combat Talon II.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Procurement	7.804	8.772	82.079	82.348	247.014	191.821	19.350	Cont.	Cont.

D. Acquisition Strategy. Program procures Talon II systems and installs these in conjunction with the C-130 Avionics Modernization/Common Avionics Architecture for Penetration (AMP/CAAP) modifications (program will not procure systems replaced by AMP/CAAP). Objective is to open the aircraft once to install the MC-130H Talon II plus ten and AMP/CAAP systems.

Exhibit R-3 COST ANALYSIS				DATE: FEBRUARY 2004							
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
System Design Development	CPAF/FFP	Various				23.920	Oct-04				23.920
Subtotal Product Dev						23.920					23.920
Remarks:											
Development Spt											
Subtotal Spt											
Remarks:											
Developmental Test & Eval											
Subtotal T&E											
Remarks:											
Contractor Engineering Spt											
Subtotal Management											
Remarks:											
Total Cost						23.920					23.920
Remarks:											

Exhibit R-4, Schedule Profile																																		
																	Date: FEBRUARY 2004																		
Appropriation/Budget Activity									Program Element Number and Name														Project Number and Name											
RDT&E/7									PE1160404BB/Special Operations Tactical System Development														Project 3129/MC-130H Combat Talon II											
Fiscal Year	2004				2005				2006				2007				2008				2009													
	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 NRE					△			△																										

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004					
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		FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
System Design Development Contract Award			1Q						
System Design Development Non-Recurring Engineering			1-4Q						

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

Cost ($ in million)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOF Aircraft Defense System	49.950	56.261	58.041	46.858	17.557	6.051	6.286
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. Sub-projects include:

- Directional Infrared Countermeasures (DIRCM). The baseline program is a joint international cooperative United Kingdom/United States 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 Missle 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.

- Electronic Warfare Avionics Integrated Systems Facility (EWAISF). The EWAISF directly supports software development and testing. 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 Decoys (HPFOTD) for AC-130 H/U Gunships and 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 AFSOC AC-130 H/U and MC-130 E/H aircraft to provide protection against monopulse and other radar guided, surface to air, and air to air missile systems.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

- Low Band Jammer (LBJ). Program funds the development 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 13 AC-130U Gunships and 22 MC-130H Combat Talon II aircraft.

B. Accomplishments/Planned Program

Cost ($ in million)	FY03	FY04	FY05
DIRCM	3.982	5.029	5.658
DIRCM NexGen MWS		14.596	18.700
DT&E Articles Quantity			

FY03 Continued to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft and contractor engineering support and nonrecurring engineering costs. Funded development and nonrecurring engineering costs for a laser upgrade to the existing lamp system.
FY04 Continue to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft and contractor engineering support fund nonrecurring engineering costs. Initiate development of an NexGen MWS as P3I for DIRCM. Exploit Tier II missiles for jam code development.
FY05 Continue to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft and contractor engineering support and nonrecurring engineering costs. Continue development of an NexGen MWS as P3I for DIRCM. Exploit Tier II missiles for jam code development.

Cost ($ in million)	FY03	FY04	FY05
EWAISF	1.397	1.614	1.880
RDT&E Articles Quantity			

FY03 Continued to support laboratory efforts to maintain SOF aircraft defensive systems.
FY04 Continue to support laboratory efforts to maintain SOF aircraft defensive systems.
FY05 Continue to support laboratory efforts to maintain SOF aircraft defensive systems.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

Cost ($ in million)			FY03	FY04	FY05
(HPFOTD			32.671	22.922	16.051
RDT&E Articles Quantity					

FY03 Continued nonrecurring engineering, and initiated development and testing of aircraft integration efforts.
FY04 Continue nonrecurring engineering and development, and complete test of aircraft integration efforts.
FY05 Continue nonrecurring engineering and development, and begin developmental test/operational test and evaluation efforts for MC-130E aircraft.

Cost ($ in million)	FY03	FY04	FY05
LBJ	11.900	12.100	15.752
RDT&E Articles Quantity			

FY03 Began development and nonrecurring engineering for the LBJ modification for AC-130U and MC-130H aircraft. Funds provided for trial installation on one aircraft from each fleet.
FY04 Continue nonrecurring engineering and development for aircraft integration efforts.
FY05 Continue nonrecurring engineering and initiate testing for aircraft integration for AC-130U aircraft.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
C-130 Mods (Procurement)									
DIRCM	.846	30.704	14.457	6.746	10.824	9.072	8.501		
LBJ	2.000		13.966	51.877	22.170	21.907	21.850		133.770
HPFOTD			26.634	35.616	36.249	13.404	13.430		125.333

D. Acquisition Strategy:

- DIRCM. The memorandum of agreement between the United Kingdom (UK)/United States (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

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

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 complete modification of two remaining aircraft series (AC-130U and MC-130H) with LBJ capability. Program will capitalize on previous SOF aircraft modifications using the ALQ-196 system currently installed on MC-130E aircraft. The ALE-55 system was selected as the best value decision on all MC-130/AC-130 aircraft. 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 US market place. Conducted an assessment to determine which non-developmental item meets operational requirements. The ALE-55 system was selected as the best value decision.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB 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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Primary Hardware Dev											
Directional Infrared Countermeasures (DIRCM)	SS/FFP	Northrop (Chicago)	77.507								77.507
PM Engineering DIRCM	SS/CPFF	Northrop (Chicago)	3.498	3.801	Mar-04	5.658	Various			Cont	Cont.
DIRCM Laser	SS/CPFF	Northrop (Chicago)	24.177								24.177
NexGen MWS	CPIF	TBD	2.859	14.596	Mar-04	18.700	Various			8.935	45.090
Electronics Warfare Avionics Integrated Systems Facility	SS/CPFF	GTRI, GA	15.360	1.614	Feb-04	1.880	Feb-05			Cont.	Cont.
HPFOTD	CPAF	Boeing, Ft. Walton Beach, FL	71.631	22.922	Nov-03	16.051	Jan-05			18.980	129.584
Low Band Jammer	CPAF	Boeing, Ft. Walton Beach, FL	23.800	12.100	Nov-03	15.752	Jan-05			18.253	69.905
Subtotal Product Dev			218.832	55.033		58.041				Cont.	Cont.
Remarks:											
Development Spt											
Subtotal Spt											
Remarks:											
Developmental Test & Eval											
Subtotal T&E											
Remarks:											
Contractor Engineering Spt											
DIRCM	FP	SVERDRUP	1.870	1.228	May-04						3.098
Subtotal Management			1.870	1.228		0.000					3.098
Remarks:											
Total Cost			220.702	56.261		58.041				Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004

Appropriation/Budget Activity	Program Element Number and Name	Project Number and Name
RDT&E/7	PE1160404BB/Special Operations Tactical System Development	Project 3284/SOF Aircraft Defensive Systems

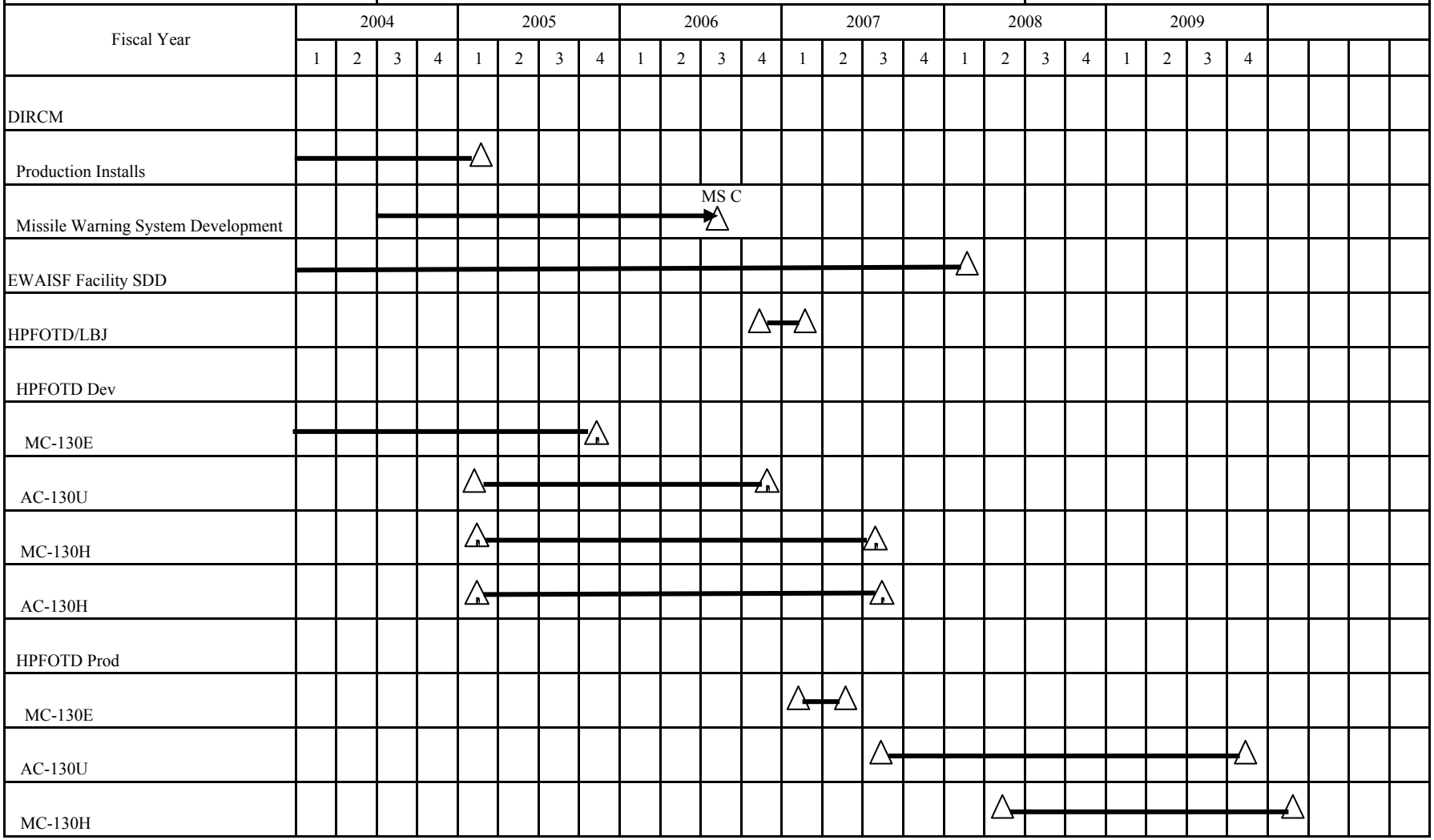

Exhibit R-4, Schedule Profile			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project 3284/SOF Aircraft Defensive Systems

