



**UNITED STATES SPECIAL OPERATIONS COMMAND**

**FISCAL YEAR (FY) FY 2011  
BUDGET ESTIMATE**

**RDT&E, DEFENSE-WIDE**

**FEBRUARY 2010**

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Sec
22	1160401BB	Special Operations Technology Development	02	32,167	30,606		30,606	26,545		26,545	U
23	1160407BB	SOF Medical Technology Development	02	2,361	2,390		2,390				U
		Applied Research		34,528	32,996		32,996	26,545		26,545	
67	1160402BB	Special Operations Advanced Technology Development	03	78,836	56,727		56,727	30,806		30,806	U
68	1160422BB	Aviation Engineering Analysis	03		3,529		3,529	4,234		4,234	U
69	1160472BB	SOF Information and Broadcast Systems Advanced Technology	03	8,405	4,967		4,967	4,942		4,942	U
		Advanced Technology Development (ATD)		87,241	65,223		65,223	39,982		39,982	
211	0304210BB	Special Applications for Contingencies	07	23,020	27,467		27,467	16,272		16,272	U
227	0305208BB	Distributed Common Ground/Surface Systems	07	763	7,701		7,701	1,290		1,290	U
232	0305219BB	MQ-1 Predator A UAV	07	13,642	2,058		2,058	98		98	U
250	1105219BB	MQ-9 UAV	07		4,362		4,362	98		98	U
251	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	10,206							U
252	1160403BB	Special Operations Aviation Systems Advanced Development	07	72,225	72,308		72,308	68,691		68,691	U
253	1160404BB	Special Operations Tactical Systems Development	07	15,143	6,845		6,845	1,582		1,582	U

Exhibit R-1G: FY 2011 President's Budget (Published), as of January 21, 2010 at 14:26:23

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se
254	1160405BB	Special Operations Intelligence Systems Development	07	39,866	41,223		41,223	23,879	9,440	33,319	U
255	1160408BB	SOF Operational Enhancements	07	53,672	63,045		63,045	62,592		62,592	U
256	1160421BB	Special Operations CV-22 Development	07	30,970	12,634		12,634	14,406		14,406	U
257	1160423BB	Joint Multi-Mission Submersible	07		33,273		33,273	14,924		14,924	U
258	1160426BB	Operations Advanced Seal Delivery System (ASDS) Development	07	5,643	3,485		3,485				U
259	1160427BB	Mission Training and Preparation Systems (MTPS)	07	5,496	3,178		3,178	2,915		2,915	U
260	1160428BB	Unmanned Vehicles (UV)	07	41,352	996		996				U
261	1160429BB	MC130J SOF Tanker Recapitalization	07	4,474	5,932		5,932	7,624		7,624	U
262	1160474BB	SOF Communications Equipment and Electronics Systems	07		730		730	1,922		1,922	U
263	1160476BB	SOF Tactical Radio Systems	07		2,358		2,358	2,347		2,347	U
264	1160477BB	SOF Weapons Systems	07	3,857	1,077		1,077	479		479	U
265	1160478BB	SOF Soldier Protection and Survival Systems	07	3,040	594		594	593		593	U
266	1160479BB	SOF Visual Augmentation, Lasers and Sensor Systems	07	6,485	8,533		8,533				U
267	1160480BB	SOF Tactical Vehicles	07	1,600	1,965		1,965	1,994		1,994	U

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

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Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Sec
268	1160482BB	SOF Rotary Wing Aviation	07	3,202	18,784		18,784	14,473		14,473	U
269	1160483BB	SOF Underwater Systems	07	8,572	18,774		18,774	13,986		13,986	U
270	1160484BB	SOF Surface Craft	07	6,232	9,959		9,959	2,933		2,933	U
271	1160488BB	SOF PSYOP	07	8,251	9,846		9,846	4,193		4,193	U
272	1160489BB	SOF Global Video Surveillance Activities	07	13,914	4,923		4,923	5,135		5,135	U
273	1160490BB	SOF Operational Enhancements Intelligence	07	7,005	11,499		11,499	9,167		9,167	U
9999	9999999999	Classified Programs		1,663	1,591		1,591	3,444		3,444	U
		Operational Systems Development		380,293	375,140		375,140	275,037	9,440	284,477	
Total Research, Development, Test & Eval, DW				502,062	473,359		473,359	341,564	9,440	351,004	