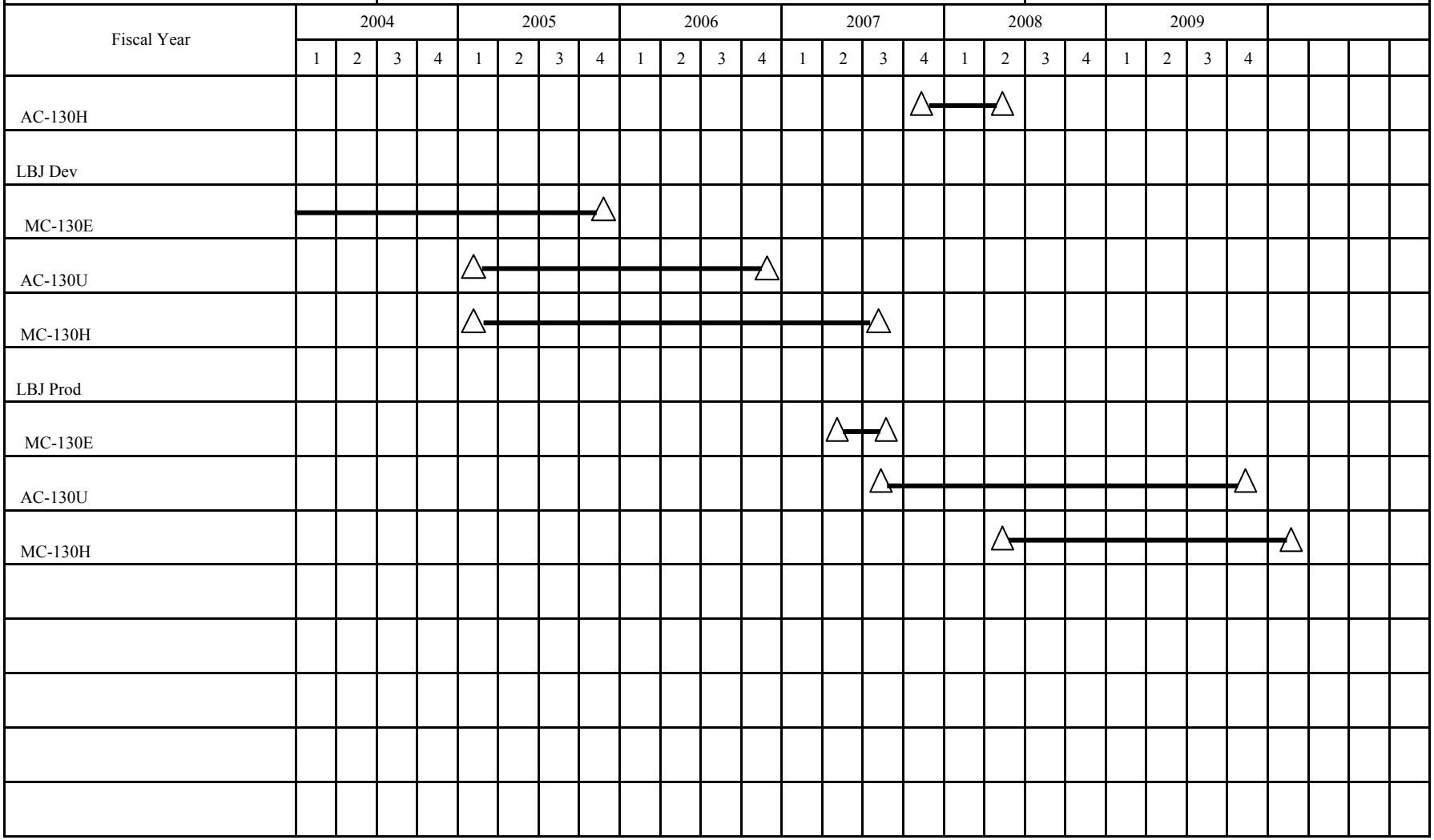

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 3284/SOF Aircraft Defensive Systems				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
DIRCM								
Production Installs	1-4Q	1Q						
Missile Warning System Development	3-4Q	1-4Q	1-3Q					
EWAISF Laboratory Testing and Evaluation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
HPFOTD/LBJ								
HPFOTD Development								
MC-130E	1-4Q	1-4Q						
AC-130U		1-4Q	1-4Q					
MC-130H		1-4Q	1-4Q	1-3Q				
AC-130H		1-4Q	1-4Q	1-3Q				
LBJ Development								
MC-130E	1-4Q	1-4Q						
AC-130U		1-4Q	1-4Q					
MC-130H		1-4Q	1-4Q	1-3Q				
HPFOTD Production								
MC-130E			4Q	1Q				
AC-130U				3-4Q	1-4Q	1-4Q		
MC-130H					2-4Q	1-4Q		
AC-130H				4Q	1-2Q			
LBJ Production								
MC-130E			4Q	1Q				
AC-130U				3-4Q	1-4Q	1-4Q		
MC-130H					2-4Q	1-4Q		

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	AC-130U Gunship/Project 3326	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
AC-130U Gunship	36.292	1.186	1.288	2.534	2.580	2.684	2.767
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 strike target with surgical accuracy, to loiter safely in the target area for extended periods, 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 (AF) Special Operations Command aircraft.

B. Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
AC-130U Plus Four	35.119		
RDT&E Articles Quantity			

FY03 Funded engineering analysis for obsolescence issues in support of the four C-130H's added to the gunship inventory.

	FY 2003	FY 2004	FY 2005
AC-130U Post Production Support	1.173	1.186	1.288
RDT&E Articles Quantity			

FY03 Continued weight and drag reduction designs, survivability, technical/reliability and maintainability studies, and tech order verification validation and ground flight test support.
FY04 Continue weight and drag reduction design, obsolescence engineering drawings, survivability studies, and ground/flight test support.
FY05 Continue weight and drag reduction design, obsolescence engineering drawings, survivability studies, and ground/flight test support.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	AC-130U Gunship/Project 3326	

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
AC-130U Gunship (Procurement)	124.204	363.571	14.694	165.368	177.910	4.650	4.764	Cont.	Cont.

D. Acquisition Strategy. Modify C-130H airframes into a side-firing gunship configuration on a sole-source fixed price contract. A cost plus fixed fee contract line item will be included to accommodate any required changes due to obsolescence, vanished vendors or other required changes. The AC-130U is logistically supported at organizational, intermediate and depot levels. Initial operational capability occurred in March 1996, and full operational capability was declared March 2002.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Post Production Support	Various	Various	1.173	1.186	Various	1.288	Various			Cont.	Cont.
											0.000
											0.000
AC-130U Plus 4			35.119								35.119
Subtotal Product Dev			36.292	1.186		1.288					Cont.
Dev Spt											
Subtotal Spt											
Subtotal T&E											
Management											
Subtotal Management											
Remarks: * Close out original Ac-130U purchase											
Total Cost			36.292	1.186		1.288				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																													
																	Date: FEBRUARY 2004												
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	2004				2005				2006				2007				2008				2009								
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
Full Rate Production Decision	▲																												
Exercise Option to Purchase Remaining Three Aircraft	▲																												
Production Delivery Plus Four Aircraft				▲	———		▲																						
Post Production Support		▲	———																					▲					

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
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	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
Full Rate Production Decision	1Q							
Exercise Option to Purchase Remaining Three Aircraft	1Q							
Production Delivery Plus Four Aircraft	4Q	2-3Q						
Post Production Support	2-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Aviation /Project D615

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOF Aviation	22.970	44.554	29.198	28.649	23.410	10.697	6.815
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: A/MH-6M, MH-60L/K/M, and MH-47D/E/G, and MH-53. Efforts include:

- A/MH-6. (1) Conducts flight testing on Mission Enhancement Little Bird. (2) Develops lightweight conformal communications antennas. (3) Develops and qualifies a lightweight version of the MIL-STD-1760 Hellfire launcher.

- MH-47/MH-60 Aircraft. (1) Develops a follow-on weapon system to the currently fielded M-134 Mini Gun. Replacement will be lighter, more reliable/maintainable, with improved suppressive fire capability. (2) Continues nonrecurring engineering, integration and testing for MH-47 Service Life Extension Program (SLEP). (3) Develops, integrates and tests a fly-by-wire flight control system for the MH-60 SLEP.

- MH-47/MH-60 Avionics/Sensors. (1) Develops and qualifies a “next generation” Forward Looking Infrared Radar (FLIR). New FLIRs will provide significantly increased performance, weight savings, and improved reliability/maintainability. (2) Develops and qualifies a multiple sensor night vision system (Distributed Aperture System) that incorporates and blends the best attributes of image intensification, infrared, and low light level camera. (3) Develops and qualifies a Low Probability of Intercept/Low Probability of Detection (LPI/LPD) Obstacle Avoidance/Cable Warning system. (4) Develops and qualifies a rotary wing Terrain Following/Terrain Avoidance (TF/TA) navigation system. The system is characterized by a forward-looking LPI/LPD active sensor, digital elevation terrain data (passive) and a

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Aviation /Project D615

blended TF/TA solution of the processed active and passive navigation information. (5) Develops/integrates the Army-provided Army Aviation Command & Control System (A2C2S) into the MH-47. Develops the ability to control Unmanned Aerial Vehicles from the A2C2S and SOF Command & Control platforms. (6) Develops and qualifies an infrared exhaust suppressor for MH-47 aircraft. (7) Develops and qualifies a Common Avionics Architecture for Penetration radar altimeter. (8) Included in the modular avionics modifications, develops the SOF unique requirements to upgrade the Enhanced Global Positioning System/Inertial Navigation System (GPS/INS) as part of a tri-service GPS/INS upgrade program.

- MH-53. Provides nonrecurring engineering associated with incorporation of the Directional Infrared Countermeasures (DIRCM) system. DIRCM provides an Infrared (IR) jamming capability that counters missile threats in the band one, two, and four infrared frequency spectrum.

B. Accomplishments/Planned Program

	FY03	FY04	FY05
A/MH-6	.419		
RDT&E Articles Quantity			

FY03 Completed flight testing of MELB aircraft.

	FY03	FY04	FY05
MH-47/MH-60 – Aircraft	0	10.545	11.970
RDT&E Articles Quantity			

FY04 Continue nonrecurring engineering and integration for the MH-47 SLEP. Begin engineering development for MH-60 SLEP (fly-by-wire flight control system).
FY05 Continue MH-60 SLEP fly-by-wire flight control system development.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Aviation /Project D615

	FY03	FY04	FY05
MH-47/MH-60 – Avionics/Sensors	16.652	34.009	17.228
RDT&E Articles Quantity			

FY03 Began development of assault and attack FLIR systems to replace aging Q-16B and D systems for the fleet of Army Special Operations Aviation (ARSOA) aircraft. Completed development of a replacement radar altimeter that is less detectable. Began development and testing of a multisensor night vision system, a rotary wing TF/TA navigation system and an Obstacle Avoidance/Cable Warning (OA/CW) system for use on all ARSOA platforms. Developed/qualified an Intelligence Broadcast Receiver. Continued development, integration, and testing of an IR engine exhaust suppressor for the MH-47.
FY04 Continue development of assault and attack FLIR systems to replace aging Q-16B and D systems for the fleet of ARSOA aircraft. Continue development and testing of a rotary wing TF/TA navigation system. Complete OA/CW development and testing. Complete development of the SOF-unique requirements to upgrade the GPS/INS which is a sub-effort of modular avionics.
FY05 Continue development of the TF/TA navigation system. Develop/integrate A2C2S into the MH-47.

	FY03	FY04	FY05
MH-53	5.899		
RDT&E Articles Only	1		

FY03 Completed nonrecurring engineering associated with the incorporation of the DIRCM system. DIRCM provides an IR jamming capability that counters missile threats in band one, two, and four IR frequency spectrum.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Aviation /Project D615

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Rotary Wing Upgrades & Sustainment	376.891	567.973	447.272	225.463	274.403	339.708	329.438	Cont.	Cont.

D. Acquisition Strategy. A/MH-6 - This effort provides necessary structural and fatigue analyses, component testing, and test support/data analysis efforts required to enhance operational safety margins and airworthiness of A/MH-6M aircraft.

MH-47/MH-60 Aircraft - This effort provides for vibration testing and analysis of the MH-47 airframe, the development of the fly-by-wire flight control system for the MH-60 SLEP and develops and qualifies the replacements for the M-134 weapons system. The program leverages engineering and production assets off the CH-47F remanufacture and UH-60 SLEP programs (both funded by the Army) that will minimize costs required to install special operations forces-peculiar modernization initiatives. Proprietary considerations drive efforts to each original airframe manufacturer. A competitive source selection process will be held for M-134 replacement program.

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

MH-53 – Provides production, installations, and associated interim contractor support at the depot level that is associated with the incorporation of the DIRCM system. DIRCM provides an IR jamming capability that counters missile threats in the band one, two and four infrared frequencies.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Primary Hardware Dev											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	40.288	5.839	Various	11.970	Various			Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	35.136	30.951	Various	17.228	Various			Cont.	Cont.
A/MH-6	Various	PM-MELB/Ft Eustis, VA	3.500							Cont.	Cont.
MH-53	Cost Plus Fixed Fee	PM-DIRCM/USSOCOM, FL	7.000								
Subtotal Product Dev			85.924	36.790		29.198				Cont.	Cont.
Remarks:											
Management											0.000
Subtotal Spt											0.000
Remarks:											
Developmental Test & Eval											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	35.981	4.706	Various					Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	16.120	3.058	Various					Cont.	Cont.
A/MH-6	Various	PM-MELB/Ft Eustis, VA	14.826							Cont.	Cont.
Subtotal T&E			66.927	7.764						Cont.	Cont.
Remarks:											
Subtotal Management											
Remarks:											
Total Cost			152.851	44.554		29.198				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile | Date: FEBRUARY 2004

Appropriation/Budget Activity
RDT&E/7

Project Number and Name
Project D615/SOF Aviation

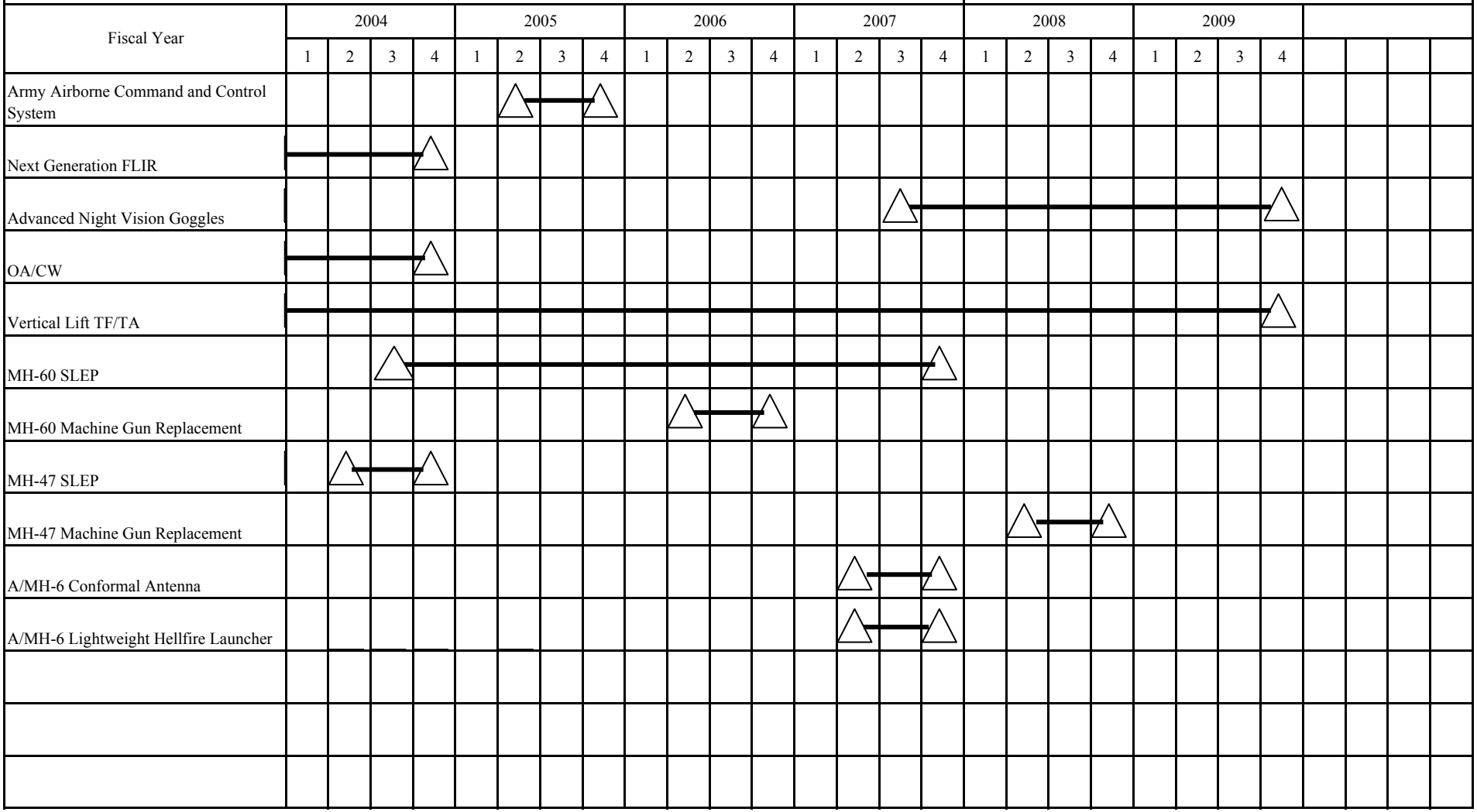

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project D615/SOF Aviation				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
Army Airborne Command and Control System		2-4Q						
Next Generation FLIR	1-4Q							
Advanced Night Vision Goggles				3-4Q	1-4Q	1-4Q		
OA/CW	1-4Q							
Vertical Lift TF/TA	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
MH-60 SLEP	3-4Q	1-4Q	1-4Q	1-4Q				
MH-60 Machine Gun Replacement			2-4Q					
MH-47 SLEP	2-4Q							
MH-47 Machine Gun Replacement					2-4Q			
A/MH-6 Conformal Antenna				2-4Q				
A/MH-6 Lightweight Hellfire Launcher				2-4Q				

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Underwater Systems Advanced Development/Project S0417	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Underwater Systems Advanced Dev	27.483	16.711	2.395	2.216	1.662	.385	1.489
RDT&E Articles Quantity							

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

- Advanced Sea, Air, Land (SEAL) Delivery System (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. ASDS advantages over the current SEAL Delivery Vehicle, a wet submersible, include greatly increased range, increased payload and passenger capacity, state of the art communications, the ability to loiter in a target area, and protection of personnel from complex dive profiles and exposure to long cold water transit.

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

  - Naval Special Warfare (NSW) Very Shallow Water Mine Countermeasures (VSW MCM). Phased development/improvement of equipment to support the combat swimmer in the NSW VSW MCM operational environment.

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

  - SEAL Delivery Vehicle (SDV). Develop replacements for obsolete and/or unsupportable electronics with current technology to improve safety, reliability and performance. Upgrade mobility capabilities for insertion and extraction of the SDVs. Evaluate technologies for next-generation SDVs.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Underwater Systems Advanced Development/Project S0417	

B. Accomplishments/Planned Program

	FY03	FY04	FY05
ASDS	25.243	15.578	1.614
RDT&E Articles Quantity			

FY03 Completed government testing phase to include Operational Evaluation. Continued Pre-planned Product Improvement (P3I) efforts on battery and acoustics.
FY04 Continue Li-Ion battery development. Continue P3I efforts.
FY05 Continue P3I efforts.

	FY03	FY04	FY05
NSW VSWMCM	.587	.580	.201
RDT&E Articles Quantity			

FY03 Achieved MS C for Hydrographic Reconnaissance Littoral Mapping Device (HRLMD) and continued P3I development efforts for the Semi-Autonomous Hydrographic Reconnaissance Vehicle (SAHRV) program.
FY04 Continue P3I development efforts for the SAHRV program.
FY05 Continue P3I development for the SAHRV program.

	FY03	FY04	FY05
NBOE	.394		
RDT&E Articles Quantity			

FY03 Completed development of the alternative fuels engine.

	FY03	FY04	FY05
SDV	1.259	.553	.580
RDT&E Articles Quantity			

FY03 Continued to develop and upgrade/replace obsolete and/or unsupportable electronic equipment.
FY04 Continue to develop and upgrade/replace obsolete and/or unsupportable electronic equipment.
FY05 Continue to develop and upgrade/replace obsolete and/or unsupportable electronic equipment.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Underwater Systems Advanced Development/Project S0417	

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
ASDS	29.307	10.364	5.864	191.965	29.902	203.522	203.884	422.176	1,096.714
ASDS Adv Proc		23.398	34.921		67.892	69.663		70.150	266.024
SOF Maritime Equip									
VSW MCM	4.544	.781	.792	1.124					7.896
NBOE		.921	1.596						2.024
STD							1.931		2.923
MK 8 Mod SDV	10.512	10.025	1.768	2.104	2.391	1.947	1.600	Cont.	Cont.

D. Acquisition Strategy

- ASDS. ASDS was designated an Acquisition Category (ACAT) 1C Major Defense Acquisition Program in Mar 03. Milestone C decision from ASN RDA scheduled for Feb 04 will determine acquisition strategy for remaining ASDS.

- HRLMD. Established to acquire a small, handheld unit to be used by NSW forces in the conduct of clandestine hydrographic reconnaissance, ship attack and harbor penetration missions. The program utilizes commercial-off-the-shelf (COTS) technology and employs a phased acquisition strategy designed to leverage similar efforts currently being pursued by the Navy. Following user evaluation of prototype units and further design refinement, as well as developmental testing and a follow-on operational assessment, the program was authorized to proceed with production.

- NBOE. Transition of technology demonstrator to an acquisition program which commenced with advanced demonstration and validation. Modifications to current Military Amphibious Reconnaissance System engine include advanced electronically controlled direct fuel injection and ignition technologies. A competitive source selection was held, with three vendors responding, resulting in a down-select to a single contractor. That contractor filed Chapter 11 bankruptcy and the purchasing company has assumed development duties.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Underwater Systems Advanced Development/Project S0417	

- SAHRV. The SAHRV is a small unmanned underwater vehicle for use by NSW personnel in the conduct of hydrographic reconnaissance. SAHRV utilizes COTS technology and employs a phased acquisition strategy designed to leverage Office of Naval Research sponsored initiatives. Four Engineering Development Models (EDM) were delivered in December 2000. The EDM supported developmental testing and operational testing and evaluation. Following operational testing and evaluation, a production decision commenced the production phase. Initial operational capability was completed 2nd Qtr FY03. Full operational capability of 14 units is planned to be completed by 2nd Qtr FY04.

- SDV. This effort replaces obsolete and/or unsupportable electronics equipment with current equipment. Identification and development of equipment for installing, upgrading and/or replacing systems on the SDV will be accomplished through either Best-Value acquisition or, where appropriate, original equipment manufacturer replacement efforts.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Underwater Systems Advance Development/S0417								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY04	Award Date FY04	Budget Cost FY05	Award Date FY05	Budget Cost FY06	Award Date FY06	To Complete	Total Program
Primary Hardware Dev											
SAHRV	FFP	WHOI, Woods Hole, MA	5.176	0.387	Jan-04	0.060	Jan-05				5.623
HRLMD	FFP	UT-ARL, Austin, TX	0.500								0.500
NBOE	Various	Various	0.757								0.757
SDV	WR	CSS, Panama City, FL	12.631	0.572	Various	0.581	Various		Various	Cont.	Cont.
STD	FFP	Stidd Systems, Inc. Greenport, NY	0.378								0.378
ASDS	CPIF/C	Northrop-Grumman	299.468							Cont.	Cont.
ASDS	CPFF	Newport News Ship Yard, VA	8.605							Cont.	Cont.
ASDS P3I and Host Support	Various	Various	26.243	9.606	Various	1.618	Various	2.110	Various		45.071
Subtotal Product Dev			353.758	10.565		2.259		2.110		Cont.	Cont.
Remarks											
Technical Data											
ASDS	Various	Various	8.044								8.044
SAHRV	WR	CSS, Panama City, FL		0.113	Jan-04	0.035	Jan-05				0.148
HRLMD	WR	CSS, Panama City, FL	0.200								0.200
NBOE	WR	CSS, Panama City, FL	0.043	0.024	Jan-03						0.067
Subtotal Supt.			8.287	0.137		0.035		0.000		0.000	8.459
Remarks											
Test & Evaluation											
Engineering T&E (NBOE)	Various	Various	0.268								0.268
DT&E (STD)	MIPR	CSS, Panama City, FL	0.357								0.357
OT&E (ASDS)	Various	OPTEVFOR, Norfolk, VA	3.085	2.500	Various						5.585
Host Testing (ASDS)	Various	NAVSEA, Washington Navy Yard	20.615								20.615
Launch & Recovery Trials (ASDS)	Various	NAVSEA, Washington Navy Yard									0.000
LFT&E (ASDS)	Various	NAVSEA, Washington Navy Yard	1.150	0.500	Various						1.650
DT&E (SAHRV)	WR	CSS, Panama City, FL	0.222					0.050	Oct-04		0.272
DT&E (SAHRV)	WR	CARDEROCK, West Bethesda, MD	0.037								0.037
OT&E (SAHRV)	WR	OPTEVFOR, Norfolk, VA	0.049								28.784

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Underwater Systems Advance Development/S0417								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY04	Award Date FY04	Budget Cost FY05	Award Date FY05	Budget Cost FY06	Award Date FY06	To Complete	Total Program
Test & Evaluation (Cont.)											
DT&E (HRLMD)	WR	CSS, Panama City, FL	0.118								0.118
OT&E (HRLMD)	WR	TBD	0.020								0.020
DT&E (NBOE)	MIPR	CSS, Panama City, FL		0.095	Jan-03						0.095
OT&E (NBOE)	WR	OPTEVFOR, Norfolk, VA		0.048	Jan-03						0.048
Subtotal T&E			25.921	3.143		0.000		0.050			0.138
Remarks											
Management											
Contract Eng. Supt. (SAHRV)	FFP	ANADAC, Arlington, VA	0.898								0.898
Govt. Eng. Supt. (SAHRV)	WR	CSS, Panama City, FL	0.910	0.070	Jan-03	0.074	Jan-04	0.040	Jan-05	0.254	1.348
Program Mgt. Supt.(SAHRV)	WR	NAVSEA, Washington, DC	0.250	0.025	Feb-03	0.027	Jan-04	0.016	Jan-05	0.077	0.395
Contract Eng. Supt. (HRLMD)	FFP	ANADAC, Arlington, VA	0.050								0.050
Govt. Eng. Supt. (HRLMD)	WR	CSS, Panama City, FL	0.089								0.089
Program Mgt. Supt. (HRLMD)	WR	NAVSEA, Arlington, VA	0.072								0.072
Contract Eng. Supt. (NBOE)	FFP	DMR, Panama City, FL	0.165	0.019	Jan-03						0.184
Program Mgt. Supt (NBOE)	MIPR	CSS, Panama City, FL	0.832	0.052	Jan-03						0.884
Program Mgt Spt (SDV)	WR	NAVSEA, Arlington, VA	0.433							Cont.	Cont.
Various (ASDS)	Various	Various	9.197	2.700	Various					Cont.	Cont.
Program Mgt Supt. (STD)	Various	Various	0.031								0.031
Govt. Eng Support (STD)	MIPR	CSS, Panama City, FL	0.043								0.043
Subtotal Management			12.970	2.866		0.101		0.056		Cont.	Cont.
Remarks:											
Total Cost			400.936	16.711		2.395		2.216		Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development
	Project Number and Name Project S0417/Underwater System Advanced Development