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***Budget Activity 07: Operational Systems Development***

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## *ORGANIZATIONS*

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ISOW	1st Special Operations Wing
160th SOAR	160th Special Operations Aviation Regiment
AFSOC	Air Force Special Operations Command
ARSOA	Army Special Operations Aviation
BGAD	Bluegrass Army Depot
CERDEC	Communications-Electronics Research, Development and Engineering Center
CSO	Center for Special Operations
DARPA	Defense Advanced Research Projects Agency
DTRA	Defense Threat Reduction Agency
FDA	Federal Drug Administration
JSOAC	Joint Special Operations Aviation Component
MARSOC	Marine Special Operations Command
NATO	North Atlantic Treaty Organization
NAVAIR	Naval Aviation Systems
NAVSCIATTS	Naval Small Craft Instructor and Technical Training School
NAVSPECWARCOM	Naval Special Warfare Command
NSA	National Security Agency
NSWC	Naval Special Warfare Command
PMA-275	V-22 Joint Program Office
SOFSA	Special Operations Forces Support Facility
TAPO	Technology Applications Program Office
TSOC	Theater Special Operations Command
USAF	United States Air Force
USASOC	United States Army Special Operations Command
USSOCOM	United States Special Operations Command

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Exhibit R-1C

(Listing by Program Element Number)

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title		Cost (\$ in Millions)				
					FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
211	07	0304210BB	Applications for Contingencies (SAFC)/9999	Current	23.020	27.467	16.272	0.000	16.272
				Previous	26.254	16.381	0.000	0.000	0.000
				Change	-3.234	11.086	16.272	0.000	16.272
227	07	0305208BB	Distributed Common Ground/Surface Systems/S400A	Current	0.763	7.701	1.290	0.000	1.290
				Previous	0.763	1.407	0.000	0.000	0.000
				Change	0.000	6.294	1.290	0.000	1.290
232	07	0305219BB	MQ-1 Predator A UAV/S400B	Current	13.642	2.058	0.098	0.000	0.098
				Previous	13.642	2.067	0.000	0.000	0.000
				Change	0.000	-0.009	0.098	0.000	0.098
**	07	1105233BB	RQ-7 UAV/S852	Current	0.000	0.000	0.000	0.000	0.000
				Previous	0.000	0.000	0.000	0.000	0.000
				Change	0.000	0.000	0.000	0.000	0.000
250	07	1150219BB	MQ-9 UAV/S851	Current	0.000	4.362	0.098	0.000	0.098
				Previous	0.000	4.380	0.000	0.000	0.000
				Change	0.000	-0.018	0.098	0.000	0.098
251	07	1160279BB	Small Business Innovative Research (SBIR)/S050	Current	10.206	0.000	0.000	0.000	0.000
				Previous	0.000	0.000	0.000	0.000	0.000
				Change	10.206	0.000	0.000	0.000	0.000

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Exhibit R-1C

(Listing by Program Element Number)