Fiscal Year	2004				2005				2006				2007				2008				2009							
	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
Advanced Sea, Air Land (SEAL Delivery System																												
P3I Development																△												
Non-Gasoline Burning Outboard Engine																												
Development/ Testing	△																											
Milestone C			△																									
Naval Special Warfare Very Shallow Water Mine Countermeasures																												
P3I (SAHRV)									△																			
SEAL Delivery Vehicle																												
Develop and Test Improved Electronics												△																
Next Generation Studies																					△			△				
Develop Alternative Mobility									△			△																

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S0417/Underwater Systems Advanced Development				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
Advanced Sea, Air, Land (SEAL) Delivery System								
P3I Development	1-4Q	1-4Q	1-4Q	1-4Q				
Non-Gasoline Burning Outboard Engine								
Development/Testing	1Q							
Milestone C	3Q							
Naval Special Warfare Very Shallow Water Mine Countermeasures								
P3I (SAHRV)	1-4Q	1-4Q	1Q					
SEAL Delivery Vehicle								
Develop and Test Improved Electronics	1-4Q	1-4Q	1-4Q					
Next Generation Studies						1-4Q		
Develop Alternative Mobility			1-4Q					

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOFPARS/Project S350	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOFPARS	1.617	2.516	6.916	3.832	3.757	3.868	3.967
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: Special Operations Forces (SOF) Planning and Rehearsal System (SOFPARS) provides automated integrated mission planning and execution tools required for time critical command and control of globally deployed SOF and, if required, coalition forces. The SOFPARS Program 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. SOFPARS spans all echelons of SOF command to include Theater Special Operations Commands (TSOCs), Joint Special Operations Task Forces (JSOTFs), Joint Special Operations Aviation Components (JSOAC), with automated interfaces to warfighters and warfighting platforms. SOFPARS develops and integrates software applications

B. Accomplishments/Planned Program:

	FY 2003	FY 2004	FY 2005
Planned Portable Flight Planning Software (PFPS) releases	0.747	1.496	2.383
RDT&E Articles Quantity			

FY03 Released PFPS 3.3, 1QFY04. Continued to develop joint version PFPS 4.0 with Army, Air Force and Navy functions, planned release 4QFY05. Also continue to develop PFPS 3.3.1 with planned release 4QFY04.
FY04 Begin development of SOC-level software development and integration. First-look migration evaluation of Joint Mission Planning System (JMPS). Transition planning and software conversion to JMPS framework begins.
FY05 Continue development of SOC-level software development and integration. Continue migration evaluation of JMPS. Continue transition planning and software conversion to JMPS framework.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOFPARS/Project S350	

	FY 2003	FY 2004	FY 2005
Deferred/Future Requirements	.520	.630	.503
RDT&E Articles Quantity			

FY03 Developed and integrated aircraft weapons/electronics enhancements and interfaces with joint systems.
FY04 Continue to develop and integrate aircraft weapons/electronics enhancements and interfaces with joint systems.
FY05 Continue to develop and integrate aircraft weapons/electronics enhancements and interfaces with joint systems.

	FY 2003	FY 2004	FY 2005
Development and Modification of Automated Tools			3.600
RDT&E Articles Quantity			

FY05 Begin the development and modification of automated tools to meet ground mission planning requirements. Begin the development of TSOC Command and Control (C2) nodes.

	FY 2003	FY 2004	FY 2005
Test and Evaluation of Core Software	0.350	.390	.430
RDT&E Articles Quantity			

FY03 Continued test and evaluation on core software, installable software modules, aircraft weapons/electronics, and flight performance models.
FY04 Continue test and evaluation on core software, installable software modules, aircraft weapons/electronics, and flight performance models.
FY05 Continue test and evaluation on core software, installable software modules, aircraft weapons/electronics, and flight performance models.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	SOFPARS/Project S350	

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
SOFPARS		0.290	0.192	0.661	0.471	0.491	0.495	Cont.	Cont.

Acquisition Strategy. Develop mission planning software to support SOF operations by leveraging ongoing personal computer-based efforts known as Portable Flight Planning Software (PFPS) under the Air Force Mission Support System program and migration to the Joint Mission Planning System in the future year defense program. 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. Maximize 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 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Forces Planning and Rehearsal System /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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Subtotal Product Dev											
Remarks:											
Development Support	C/CPFF	CAS, Huntsville, AL	2.564	0.630	Dec-03	0.503	Dec-04			Cont.	Cont.
	C/CPFF	LMFS, Owego, NY	7.629								7.629
	Various	Various	0.847			0.600	Dec-04				0.847
Software Dev/Integ	SS/CPFF	GTRI, Atlanta, GA	3.723	1.496	Apr-04	2.383	Apr-05			Cont.	Cont.
	T&M	Tybrin, Ft Walton Beach, FL	5.346								5.346
	Various	Various	2.099								2.099
	Various	Various				3.000	Various				
Subtotal Spt			22.208	2.126		6.486				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Forces Planning and Rehearsal System /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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Developmental Test & Eval	MIPR	46th FTS, Hurlburt Field, FL	1.285	0.165	Apr-04	0.180	Apr-05			Cont.	Cont.
	SS/CPFF	ARINC, Annapolis, MD	0.784	0.225	Apr-04	0.250	Apr-05			Cont.	Cont.
	SS/CPFF	Salinas Tech, FL	0.017								0.017
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			3.028	0.390		0.430				Cont.	Cont.
Remarks:											
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			37.485	2.516		6.916				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																																
																	Date: FEBRUARY 2004																
Appropriation/Budget Activity									Program Element Number and Name														Project Number and Name									
RDT&E/7									PE1160404BB/Special Operations Tactical System Development														Project S350/SOFPARS									
Fiscal Year	2004				2005				2006				2007				2008				2009											
	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 (PFPS) Releases 4.0	△	—	—	—	—	—	—	△																								
JMPS										△	—	△	△	—	—	△	△	—	—	△	△	—	—	△								
PFPS Functionality	△	—	△		△	—	△		△	—	△		△	—	△		△	—	△		△	—	△									
Route Analysis Tool	△	—	△		△	—	△		△	—	△		△	—	△		△	—	△		△	—	△									
Mission Planning Module	△	—	△		△	—	△		△	—	△		△	—	△		△	—	△		△	—	△									
Development of Automated Tools						△	△																				—	—	—	—	—	—
TSOC C2 Planning Tools						△	△		△	—	—	△																				
TSOC C2 Nodes					△	—	△																									

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S350/SOFPARS				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
Mission Planning Environment Software Suite								
Portable Flight Planning System (PFPS) Releases								
4.0 Joint Build	1-4Q	1-4Q						
Joint Mission Planning System (JMPS)			2-4Q	1-4Q	1-4Q	1-4Q		
Aircraft/Weapons & Electronics Software Modules								
Enhancements required to take advantage of new								
PFPS Functionality	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q		
Route Analysis Tool	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q		
Mission Planning Module	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q	1-3Q		
Development of Automated Tools		2-3Q						
TSOC C2 Planning Tools		2-3Q	1-4Q					
TSOC C2 Nodes		1-3Q						

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Weapons and Support Sys Adv Dev	4.158	7.299	5.758	4.401	.386	.587	.256
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:

- 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.

- 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 with effective detection ranges that allow for the conduct of counter-sniper operations.

- 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 effort was transitioned from Project S200 in FY 2002.

- 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) is a subproject of the M4MOD program to further enhance the performance of SOF equipment. The SCAR will provide an enhanced family of weapons.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

- 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.

B. Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
BALCS		.203	
RDT&E Articles Quantity		150	

FY04 Conduct ballistics testing on Special Operations Forces (SOF) multi hit APM2 plates and other non-SOF plates for the purpose of establishing a body armor ballistics protection database.

	FY 2003	FY 2004	FY 2005
FSDS		2.417	
RDT&E Articles Quantity			

FY04 DD Fm 1415 request submitted to Office of the Secretary of Defense to reprogram this Congressional Plus-up from RDT&E to Procurement to continue buying out the basis of issue of Gunfire Detection Systems (GDS).

	FY 2003	FY 2004	FY 2005
LCMR	.300	.966	
RDT&E Articles Quantity			

FY03 Completed additional research and development prior to production decision on two working prototypes transitioned from technology development program.
FY04 Congress added funds to further develop the pre-production prototype LCMRs and investigate alternative sources that may possibly meet the LCMR Operational Requirements Document.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

	FY 2003	FY 2004	FY 2005
M4MOD	.235	1.099	1.796
RDT&E Articles Quantity			

FY03 Developed Enhanced Combat Optical Sights and clip-on night vision devices, and continued efforts on the Enhanced Grenade Launcher Module (EGLM).
FY04 Research, develop and test the next generation day/night and various next generation lasers and continue efforts on the EGLM. Funds will also support document preparation and solicitation in support of a MS B decision and conduct early user assessments and developmental testing on candidate SCAR weapon systems.
FY05 Research, develop and test the next generation kit items and continue efforts on next generation lasers. Funds will also be used to award contracts for SCAR engineering test units and to conduct an additional early user assessment and development testing.

	FY 2003	FY 2004	FY 2005
NVD	3.623	2.614	.969
RDT&E Articles Quantity			10

FY03 This initiative was Congressional Plus-up funding used to develop and test the next generation laser target designator.
FY04 Design and test the next generation SOF NVD.
FY05 Design and test the next generation (fusion) SOF goggle. The fusion goggle combines an image intensification tube and a thermal micro bolometer sensor to provide the ability for the SOF operator to improve his ability to see in dust, smoke, fog, and periods of non-ambient light.

		FY 2003	FY 2004	FY 2005
PLTD				2.993
RDT&E Articles Quantity				30

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

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Small Arms and Weapons	115.346	74.657	8.221	30.758	40.091	48.695	27.697	Cont.	Cont.

D. Acquisition Strategy.

- BALCS. Maximizes the use of Commercial Off the Shelf (COTS) and Non-Developmental Item technology, combined milestone decisions, early user involvement, Integrated Product Teams and streamlined source selection procedures to rapidly build, test and field operational capability.

- FSDS. The GDS 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 Milestone C, Full Rate Production and Fielding and Deployment Release.

- LCMR. Transitioned the program from Director of Technology to a Program Executive Office, with two working prototypes. Conduct additional research and development prior to production decision.

- M4MOD. The intent of the M4MOD program is to provide SOF with the ability to adapt the M4A1 Carbine to increase its operational effectiveness through improved target recognition, acquisition, and hit capability during day and night from close quarters to 600 meters. The program calls for continuing efforts contained in blocks that are first developed and tested, and then fielded to the full spectrum of SOF operators. Future blocks include a program to develop a pocket scope mount, an enhanced M203 capability, family of muzzle break suppressors, shot counter and numerous other components designed to enhance the capabilities of the weapon while at the same time combining or increasing capability. The SCAR effort will use an evolutionary acquisition approach.