**Cost (\$ in Millions)**

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)					
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
22	02	1160401BB	Special Operations Technology Development/S100	Current	32.167	30.606	26.545	0.000	26.545
				Previous	35.400	27.384	0.000	0.000	0.000
				Change	-3.233	3.222	26.545	0.000	26.545
67	03	1160402BB	Special Operations Advanced Technology Development/S200	Current	78.836	56.727	30.806	0.000	30.806
				Previous	65.684	31.675	0.000	0.000	0.000
				Change	13.152	25.052	30.806	0.000	30.806
252	07	1160403BB	Special Operations Aviation Systems Advanced Development/SF100	Current	72.225	72.308	68.691	0.000	68.691
				Previous	43.856	82.621	0.000	0.000	0.000
				Change	28.369	-10.313	68.691	0.000	68.691
253	07	1160404BB	Special Operations (SO) Tactical Systems (Automation) Development/S710	Current	15.143	6.845	1.582	0.000	1.582
				Previous	19.884	6.182	0.000	0.000	0.000
				Change	-4.741	0.663	1.582	0.000	1.582
254	07	1160405BB	Special Operations (SO) Intelligence Systems Development/S400	Current	39.866	41.223	23.879	9.440	33.319
				Previous	39.866	21.273	0.000	0.000	0.000
				Change	0.000	19.950	23.879	9.440	33.319
23	02	1160407BB	Special Operations Forces (SOF) Medical Technology Development/S275	Current	2.361	2.390	0.000	0.000	0.000
				Previous	2.452	0.000	0.000	0.000	0.000
				Change	-0.091	2.390	0.000	0.000	0.000

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Exhibit R-1C

(Listing by Program Element Number)

**Cost (\$ in Millions)**

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)					
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
256	07	1160421BB	Special Operations CV-22 Development/SF200	Current	30.970	12.634	14.406	0.000	14.406
				Previous	40.120	12.687	0.000	0.000	0.000
				Change	-9.150	-0.053	14.406	0.000	14.406
68	03	1160422BB	Aviation Engineering Analysis/SF101	Current	0.000	3.529	4.234	0.000	4.234
				Previous	0.000	3.544	0.000	0.000	0.000
				Change	0.000	-0.015	4.234	0.000	4.234
257	07	1160423BB	Joint Multi-Mission Submersible/S0419	Current	0.000	33.273	14.924	0.000	14.924
				Previous	0.000	43.412	0.000	0.000	0.000
				Change	0.000	-10.139	14.924	0.000	14.924
258	07	1160426BB	SO Advanced SEAL Delivery System Dev/S0418	Current	5.643	3.485	0.000	0.000	0.000
				Previous	8.666	1.321	0.000	0.000	0.000
				Change	-3.023	2.164	0.000	0.000	0.000
259	07	1160427BB	Mission Training and Preparation Systems (MTPS)/S750	Current	5.496	3.178	2.915	0.000	2.915
				Previous	5.637	3.192	0.000	0.000	0.000
				Change	-0.141	-0.014	2.915	0.000	2.915
260	07	1160428BB	Unmanned Vehicles/S850	Current	41.352	0.996	0.000	0.000	0.000
				Previous	41.409	0.000	0.000	0.000	0.000
				Change	-0.057	0.996	0.000	0.000	0.000

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Exhibit R-1C

(Listing by Program Element Number)

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title		Cost (\$ in Millions)				
					FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
261	07	1160429BB	MC-130J SOF Tanker Recapitalization/S875	Current	4.474	5.932	7.624	0.000	7.624
				Previous	4.646	5.957	0.000	0.000	0.000
				Change	-0.172	-0.025	7.624	0.000	7.624
69	03	1160472BB	Information and Broadcast Systems Advanced Technology/S225	Current	8.405	4.967	4.942	0.000	4.942
				Previous	10.960	4.988	0.000	0.000	0.000
				Change	-2.555	-0.021	4.942	0.000	4.942
262	07	1160474BB	SOF Communications Equipment and Electronics Systems/S225	Current	0.000	0.730	1.922	0.000	1.922
				Previous	0.000	0.733	0.000	0.000	0.000
				Change	0.000	-0.003	1.922	0.000	1.922
263	07	1160476BB	SOF Tactical Radio Systems/S725	Current	0.000	2.358	2.347	0.000	2.347
				Previous	0.000	2.368	0.000	0.000	0.000
				Change	0.000	-0.010	2.347	0.000	2.347
264	07	1160477BB	SOF Weapon Systems/S375	Current	3.857	1.077	0.479	0.000	0.479
				Previous	3.952	1.081	0.000	0.000	0.000
				Change	-0.095	-0.004	0.479	0.000	0.479
265	07	1160478BB	SOF Soldier Protection and Survival Systems/S385	Current	3.040	0.594	0.593	0.000	0.593
				Previous	3.181	0.597	0.000	0.000	0.000
				Change	-0.141	-0.003	0.593	0.000	0.593