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

- PLTD. The PLTD will leverage COTS capability and develop a more accurate laser targeting device capable of providing geo-location of a target for the delivery of global positioning system guided munitions. The improved accuracy is necessary to eliminate the possibility of fratricide incidents.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Hardware Dev											
BALCS (Test Articles)	Various	PM Spear, Natick, MA		0.050	Various					Cont.	Cont.
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.050							Cont.	Cont.
M4MOD	Various	NSWC-Crane, Crane, IN	3.733	0.225	Various	0.346	Various			Cont.	Cont.
NVD	TBD	Various	3.000	0.904	Various	0.287	Various			Cont.	Cont.
PLTD	TBD	PM Sensors & Lasers, Ft. Belvoir, VA				2.000	Various			Cont.	Cont.
Subtotal Product Dev			6.783	1.179		2.633				Cont.	Cont.
Remarks:											
Development Spt											
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.202	0.128	Various	0.225	Various			Cont.	Cont.
NVD	TBD	Various	0.100	0.824	Various	0.231	Various			Cont.	Cont.
PLTD	TBD	PM Sensors & Lasers, Ft. Belvoir, VA				0.250	Various			Cont.	Cont.
Intregrated Logistics Spt											
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.073	0.072	Various	0.108	Various			Cont.	Cont.
Configuration Mgmt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ		0.100	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.107	0.072	Various	0.108	Various			Cont.	Cont.
NVD	TBD	Various	0.027	0.330	Various	0.102	Various			Cont.	Cont.
PLTD	TBD	PM Sensors & Lasers, Ft. Belvoir, VA				0.250	Various			Cont.	Cont.
Subtotal Spt			0.509	1.526		1.274				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Developmental Test											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ		0.250	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.292	0.214	Various	0.444	Various			Cont.	Cont.
PLTD	TBD	PM Sensors & Lasers, Ft. Belvoir, VA				0.493	Various			Cont.	Cont.
Operational Test											
BALCS	SS/FFP	HP White Lab, Street, MD		0.070	Mar-04					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.150	0.350	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.360							Cont.	Cont.
SPEAR	ALLOT	Natick Soldier Center, Natick, MA	0.346							Cont.	Cont.
NVD	TBD	Various	0.100	0.500	Various	0.249	Various			Cont.	Cont.
Subtotal T & E			1.248	1.384		1.186				Cont.	Cont.
Remarks:											
Government Eng Spt											
BALCS	ALLOT	PM SPEAR, Natick, MA		0.050	Various					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.050	0.066	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.118	0.007	Various	0.013	Various			Cont.	Cont.
Program Mgmt Spt											
BALCS	ALLOT	PM SPEAR, Natick, MA		0.025	Various					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.050	0.150	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.381	0.280	Various	0.459	Various			Cont.	Cont.
Travel											
BALCS	ALLOT	PM SPEAR, Natick, MA		0.010	Various					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ		0.050	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.130	0.100	Various	0.093	Various			Cont.	Cont.
NVD	TBD	Various	0.100	0.055	Various	0.100	Various			Cont.	Cont.
Subtotal Management			0.829	0.793		0.665				Cont.	Cont.
Remarks:											
FSDS DD Form 1415 to re-color to Procurement				2.417							
Total Cost			9.369	7.299		5.758				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004
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	2004				2005				2006				2007				2008				2009			
	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. Body Armor/Load Carrying System																								
Ballistic Plate Test		◁—▷																						
Ballistic Plate Effectiveness Database			◁—▷																					
Ballistic Plate Test Report				▷																				
2. Family of Sniper Detection Systems																								
No RDT&E activities planned - DD Fm 1415 reprogramming request submitted to change funding to Procurement for purchase of production systems.																								
3. Lightweight Counter Mortar Radar																								
Developmental Test (DT)	◁—	▷																						
Operational Test (OT)	◁—	—▷																						
MS B				▷																				
MS C									▷															
IOC											▷													
FOC															▷									

Exhibit R-4, Schedule Profile			Date: FEBRUARY 2004
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

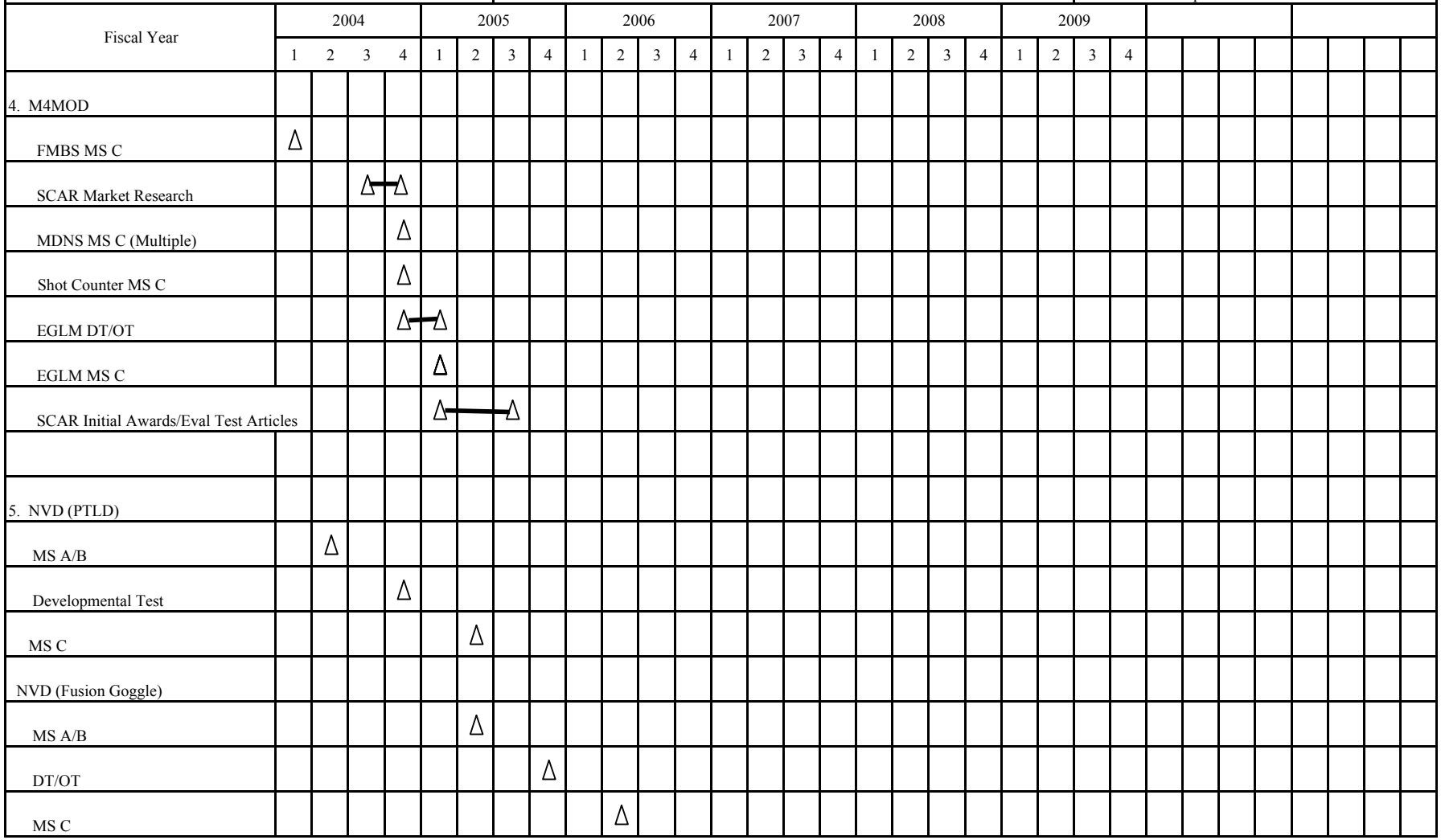

Exhibit R-4, Schedule Profile																																		
																Date: FEBRUARY 2004																			
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development														Project Number and Name Project S375/Weapons and Support Systems Advanced Development											
Fiscal Year	2004				2005				2006				2007				2008				2009													
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4										
5. NVD (PTLD) Cont'd																																		
NVD (Next Generation Monocular)																																		
MS A/B									Δ																									
DT/OT											Δ																							
MS C													Δ																					
NVD (Countermeasures)																																		
MS A/B													Δ																					
DT/OT																Δ																		
6. PLTD																																		
MS A/B					Δ																													
Developmental Test								Δ																										

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
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	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
1. Body Armor/Load Carrying System								
Ballistic Plate Test	2-3Q							
Ballistic Plate Effectiveness Database	3-4Q							
Ballistic Plate Test Report	4Q							
2. Family of Sniper Detection Systems								
No RDT&E Activities planned - DD Fm 1415								
request submitted to change RDT&E to								
Procurement to purchase production systems								
3. Lightweight Counter Mortar Radar								
Developmental Test	1Q							
Operational Test	1-2Q							
Milestone B	4Q							
Milestone C			1Q					
IOC			3Q					
FOC				3Q				
4. M4MOD								
FMBS MS C	1Q							
SCAR Market Research	3-4Q							
MDNS MS C (Multiple)	4Q							
Shot Counter MS C	4Q							
EGLM DT/OT	4Q	1Q						
EGLM MS C		1Q						
SCAR Initial Awards/Eval Test Articles		1-3Q						

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
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	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
5. NVD (PTLD)								
MS A/B	2Q							
Developmental Test	4Q							
MS C		2Q						
NVD (Fusion Goggle)								
MS A/B		2Q						
DT/OT		4Q						
MS C			2Q					
NVD (Next Generation Monocular)								
MS A/B			1Q					
DT/OT			3Q					
MS C				1Q				
NVD (Countermeasures)								
MS A/B				1Q				
DT/OT				4Q				
6. PLTD								
MS A/B		1Q						
Developmental Test		4Q						

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Training Systems /Project S625	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SOF Training Systems	.169	13.537	4.765	11.203	4.489	5.111	1.165
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification**:** This project funds the analysis, development, test, and integration of Special Operations Forces (SOF) simulator training and mission rehearsal systems and upgrades. Sub-projects include:

- MH-47G/MH-60-BLK-1 Combat Mission Simulator (CMS) – Develops a common database (using a single common source) used to run all the different computers on the simulator, including the visual, sensor, threat, weather, and computer generated forces. The common environment developmental effort will enable increased levels of Joint Simulator interoperability because, eventually, all SOF simulators will use and share the common single source. Will be initially developed, tested and fielded on the first MH-47G Model Simulator for the 160th Special Operations Aviation Regiment..

- SOF Air to Ground Interface Simulator (SAGIS) for Air Force Special Operations Command (AFSOC) Combat Controllers and United States Army Special Operations Command (USASOC) Special Forces Teams. Develops training capability to allow Ground units to virtually interface with SOF Aircrews to practice and rehearse Joint Close Air Support, Terminal Attack Control, and ordnance delivery. Funds the initial development using incremental, spiral development methodology.

- A/MH-6 CMS. Develops 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.

- AFSOC Simulator Block Upgrade. Funds the upgrade of the AFSOC simulators to overcome obsolescence and concurrency issue. Additionally develops a common electronic warfare.

- USASOC Simulator Block Upgrade. Funds the upgrade of USASOC simulators to overcome obsolescence and concurrency issues.

B. Accomplishments/Planned Program

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Training Systems /Project S625	

	FY03	FY04	FY05
MH-47-60 CMS		8.255	3.791
RDT&E Articles Quantity			

FY04 Develop the Common Environment for the new MH-47G/60 CMS and the MH- 60 Block-1 in the Common Avionics Architecture System (CAAS) configuration to improve joint rehearsal capability and yield higher fidelity Joint Distributed Mission Training/Distributed Mission Rehearsal (DMT/DMR). Develop a joint common architecture resulting in higher levels of correlation between the simulator's out the window view, sensors, threat, weather, and weapons effects with the rest of the SOF training and rehearsal network.
FY05 Continue development of the new MH-47/G/60 CMS and the MH-60 Block-1 in the CAAS configuration to improve joint rehearsal capability and yield higher fidelity Joint DMT/DMR. Develop a joint common architecture resulting in higher levels of correlation between the simulator's out the window view, sensors, threat, weather, and weapons effects with the rest of the SOF training and rehearsal network.

	FY03	FY04	FY05
SAGIS		4.059	
RDT&E Articles Quantity			

FY04 Begin increment zero of the first SAGIS prototype, focusing on the Terminal Attack Control requirements.

	FY03	FY04	FY05
CMS	.169		
RDT&E Articles Only			

FY03 Funded an A/MH-6 upward adjustment due to Canadian/U.S. exchange rate calculation.

	FY03	FY04	FY05
AFSOC Simulator Block Upgrade			.974
RDT&E Articles Quantity			

FY05 Begins Requirements Analysis and Concept Exploration for a common threat environment/AFSOC Electronic Warfare Officer Station.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Training Systems /Project S625	

	FY03	FY04	FY05
USASOC Simulator Block Upgrade		1.223	
RDT&E Articles Only			

FY04 Funds the upgrade of USASOC simulators to overcome obsolescence and concurrency issues

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Proc, SOF Training Systems	24.434	65.716	49.192	24.298	25.662	110.665	28.834	Cont.	Cont.