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**Cost (\$ in Millions)**

Line#	BA#	PE#	PE Title	Cost (\$ in Millions)					
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
266	07	1160479BB	SOF Visual Augmentation, Lasers and Sensor Systems/S395	Current	6.485	8.533	0.000	0.000	0.000
				Previous	6.967	3.369	0.000	0.000	0.000
				Change	-0.482	5.164	0.000	0.000	0.000
267	07	1160480BB	SOF Tactical Vehicles/S910	Current	1.600	1.965	1.994	0.000	1.994
				Previous	1.600	1.973	0.000	0.000	0.000
				Change	0.000	-0.008	1.994	0.000	1.994
268	07	1160482BB	SOF Rotary Wing Aviation/D615	Current	3.202	18.784	14.473	0.000	14.473
				Previous	3.162	18.863	0.000	0.000	0.000
				Change	0.040	-0.079	14.473	0.000	14.473
269	07	1160483BB	SOF Underwater Systems/S0417	Current	8.572	18.774	13.986	0.000	13.986
				Previous	8.727	3.452	0.000	0.000	0.000
				Change	-0.155	15.322	13.986	0.000	13.986
270	07	1160484BB	SOF Surface Craft/S1684	Current	6.232	9.959	2.933	0.000	2.933
				Previous	6.392	12.250	0.000	0.000	0.000
				Change	-0.160	-2.291	2.933	0.000	2.933
271	07	1160488BB	SOF PSYOP/D476	Current	8.251	9.846	4.193	0.000	4.193
				Previous	15.124	9.887	0.000	0.000	0.000
				Change	-6.873	-0.041	4.193	0.000	4.193

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## *ACRONYMS*

A2C2S	Army Aviation Command & Control System
AA	Anti-Armor
ACTD	Advanced Concepts Technology Demonstration
ADM-NVG	Advanced Digital Multi-Spectral Night Vision Goggle
ADP	Automated Data Processing
ADRAC	Altitude Decompression Sickness Risk Assessment Computer
ADSS	Adaptive Deployable Sensor Suite
AEP	Alternate Engine Program
AFCS	Auto Flight Control System
AGE	Arterial Gas Embolism
AHRS	Attitude Heading Reference System
ALE	Automatic Link Establishment
ALGL	Autonomous Landing Guidance System
ALGS	Advanced Lightweight Grenade Launcher
ALLTV	All Light Level Television
AM	Amplitude Modulation
AMP	Avionics Modernization Program
AMR	Anti-Materiel Rifle
AOBPS	Aircraft Occupant Ballistic Protection System
ARAP	ASDS Reliability Action Panel
ARH	Armed Reconnaissance Helicopter
AS&C	Advanced Systems Concept
ASD	Assistant Secretary of Defense
ASDS	Advanced Sea, Air, Land Delivery System
ASE	Aircraft Survivability Equipment
ASIC	Application Specific Integrated Circuit
ASM	Anti Structural Munitions
ATACMS	Army Tactical Missile System
ATC	Air Traffic Control
ATD	Advanced Technology Demonstration
ATD/TB	AC-130U Gunship Aircrew Training Devices/Testbed
ATL	Advanced Tactical Laser

## ACRONYMS

ATM	Asynchronous Transfer Mode
ATPIAL	Advanced Tactical Precision Illuminator Aiming Laser
ATPS	Advanced Tactical Parachute System
ATTWR	Advanced Tactical Threat Warning Radio
ATV	All Terrain Vehicle
AWE	Aircraft, Weapons, Electronics
BALCS	Body Armor Load Carriage System
BFT	Blue Force Tracking
BIO	Basic Input Output
BLOS	Beyond Line-of-Site
BLOSESM	Below Line-of-Site Electronic Support Measures
BMATT	Brief Multimission Advanced Tactical Terminal
BOIP	Basis of Issue Plan
BUD/S	Basic Underwater Demolition School
C2	Command and Control
C3I	Command, Control, Communications, and Intelligence
C4	Command, Control, Communications, and Computers
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
CAMS	Combat Autonomous Mobility System
CAPS	Counter-Proliferation Analysis and Planning System
CASEVAC	Casualty Evacuation
CBN	Chemical, Biological and Nuclear
CCCEKIT	Combat Casualty Care Equipment Kit
CCD	Coherent Change Detection
CCD	Charged Coupled Device (Forward Looking Infrared Radar Only)
CCFLIR	Combatant Craft Forward Looking Infrared
CDB	Common Database
CDR	Critical Design Review
CERP	Capital Equipment Replacement Plan



## *ACRONYMS*

CESE	Civil Engineering Support Equipment
CFE	Contractor Furnished Equipment
CGF	Computer Generated Forces
CINC	Commander in Chief
CLR	Combat Loss Replacement
CMNS	Combat Mission Needs Statement
CMR	Combat Mission Requirement
CMS	Combat Mission Simulator
CNVD	Clip-On Night Vision Device
COIL	Chemical Oxygen Iodine Laser
COMSEC	Communications Security
CONOPS	Concept of Operations
COTM	Communications On-the-Move
COTS	Commercial-Off-The-Shelf
COW	Cost of War
CP	Counter-Proliferation
CPAF	Cost Plus Award Fee
CQBR	Close Quarters Battle Rifle
CS	Confined Space (Light Anti-Armored Weapons)
CS	Combat Swimmer
CSAR	Combat Survivor Evader Locator
CSEL	Combat Search and Rescue
CSOLO	Commando Solo
CW	Center Wing
DAGR	Defense Advanced Global Positioning System Receiver
DAMA	Demand Assured Multiple Access
DARPA	Defense Advanced Research Projects Agency
DAS	Distributed Aperture System
DBP	Demolitions and Bleaching Program
DCGS	Data Common Ground/Surface System
DCS	Decompression Sickness
DDRE	Director, Defense Research & Engineering

## *ACRONYMS*

DDS	Dry Deck Shelter
DERF	Defense Emergency Response Fund
DF	Direction Finding'
DHEA	Dehydroepiandrosterone
DHIP	Defense Human Intelligence Program
DIAM	Data Interface Acquisition Module
DIRCM	Directional Infrared Countermeasures
DISN	Defense Information Systems Network
DMCS	Deployable Multi-Channel SATCOM
DMS	Diminished Manufacturing Sources (ASDS)
DMS	Defense Message System
DMO	Distributed Mission Operations
DMR	Distributed Mission Rehearsal
DMT	Distributed Mission Training
DMTRS	Distributed Mission Training Rehearsal System
DDP	Detachment Deployment Package
DPPC	Deployable Print Production Center
DT	Development and Test
DT&E	Development, Test and Evaluation
DTT	Desk Top Trainer
DUSD	Deputy Under Secretary of Defense
EA	Evolutionary Acquisition
ECM	Electronic Countermeasures
ECO	Engineering Change Order
ECOS	Enhanced Combat Optical Sights
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EFP	Explosively Forced Penetrator
EGLM	Enhanced Grenade Launcher Module
EIR	Embedded Integrated Broadcast System Receiver
EIRS	Enhanced Infrared Suppression
EMD	Engineering and Manufacturing Development