D. Acquisition Strategy. MH 47G/60 BLK-1 Part task Trainers, Developable Mission Rehearsal Devices, and Combat Mission Simulators developed in concert with the Common architecture developed using a spiral development, phased approach.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Forces (SOF) Training System /S625								
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
USASOC Simulator Block Upgrade Program	FFP	PEO STRI, Orlando, FL		1.223	Mar-04						1.223
MH-47G/60M CMS	CPAF	PEO STRI, Orlando, FL		8.255	Feb-04	3.791	Feb-04				12.046
SAGIS - Increment 0	CPAF	PEO STRI, Orlando, FL		4.059	Feb-04						4.059
AFSOC Simulator Block Upgrade	FFP	Hill AFB, UT				0.974					0.974
A/MH-6 CMS	CPAF	PEO STRI, Orlando, FL	21.583								21.583
Subtotal Product Dev			21.583	13.537		4.765					39.885
Remarks:											
Total Cost			21.583	13.537		4.765					Cont.
Remarks:											

Exhibit R-4, Schedule Profile																													
												Date: FEBRUARY 2004																	
Appropriation/Budget Activity RDT&E/7					Program Element Number and Name PE1160404BB/Special Operations Tactical System Development																Project Number and Name Project S625/SOF Training System							
Fiscal Year	2004				2005				2006				2007				2008				2009							
	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 SBUD																												
MH60/47 CMS																												
SAGIS Increment 0																												
AFSOC SBUD																												

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S625/SOF Training Systems				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
USASOC SBUD	4Q	2Q						
MH-47G/60M CMS	2Q	2-4Q	2Q					
SAGIS Increment 0	2Q	3Q						
AFSOC SBUD		2Q	3Q					

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Aviation Sys Adv Dev	66.944	67.713	103.982	59.662	23.156	10.730	8.803
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project investigates the applicability of current and maturing technologies that have great potential for direct application to the development and procurement of specialized equipment to meet 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) radios and radar; LPI formation/rendezvous flight; digital terrain elevation data and electronic order of battle; digital maps; LPI radar altimeter; display technology; situational awareness; near-real-time intelligence to include data fusion; laser radar/millimeter wave radar obstacle avoidance; imagery; 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. Sub-projects include:

- AC-130U Pre-Planned Product Improvement. Provides correction of system deficiencies and enhancement of mission capabilities for the AC-130U Gunship fleet.

- 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 initiates development of terrain following/terrain avoidance (TF/TA) radar having LPI/LPD characteristics for SOF C-130s. It also initiates development of an On-Board Enhanced Situational Awareness System (OBESA) which consolidates threat data from on and off-board sensors into a single coherent image to the crew. OBESA will be integrated on SOF C-130s, CV-22s, MH-60s and MH-47s.

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

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

- Leading Edge Technology. This program is directed toward improving near-real-time intelligence on SOF aircraft. This program will mature technologies enabling exploitation of vibroacoustic signatures relating to targets or tracking of friendly forces.

- MC-130H Aerial Refueling (MCAR). Provides 22 Air Force Special Operations Command MC-130H Combat Talon II aircraft with the capability to air refuel Special Operations Forces rotary wing aircraft. This extends the range of rotary wing aircraft operating in politically sensitive/denied airspace. Elements of the air refueling system include non-developmental item aerial refueling pods, 2 internal flat stackable tanks, and enlarged paratroop door windows.

- Digital Auto Flight Control System (DAFCS). This is a congressional plus-up for the MH-47s.

B. Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
AC-130U Pre-Planned Product Improvement		2.356	
RDT&E Articles Quantity			

FY04 Initiate risk reduction strategies for an All Light Level Television replacement.

	FY 2003	FY 2004	FY 2005
Aviation Engineering Analysis	.453	1.333	1.447
RDT&E Articles Quantity			

FY03 Continued engineering analysis of SOF fixed wing aircraft avionics and sensors.
FY04 Continue engineering analysis of SOF fixed wing aircraft avionics and sensors.
FY05 Continue engineering analysis of SOF fixed wing aircraft avionics and sensors.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

	FY 2003	FY 2004	FY 2005
Common Avionics Architecture for Penetration (CAAP)	42.631	41.346	74.849
RDT&E Articles Quantity			

FY03 Continued TF/TA and off-board ESA development under the US Air Force AMP contract. Continued integration and test of TF/TA radar; began CAAP risk reduction effort; completed CAAP hardware and software specification reviews; continued development and integration of intelligence broadcast receiver.
FY04 Accelerate TF/TA and off-board ESA development under the US Air Force AMP contract. Department of Defense accelerated CAAP in FY 2004 for TF/TA development and qualification. This acceleration was necessitated by a 26 month slip in the Air Force AMP program which creates unacceptable risks and cost to SOF's effort to field additional MC-130H Combat Talon IIs to address low density/high demand issues. Specific CAAP activities scheduled are acceleration of TF/TA risk reduction, initiation of developmental testing for MC-130H platforms, CAAP hardware preliminary design review; and CAAP software specification review.
FY05 Continue acceleration of TF/TA and off-board ESA development. Specific activities scheduled for FY05: AMP/CAAP preliminary and critical design reviews; Gunship software specification review; and test readiness review for Talon I preliminary DT&E.

		FY 2003	FY 2004	FY 2005
CAAP On-Board ESA		4.903	16.717	22.323
RDT&E Articles Quantity				

FY03 Initiated development of below line-of-sight (BLOS) On-Board ESA (OBESA) system. Initiated engineering analysis and development of special receiver technology for ESA.
FY04 Continue development of below line-of-sight OBESA system. Continue engineering analysis and development of special receiver, digital map and color displays. Develop software for correlation fusion of special receive data with off/on-board threat information.
FY05 Continue development of BLOS OBESA and special receiver systems. Continue integration and test of special receiver data with off/on-board threat information. Initiate development of special transmitter technology system.

	FY 2003	FY 2004	FY 2005
EC-130 Equipment Obsolescence			.678
RDT&E Articles Quantity			

FY05 Develop and design improvements to resolve special mission equipment obsolescence.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

	FY 2003	FY 2004	FY 2005
Leading Edge Technology	1.424		
RDT&E Articles Quantity			

FY03 This initiative is a Congressional plus-up. Continued effort focusing on Vivro-Electronic Signature Target Analysis and Passive Acoustic Reflection Device technologies to design and build an aircraft interface unit and associated algorithms for target characterization.

	FY 2003	FY 2004	FY 2005
MC-130H Aerial Refueling	17.533	1.902	4.685
RDT&E Articles Quantity			

FY03 Continued engineering and manufacturing development (EMD) activities. Initiated trial install and flight test.
FY04 Continued EMD activities. Continue flight testing of MC-130H MCARs.
FY05 Develop carry-on internal flat stackable tanks.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Proc, C-130 Mods	98.744	130.365	42.418	28.743	17.524	11.640	15.145	Cont.	Cont.

D. Acquisition Strategy.

- AC-130U P3I. Conduct engineering analysis to improve electro-optical sensor capability.
- 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.
- Common Avionics Architecture for Penetration (CAAP). Develop a common technical solution satisfying fixed and rotary wing requirements for penetration missions. The program will leverage knowledge gained on previously conducted advanced technology demonstrations to implement a low risk solution. The fixed wing application of CAAP will be accomplished by merging with the USAF C-130 Avionics Modernization Program (AMP).

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

- EC-130 Obsolescence. Initiate 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.

- MC-130H Aerial Refueling. Integrate a non-developmental item aerial refueling system onto MC-130H Talon II aircraft. The first phase of this program is Foreign Comparative Testing (FCT) of the MK 32B-902E Aerial Refueling POD. Phase II development of aircraft integration and production installations completed on a pre-competed contract with Boeing, Ft. Walton Beach, FL.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB 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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Primary Hardware Development											
CAAP	C/CPAF	Boeing, Long Beach, CA	78.817	41.346	Various	74.849	Various			35.205	230.217
Award Fees			2.081							Cont.	Cont.
MC-130 Air Ref	CPAF	Boeing, Ft. Walton Beach, FL	29.967	1.902	Jan-04	4.685	Jan-05				36.554
Leading Edge Technology	Allot	SPAWAR, Charleston, SC	8.635								8.635
CAAP OBESA	CPIF	Northrop Grumman, Dayton, OH	4.903	16.717	Various	22.323	Various			37.677	81.620
Digital Auto Flight Control System	Various	Boeing		4.059	Various						4.059
Subtotal Product Dev			124.403	64.024		101.857				Cont.	Cont.
Remarks:											
Development Support											
Engineering/Studies											
Aviation Engineering Analysis	Various	AF Research Laboratory	2.264	1.333	Various	1.447	Various			Cont.	Cont.
AC-130U Gunship P3I	Various	Various	4.785	2.356	Various						7.141
MC-130H Air Refueling	MIPR	46TH TW, Hurlburt Fld, FL	0.300								0.300
EC-130 Obsolescence	TBD	Lockheed Marietta				0.678	Various			Cont.	Cont.
Subtotal Spt			7.349	3.689		2.125				Cont.	Cont.
Remarks:											
Total Cost			131.752	67.713		103.982				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile			Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name SF100/Aviation System Advance Development

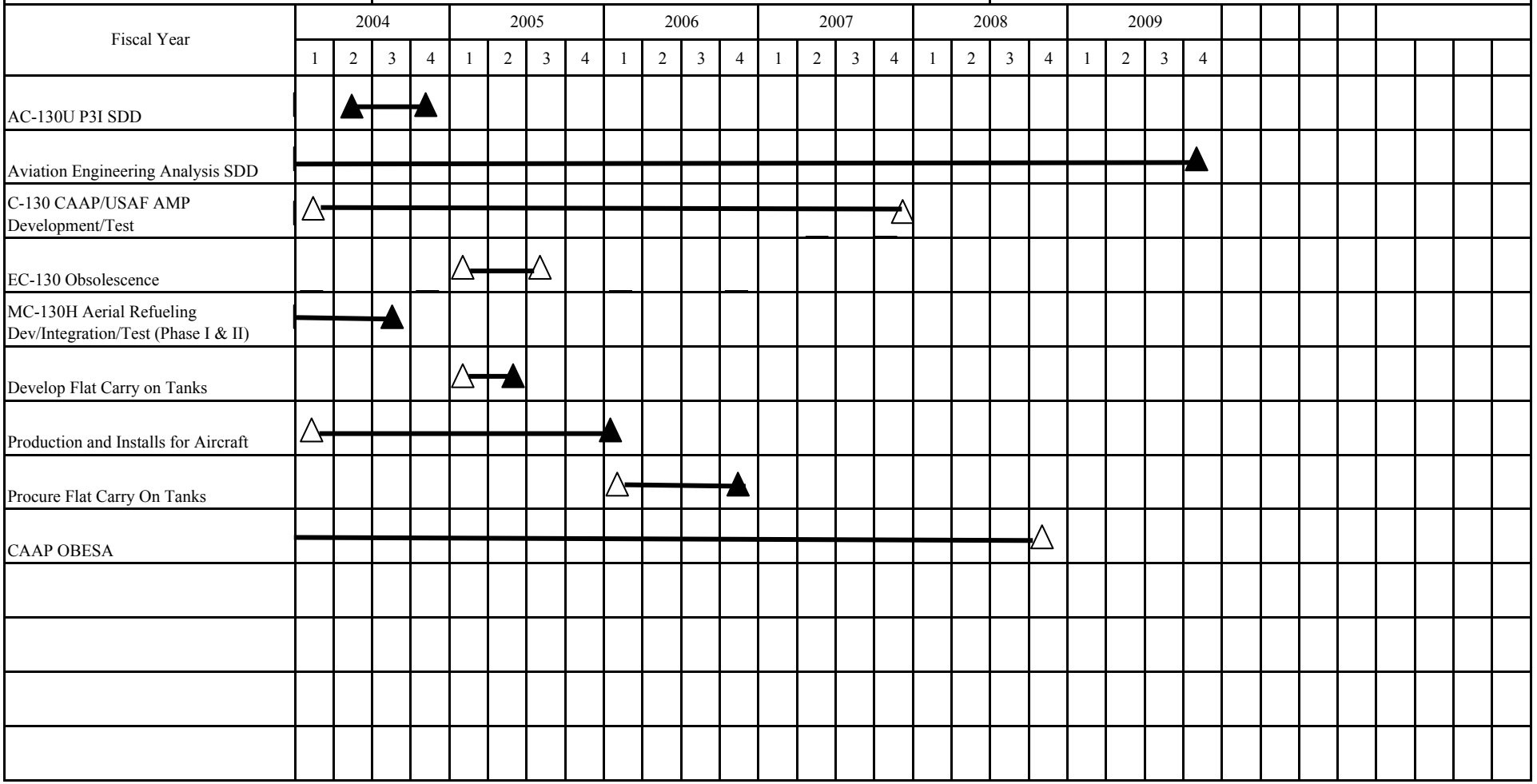

Exhibit R-4a, Schedule Profile			Date: FEBRUARY 2004					
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development		Project Number and Name Project SF100/Aviation Systems Advance Development					
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
AC-130U P3I - SDD	2-4Q							
Aviation Engineering Analysis - SDD	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				
EC-130 Obsolescence		1-3Q						
MC-130H Aerial Refueling Dev/Integration/Test (Phase I & II)	1-3Q							
Develop Flat Carry on Tanks		1-2Q						
Production and Installs (MCAR)	1-4Q	1-4Q	1Q					
Procure Flat Carry On Tanks			1-4Q					
CAAP OBESA	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q			

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	CV-22/Project SF200

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
CV-22	32.469	78.610	75.131	28.811			
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This program provides capabilities necessary to meet Special Operations Forces (SOF) operational requirements. The CV-22 acquisition program delayed the incorporation of some operational capabilities until the completion of a Block 10 (formerly Pre-Planned Product Improvement) CV-22 program. This strategy was based on a developmental funding cap agreed to by the Department of the Navy and the USSOCOM Acquisition Executive and concerns over the technical maturity of parallel acquisition programs. Block 10 includes integrating and testing the Directional Infrared Countermeasures (DIRCM), a system to provide protection against infrared guided missiles; design and integration 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; relocation of the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; addition of 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 the incorporation of a dual access feature to the Digital Map System to allow both the pilot and copilot to independently access and control the digital map display from the mission computer. This program includes modification of an existing undelivered MV-22 to a CV-22 Additional Test Aircraft (ATA) configuration.

B. Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
Dev/Integration/Test of Block 10 Program	32.469	33.734	67.015
ATA Modification		37.148	
RDT&E Articles Quantity			

FY03 Continued development, integration, and developmental testing of Block 10 capabilities; commenced ATA modification efforts.

FY04 Continue development and integration of Block 10 capabilities, to include the start of Block 10 flight testing; continue and complete ATA modification efforts.

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

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	CV-22/Project SF200

	FY 2003	FY 2004	FY 2005
Program Office Support		0.777	0.816
RDT&E Articles Quantity			

FY03 Continued program office support for Block 10 program.
FY04 Continue program office support for Block 10 program.
FY05 Continue program office support for Block 10 program.

	FY 2003	FY 2004	FY 2005
Engineering and Logistics Support	6.578	6.951	7.300
RDT&E Articles Quantity			

FY03 Continued engineering and logistics support for Block 10 program.
FY04 Continue engineering and logistics support for Block 10 program.
FY05 Continue engineering and logistics support for Block 10 program.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
Proc, CV-22 SOF Osprey	43.449	114.565	126.083	122.299	162.419	200.094	160.305	Cont.	Cont.

D. Acquisition Strategy. The CV-22 program is managed by the Navy V-22 program office (NAVAIR PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. RDT&E funding is sent from USSOCOM to PMA-275 to place on contract with the V-22 prime contractor. The RDT&E funding will be used to fund Block 10 (formerly Pre-Planned Product Improvement) development. Block 10 capability is required for full compliance with the Joint Operational Requirements Document. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget.

Exhibit R-3 COST ANALYSIS			DATE: FEBRUARY 2004								
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB 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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY05			To Complete	Total Program
Primary Hardware (H/W) Dev	SS/CPAF	NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD	120.957	30.868	Feb-04	64.104	Feb-05			Cont.	Cont.
Additional Test Aircraft (ATA) Modification	SS/CPAF/IF	NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD	31.797	30.798	Jan-04					0.000	62.595
Award/Incentive Fees											
Primary H/W Dev			4.890	2.866	Feb-04	2.911	Feb-05			Cont.	Cont.
ATA				6.350	Mar-04						
Subtotal Product Dev			157.644	70.882		67.015				Cont.	Cont.
Remarks:											
Contractor Engineering Spt	WR	Various		3.963	Dec-03	4.089	Dec-04			Cont.	Cont.
Government Engineering Spt	WR	Various	17.825	3.465	Dec-03	3.627	Nov-04			Cont.	Cont
Travel and Logistics			0.400	0.300	Dec-03	0.400	Nov-04			Cont.	Cont
Subtotal Management			18.225	7.728		8.116				Cont.	Cont
Remarks:											
Total Cost			175.869	78.610		75.131				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development
Project Number and Name Project SF200/CV-22	

Fiscal Year	2004				2005				2006				2007				2008				2009											
	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
Acquisition Milestones								V-22 MS III	△																							
CV-22 Block 10 Development											△																					
Block 0/10 Flight Test											△																					
CV-22 IOT&E												△		△																		
CV-22 Deliveries							PRTV #1 △		PRTV #2 △		Lot 8 Deliveries (2) △ △			Lot 9 Deliveries (3) △ △ △				Lot 10 Deliveries (2) △ △				Lot 11 Deliveries (2) △ △										
CV-22 IOC																						△										

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004					
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project SF200/CV-22					
Schedule Profile		FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
CV-22 Block 10 Development		1-4Q	1-4Q	1-3Q					
Block 0/10 Flight Test		1-4Q	1-4Q	1-3Q					
CV-22 IOT&E				4Q	1Q				
CV-22 Deliveries			3Q	1-3Q	2-4Q	2-3Q	2Q, 4Q		
CV-22 IOC							2Q		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations (SO) Intelligence Systems Development

COST (Dollars in Millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09	Cost to Complete	Total Cost
PE1160405BB	6.670	47.084	25.015	24.520	22.151	23.782	30.434	Cont.	Cont.
S400, SO INTELLIGENCE	6.670	47.084	25.015	24.520	22.151	23.782	30.434	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. The intelligence programs funded in this project are grouped by the level of organizational element they support: Operational Element (Team), Above Operational Element (Deployed), and Above Operational Element (Garrison).

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations (SO) Intelligence Systems Development

B. Program Change Summary:

Previous President's Budget	4.648	16.726	15.679
Current President's Budget	6.670	47.084	25.015
Total Adjustments	2.022	30.358	9.336
Congressional Program Reductions		-0.419	
Congressional Rescissions			
Congressional Increases		22.750	
Reprogrammings	2.022	8.926	9.336
SBIR Transfer		-0.899	

Funding:
FY03
- Internal reprogrammings within the Command resulted in a net increase of $2.022M to this program element for the following programs:
- $0.261M for development of the Multi-Mission Advanced Tactical Terminal program's embedded Integrated Broadcast Service (IBS) Receiver.
- $0.435M for development of a Digital Video Broadcast System.
- $0.300M for completion of development of the Joint Threat Warning System Ground Signals Intelligence Kit.
- $1.026M for development of the Special Operations Joint Interagency Collaboration Center.

FY04
- Congressional increases of $22.750M for the following programs:
- $2.450M for the development of the Joint Threat Warning System.
- $10.200M for the development of the Tactical Information Display.
- $4.000M for the development of the Advanced Manpack Threat Warning and Survival System.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2004
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations (SO) Intelligence Systems Development

- $0.500M for the completion of development of the Multi-Mission Advanced Tactical Terminal program's Embedded IBS Receiver (EIR) technology.
- $1.500M for the development of the Optimal Placement of Unattended Sensors.
- $1.600M for the development of the Special Operations Joint Interagency Collaboration Center.
- $1.750M for the development of the Covert Waveform.
- $0.750M for the development of the Integrated Survey Program.
- Funds were reduced for congressional pro rata reductions in the FY 2004 Appropriations Conference Report and for program share of Small Business Innovative Research calculation.
- OSD reprogrammed management of the Counter-proliferation Analysis and Planning System (CAPS) program from DTRA to USSOCOM beginning in FY04

FY05
- Transfer of funds from DTRA to USSOCOM ($9.398M) for CAPS.
- Funds were adjusted based on current inflation factors (-$0.062M).

Schedule: None.

Technical: The Remote Miniature Weather Station (RMWS) was moved to program element 1160404BB Special Operations Tactical Systems Development, subproject S700 Special Operations Communications Advanced Development since RMWS did not qualify as a Tactical Intelligence and Related Activities program.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

Cost ($ in millions)	FY03	FY04	FY05	FY06	FY07	FY08	FY09
SO Intelligence	6.670	47.084	25.015	24.520	22.151	23.782	30.434
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)

- Multi-Mission Advanced Tactical Terminal (MATT). The MATT is an Evolutionary Acquisition (EA) program that provides threat warning, force protection, enhanced situational awareness, and target acquisition information to SOF via receipt of Integrated Broadcast Service (IBS) data. IBS data supports mission planning and execution by aiding the warfighter with course of action analysis during infiltration and exfiltration from operating areas. The MATT program will employ continuing technology updates to address the changing threat environment by integrating IBS capabilities with Command, Control, Communications, and Intelligence (C3I) systems, e.g., Tactical Local Area Network (TACLAN), Joint Threat Warning System (JTWS), Common Avionics Architecture for Penetration (CAAP)-Enhanced Situational Awareness (ESA). MATT provides globally deployed SOF with an en-route capability to receive near-real-time intelligence data on the changing threat and target environment. The deployed teams and aircrews rely heavily on near-real-time IBS information to support combat mission planning, updates, and execution, including combat search and rescue, providing threat avoidance, detection, targeting, and blue force tracking information. MATT simultaneously receives, demodulates, decrypts, filters, processes, correlates, formats, and distributes four channels of IBS intelligence data. The Briefcase MATT (BMATT) is a smaller, two-channel IBS receiver with an integrated laptop for control and data display. The next generation system will be the Embedded IBS Receiver (EIR). This will be

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

available in a rugged, tactical terminal version for airborne applications (known as the Intelligence Broadcast Receiver (IBR) or as a module [known as the Embedded National Tactical Receiver (ENTR)] to embed into a variety of host systems, (e.g., TACLAN, JTWS, tactical radios).

- 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.

- JTWS. JTWS is an (EA) program that provides threat warning, force protection, enhanced situational awareness, and target 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 operation in Special Operations scenarios. All configurations 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 sensors in support of SOF mission planning efforts.

ABOVE OPERATIONAL ELEMENT (DEPLOYED)

Exhibit R-2a, RDT&E Project Justification		Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400	

- Special Operations Tactical Video System (SOTVS). The SOTVS/Reconnaissance Surveillance Target Acquisition (RSTA) program employs an evolutionary acquisition strategy to meet SOF reconnaissance and surveillance mission requirements. The program consists of a family of interoperable digital Commercial-Off-the-Shelf systems to capture and transfer near real time day/night tactical ground imagery utilizing SOF organic radios and global C4I infrastructure. These systems complement national and theater level collection efforts and facilitate decision making, mission planning and execution, and post-strike analysis. Three variants have been fielded: 1) SOTVS, a handheld digital still/video camera system consisting of two main components: a Digital Imaging Apparatus to include various lenses and night vision device; and a laptop computer with image manipulation, compression, transmission software and data controllers; 2) RSTA, a long-range remotely operated digital day/night video camera system; and 3) A digital still/video camera system with night vision capability.

ABOVE OPERATION ELEMENT (GARRISON)

- SOJICC is an EA program providing a state-of-the-art collaborative center designed to synthesize operation and intelligence information supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. The center fuses 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 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 RDTE funding at USSOCOM for overall program management. US 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). The SOCRATES program is a garrison

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

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, 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/COTS software.

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

- Integrated Survey Program (ISP) uses an evolutionary migration strategy to support Joint Staff contingency planning for conducting surveys on OCONUS facilities where U.S. country teams could be at risk. ISP consists of digital still and video cameras, laptops, Global Positioning Systems, rangefinders and software that are fielded to SOF units while in theater. The Digital Production System is a GOTS/COTS based system fielded to the USSOCOM Joint Intelligence Center. ISP continually develops and evaluates new intelligence systems technologies for integration to the ISP Data Collection System.

B. Accomplishments/Planned Program

	FY03	FY04	FY05
MATT	1.195	0.713	
RDT&E Articles Quantity			

FY03 This initiative was a Congressional Plus-Up. Funds were used to develop a common software baseline for Embedded IBS and a Digital Embedded Broadcast Receiver Appliqué (DEBRA).
FY04 This initiative is a Congressional Plus-up. Funds will be used to complete development of DEBRA and a common software baseline for SOF systems requiring an EIR.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

	FY03	FY04	FY05
NSSS SOF (NSSS)	1.830	1.294	1.338
RDT&E Articles Quantity			

FY03 Continued to leverage and develop space intelligence, surveillance, and reconnaissance technology developments with SOF utility from the National Community and Military Services. Continued to participate in reconnaissance/technology community programs to influence technology developments for SOF use.
FY04 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.
FY05 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.