## *ACRONYMS*

ENTR	Embedded National Tactical Receiver
EOIR	Electro-Optical Infrared
EP	Extension Packages
EPRO	Environmental Protection
ESA	Enhanced Situational Awareness
ETCAS	Enhanced Traffic Alert and Collision Avoidance System
EUE	Extended User Evaluation
ETI	Evolutionary Technology Insertion
EW	Electronic Warfare
EWAISF	Electronic Warfare Avionics Integrated Systems Facility
EWO	Electronic Warfare Officer
FAA	Federal Aviation Administration
FABS	Fly-Away Broadcast System
FCD	Field Computing Devices
FCT	Foreign Comparative Testing
FCU	Fire Control Unit
FDEK	Forward Deployed Equipment Kits
F&DR	Fielding & Deployment Release
FEPSO	Field Experimentation Program for Special Operations
FFE	Fire From Enclosure
FLIR	Forward Looking Infrared Radar
FM	Frequency Modulation
FMBS	Family of Muzzle Brake Suppressors
FNM	Foreign & Nonstandard Materiel
FOL	Family of Loud Speakers
FPM	Flight Performance Model
FSDS	Family of Sniper Detection Systems
FSOV	Family of SOF Vehicles
FSW	Family of Sniper Weapons
FW	Fixed Wing
FSDS	Family of Sniper Detection Systems
GBS	Global Broadcasting System

## ACRONYMS

GDS	Gunfire Detection System
GEO	Geological
GFE	Government Furnishment Equipment
GIG	Global Information Grid
GMS-2	Gunship Multispectral System
GMV	Ground Mobility Vehicles
GMVAS	Ground Mobility Visual Augmentation Systems
GO	Global Observer
GOTS	Government-Off-the-Shelf
GPK	Gunner Protection Kit
GPS	Global Positioning System
GSK	Ground Signal Intelligence Kit
GSN	Global Sensor Network
GV	Ground Vehicle
GVSA	Global Video Surveillance Activity
GWOT	Global War on Terrorism
H-SUV	Hardened-Sport Utility Vehicle
HALE	High Altitude Long Endurance
HE	High Explosive
HEI	High Explosive Incendiary
HF	High Frequency
HFIS	Hostile Fire Indicating System
HFTTL	Hostile Forces Tagging, Tracking, and Locating
HLA	High Level Architecture
HMMWV	High Mobility Multi-purpose Wheeled Vehicle
HMU	Hydrographic Mapping Unit
HPFOTD	High Power Fiber Optic Towed Decoys
HPMMR	High Performance Multi-Mission Radio (PRC-117F)
HPS	Human Patient Simulator
HQ	Headquarters
HRLMD	Hydrographic Reconnaissance Littoral Mapping Device
HSB	High Speed Boat

## *ACRONYMS*

HSR	Heavy Sniper Rifle
HUD	Heads Up Display
IAS/CMS	Integration Avionics System/Cockpit Management System
IBR	Intelligence Broadcast Receiver
IBS	Integrated Bridge System
IBS	Integrated Broadcast Service
IC	Interim Configuration
ICAD	Integrated Control and Display
ICLS	Interim Contractor Logistics Support
ICS	Integrated Combat System
ICS	Interim Contractor Support
ICS	Internal Communication Systems
IDAP	Integrated Defensive Armed Penetrator
IDAS	Interactive Defensive Avionics Subsystem
IDS	Infrared Detection System
IED	Improvised Explosive Devices
IFF	Identify Friend or Foe
IGPS	Iridium Global Positioning System
ILM	Improved Limpet Mine
IM	Insensitive Munitions
IMFP	Integrated Multi-Function Probe
ILS	Integrated Logistics Support
INFOSEC	Information Security
INOD	Improved Night/Day Observation/Fire Control Device
INS	Inertial Navigation System
IOC	Initial Operational Capability
IP	Internet Protocol
IPOC	Initial Proof-of-Concept
IPT	Integrated Product Team
IR	Infrared
IRCM	Infrared Countermeasures
ISOCA	Improved Special Operations Communications Assemblage

## *ACRONYMS*

ISR	Intelligence Surveillance and Reconnaissance
ISR&T	Intelligence Surveillance and Reconnaissance and Target
ISSMS	Improved SOF Manpack System
ITMP	Integrated Technical Management Plan
IWIS	Integrated Warfare Info System
JBS	Joint Base Station
JCAS	Joint Close Air Support
JCIDS	Joint Capabilities Integration and Development System
JCS	Joint Chiefs of Staff
JCTD	Joint Concept Technology Demonstration
JDISS	Joint Deployable Intelligence Support System
JEM	Joint Enhanced Multi-Purpose Inter/Intra Team Radio
JHL	Joint Heavy Lift
JMPS	Joint Mission Planning System
JOS	Joint Operational Stocks
JSOAC	Joint Special Operations Aviation Components
JSOTFS	Joint Special Operations Task Force
JSTAR	Joint Surveillance and Target Attack Radar System
JTA	Joint Table of Allowances
JTC	Joint Terminal Control
JTCITS	Joint Tactical C4I Transceiver System
JTRS	Joint Tactical Radio System
JTWS	Joint Threat Warning System
JWIC	Joint Worldwide Communication System
LASIK	Laser-Assisted IN-Situ Keratomileusis
LAN/WAN	Local Area Network/Wide Area Network
LASAR	Light Assault Attack Reconfigurable Simulator
LAW	Light Anti-Armored Weapons
LBJ	Low Band Jammer
LCMP	Life Cycle Management Plan
LCMR	Lightweight Counter Mortar Radar
LDS	Leaflet Delivery System

## ACRONYMS

LED	Light Emitting Diode
LEP	Lightweight Environmental Protection
LMG	Lightweight Machine Gun
LOS	Line of Sight
LPD	Low Probability of Detection
LPI	Low Probability of Intercept
LPI/D	Low Probability of Intercept/Detection
LPI/LPD	Low Probability of Intercept/Low Probably of Detection
LRBS	Long Range Broadcast System
LRIP	Low Rate Initial Production
LRU	Line Replaceable Unit
LRV	Light Reconnaissance Vehicle
LSV	Logistics Support Vehicle
LTAV	Lightweight Tactical All Terrain Vehicle
LTD	Laser Target Designator
LTDR	Laser Target Designator/Rangefinder
LTI	Lightweight Thermal Imager
LTTG	Locating, Tagging, and Tracking for Global War on Terrorism
LWC	Littoral Warfare Craft
LWCM	Lightweight Counter-Mortar
LWHF	Lightweight Hellfire
M4MOD	M4A1 SOF Carbine Accessory Kit
MAAS	Multimedia Analyst Archive System
MAAWS	Multi-Purpose Anti-Armor/Anti-Personnel Weapons System
MALET	Medium Altitude Long Endurance Tactical
MANPAD	Man Portable Air Defense System
MATT	Multi-mission Advanced Tactical Terminal
MBITR	Multi-Band Inter/Intra Team Radio
MBLT	Machine Based Language Translator
MBMMR	Multi-Band/Multi-Mission Radio
MBSS	Maritime Ballistic Survival System
MCAR	MC-130 Air Refueling

## *ACRONYMS*

MCADS	Maritime Craft Air Drop System
MCOTS	Modified Commercial Off the Shelf
MCU	Multipoint Conferencing Unit
MDA	Maritime Domain Awareness
MDNS	Mini Day/Night Sight
MELB	Mission Enhancement Little Bird
MET	Meteorological
METOC	Meteorological and Oceanographic
MICH	Modular Integrated Communications Helmet
MK V	Mark V
MMB	Miniature Multiband Beacon
MMPV	Medium Mine Protected Vehicles
MMR	Multi-Mode Radar
MOA	Memorandum of Agreement
MONO-HUD	Monocular Head Up Display
MP	Manpack
MPARE	Mission Planning, Analysis, Rehearsal and Execution
MPC	Media Production Center
MRAP	Mine Resistant Ambush Protected
MPK	Mission Planning Kits
MRD	Mission Rehearsal Device
MTBS	Mobile Television Broadcast System
MTPS	Mission Training and Preparation System
MUA	Military Utility Assessment
NAVSCIATTS	Naval Small Craft Instructor and Technical Training School
NBC	Nuclear, Biological, and Chemical
NBOE	Non-Gasoline Burning Outboard Engine
NDI	Non-Developmental Item
NET	New Equipment Training
NGLS	Next Generation Loudspeaker System
NISH	National Institute of Severly Handicapped
NM	Nautical Miles