	FY03	FY04	FY05
JTWS	1.546	20.392	3.017
RDT&E Articles Quantity			

FY03 The bulk of this initiative was funded by a Congressional Plus-up. Continued Ground Signal Intelligence Kit (GSK) development.
FY04 The bulk of this initiative was funded by a Congressional Plus-up. Complete GSK kit development and operational testing of GSK, initiate the air variant development and conduct an Advanced Concept Technology Demonstrations (ACTD) of a Manpack Signals intelligence capability and an ACTD of a tactical wireless information display suitable for various mission profiles and requirements.
FY05 Complete air variant development.

	FY03	FY04	FY05
OPUS	.960	1.450	
RDT&E Articles Quantity			

FY03 This initiative was a Congressional plus-up. Developed and demonstrated commercial technology used to identify the optimal placement of unattended sensors.
FY04 This initiative is a congressional plus-up. Continue to develop and demonstrate commercial technology used to identify the optimal placement of unattended sensors.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

	FY03	FY04	FY05
SOTVS		.020	.020
RDT&E Articles Quantity			

FY04 Conduct future system evaluation of digital imagery to SOF tactical communication systems in support of surveillance and reconnaissance missions.
FY05 Continue to conduct future system evaluation of digital imagery to SOF tactical communication systems in support of surveillance and reconnaissance missions.

	FY03	FY04	FY05
SOJICC	1.139	3.948	2.463
RDT&E Articles Quantity			

FY03 Continued systems engineering and program management efforts to achieve data compatibility by integrating different commercial off-the-shelf hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.
FY04 This initiative will be partially funded by a Congressional Plus-up. Continue systems engineering and program management efforts to achieve data compatibility by integrating different commercial off-the-shelf hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.
FY05 Continue systems engineering and program management efforts to achieve data compatibility by integrating different commercial off-the-shelf hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.

	FY03	FY04	FY05
CAPS		14.942	16.221
RDT&E Articles Quantity			

FY04 Supports 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 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.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

	FY03	FY04	FY05
SOCRATES		1.909	1.956
RDT&E Articles Quantity			

FY04 Initiate efforts to develop a Multi-Level Security 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 Continue efforts to develop a Multi-Level Security 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.

	FY03	FY04	FY05
Integrated Survey Program (ISP)		0.725	
RDT&E Articles Quantity			

FY04 Tested and integrated candidate replacement technologies for special events. Includes red-green-blue (color) integration with Laser Identification and Ranging via the Urban Reconnaisance ACTD.

	FY03	FY04	FY05
Covert Waveform		1.691	
RDT&E Articles Quantity			

FY04 This initiative is a Congressional Plus-up. Develop a new JTRS-compliant covert communication capability with embedded positive threat identification, using new Wavelet Packet Modulation technology.

C. Other Program Funding Summary:

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	To Complete	Total Cost
PROC, SOF Intelligence Systems	28.472	29.779	16.946	14.484	16.215	12.993	14.618	Cont.	Cont.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

D. Acquisition Strategy:

- MATT is an evolutionary acquisition program that will insert proven embedded Integrated Broadcast Service (IBS) receiver technologies into SOF systems/platforms requiring IBS data for a common hardware and software solution.

- 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 evolutionary acquisition program that provides threat warning, force protection, enhanced situational awareness, and target acquisition information to SOF via signal intercept, direction finding and Signals Intelligence (SIGINT). JTWS will employ continuing technology updates to address the changing threat environment.

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

- SOTVS will conduct future system evaluation of digital imagery to SOF tactical communication systems in support of surveillance and reconnaissance missions for candidates of capital equipment replacement.

- SOJICC is an EA program providing a state-of-the-art collaborative center designed to synthesize operation and intelligence information supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. The center fuses 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 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 and Chemical and Biological Defense Program 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

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2004
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changing threats. As such, this program will continue to depend upon on-going RDT&E funding from USSOCOM to meet these 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 2004					
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 FY04	Award Date FY04	Budget Cost FY05	Award Date FY0			To Complete	Total Program
Primary Hardware Dev	MIPR	SPAWAR, Charleston, SC	9.909	6.907	Mar-04	3.024	Mar-05			Cont.	Cont.
	Form 9	GovConnection, Rockville, MD	0.065								0.065
	Form 9	Raytheon, Ft Wayne, IN	0.261	0.232	Dec-03						0.493
	Form 9	ProLogic Inc., Fairmont, WV	0.960	1.450	Mar-04						2.410
Ancillary Hardware Dev											
Systems Engineering	Various	Various	1.228								1.228
	MIPR	SPAWAR, Charleston, SC	0.350								0.350
	MIPR	Lawrence Livermore National Labs, (LLNL)	4.964								4.964
		Livermore, CA									
Materiel/Equipment											
Subtotal Product Dev			17.737	8.589		3.024				Cont.	Cont.
Remarks:											
DERF Funds:											
Primary Hardware Development	Various	Various	1.548								1.548
Development Spt	MIPR	SAF, Washington, DC	0.027	0.070	Jun-04	0.075	Jun-05			Cont.	Cont.
	MIPR	SPAWAR, Charleston, SC	0.545	0.060	Dec-03	0.045	Dec-04			Cont.	Cont.
	MIPR	Raytheon, Falls Church, VA	0.948								
	MIPR	NSMA, Ft Washington, VA	0.250	0.200	Feb-04	0.205	Feb-05			Cont.	Cont.
	MIPR	TBD		0.035	Mar-04						
	TBD	LLNL, Livermore, CA		14.927	Dec-03	16.185	Dec-04			Cont.	Cont.
Software Dev/Integ	MIPR	BTG, Inc., Fairfax, VA	1.255								
	MIPR	TBD		2.634	Mar-04	1.961	Mar-05			Cont.	Cont.
		CECOM/MITRE, Ft Monmouth, NJ	0.823	2.880	Jan-04	2.469	Jan-05			Cont.	Cont.
		AF Space Battle Lab, Colorado Springs, CO		0.386	Nov-03	0.400	Nov-04			Cont.	Cont.
		ASAP Software, Buffalo Grove, IL	0.025								0.025
		ACTD-TBD		15.416	Mar-04						15.416
Software Spt		Various		0.911	Sep-04						0.911
Training Development											
Integrated Logistics Spt											
Configuration Management											
Subtotal Spt			3.873	37.519		21.340					Cont.
Remarks:											
DERF Funds:											
Software Dev/Tng	Various	Various	1.585								1.585
Training Development	FFP/C	EMC Corp, MacLean, VA	0.038								0.038

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2004					
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 FY04	Date FY04	Cost FY05	Date FY0			To Complete	Total Program
Developmental Test & Eval	MIPR	SPAWAR, Charleston, SC	0.630								0.630
OT&E	MIPR	SPAWAR, Charleston, SC	1.737								1.737
	MIPR	DESA, Kirtland, NM	0.217			0.020	Dec-04			Cont.	Cont.
		BTG, Tampa, FL		0.020	Mar-04						0.020
		Ft Huachuca, AZ	0.526	0.363	Mar-04						0.889
		NAVAIR, St. Inigoes, MD	0.031								0.031
Subtotal T&E			3.141	0.383		0.020		0.000		Cont.	Cont.
Remarks:											
Government Engineering Spt		SPAWAR, Charleston , SC	0.116		Apr-03						
Program Management Spt	CPAF	Jacobs-Sverdrup, Tampa, FL	0.385	0.578	Jan-04	0.616	Jan-05			Cont.	Cont.
Travel	N/A	USSOCOM, MacDill AFB, FL	0.136	0.015	Various	0.015	Various			Cont.	Cont.
Subtotal Management			0.637	0.593		0.631				Cont.	Cont.
Remarks:											
Total DERF			3.171								3.171
Total Cost			25.388	47.084		25.015				Cont.	Cont.

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2004
Appropriation/Budget Activity RDT&E/7	Project Number and Name Project S400/SO Intelligence

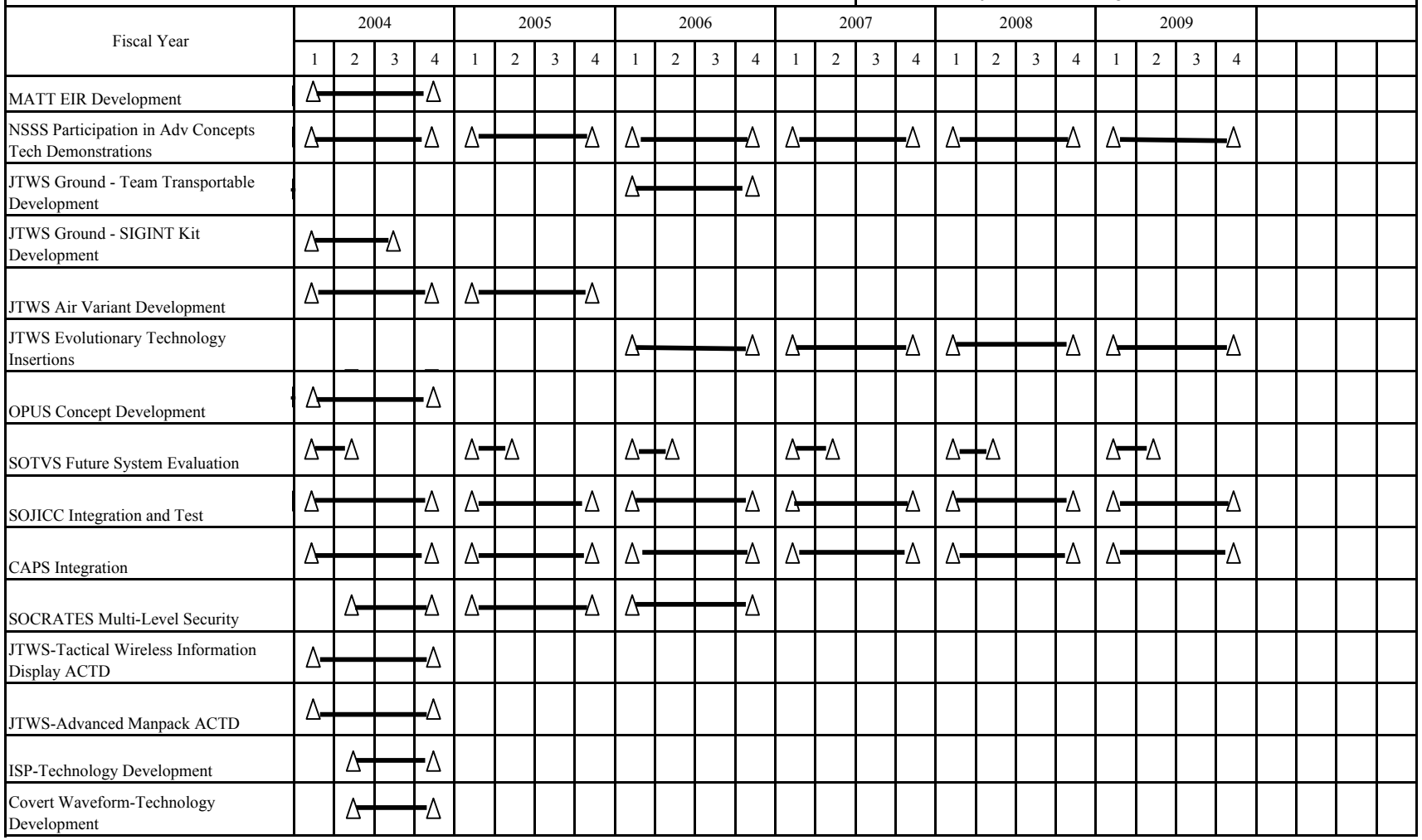

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2004				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160405BB/Special Operations Intelligence Systems Development			Project Number and Name Project S400/SO Intelligence				
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009		
MATT EIR Development	1-4Q							
NSSS Participation in Adv Concepts Tech Demonstrations	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
JTWS Ground - Team Transportable Development			1-4Q					
JTWS Ground - SIGINT Kit Development	1-3Q							
JTWS Air Variant Development	1-4Q	1-4Q						
JTWS Evolutionary Technology Insertions			1-4Q	1-4Q	1-4Q	1-4Q		
Optimal Placement of Unattended Sensors	1-4Q							
SOTVS Future System Evaluation	1-2Q	1-2Q	1-2Q	1-2Q	1-2Q	1-2Q		
SOJICC Integration and Test	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		
SOCRATES Multi-Level Security Guard	2-4Q	1-4Q	1-4Q					
JTWS - Tactical Wireless Information Display ACTD	1-4Q							
JTWS - Advanced Manpack ACTD	1-4Q							
ISP Technology Development	2-4Q							
Covert Waveform Technology Development	2-4Q							