## ACRONYMS

NOSC	Network Operations Systems Center
NRE	Non-Recurring Engineering
NSAV	Non-Standard Aviation
NSCV	Non Standard Commercial Vehicle
NSM	Nonstandard Materiel
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
OGA	Other Government Agencies
OIF	Operation Iraqi Freedom
OMB	Office of Management and Budget
OMMS	Organizational Maintenance Manual Sets
OPEVAL	Operational Evaluation
OPUS	Optimal Placement of Unattended Sensors
ORD	Operational Requirements Document
OT	Operational Test
OT&E	Operational Test and Evaluation
QOT&E	Qualification Test and Evaluation/Qualification Operational Test and Evaluation
P3I	Pre-Planned Product Improvement
PAI	Primary Aircraft Inventory
PAM	Penetration Augmented Munition
PARD	Passive Acoustic Reflection Device
PC	Personal Computer
PC	Patrol Coastal
PDR	Preliminary Design Review
PDS	Psychological Operations Distribution System
PDM	Program Decision Memorandum
PFPS	Portable Flight Planning System

## *ACRONYMS*

PGCB	Precision Guided Canister Bomb
PGSE	Peculiar Ground Support Equipment
PGL	Precision Geo-Location
PIMM	Payload Interface Master Module
PLTD	Precision Laser Targeting Device
PM	Program Manager
PM-MCD	Project Manager for Mines, Countermeasures and Demolitions
PMO	Program Management Office
PMP	Prime Mission Product
PMT	Program Management
POBS	Psychological Operations Broadcasting System
POMD	Psychological Operations Media Display
POPAS	PSYOP Planning and Analysis System
POPS	Psychological Operations Print System
PPHE	Pre-Fragmented Programmable High Explosive
PRK	Photo Refractive Keratectomy
PRTV	Production Representative Test Vehicle
PSR	Precision Sniper Rifle
PSYOP	Psychological Operations
PTLD	Precision Target Locator Designator
PTT	Part Task Trainer
RAA	Required Assets Available
RAMS	Remote Activated Munitions System
REITS	Rapid Exploitation of Innovative Technologies for SOF
RF	Radio Frequency
RFP	Request for Proposal
RGB	Red, Green, Blue
RIB	Rigid Inflatable Boat
RIS	Radio Integration System
RMWS	Remote Miniature Weather System
ROAR	Rover Over the Horizon Augmented Reconnaissance
ROSES	Reduced Optical Signature Emissions System

## *ACRONYMS*

RPG	Rocket Propelled Grenade
RPUAS	Rucksack Portable Unmanned Aircraft System
RSTA	Reconnaissance Surveillance Target Acquisition
RW	Rotary Wing
RWR	Radar Warning Receivers
SA	Situational Awareness
SAFC	Special Applications for Contingencies
SAGIS	SOF Air-Ground Interface Simulator
SAHRV	Semi-Autonomous Hydrographic Reconnaissance Vehicle
SATCOM	Satellite Communication
SBIR	Small Business Innovative Research
SBR	System Baseline Review
SBUD	Simulator Block Update
SCAR	SOF Combat Assault Rifle
SCI	Sensitive Compartmented Information
SDD	System Design and Development
SDS	Sniper Detection System
SDN	SOF Deployable Node
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SEALION	Sea, Air, Land, Insertion Observation Neutralization
SIE	SOF Information Enterprise
SIGINT	Signals Intelligence
SIL	Systems Integration Lab
SIPE	Swimming Induced Pulmonary Edema
SIRCM	Suite of Infrared Countermeasures
SIRFC	Suite of Integrated Radar Frequency Countermeasures
SKOS	Sets, Kits and Outfits
SLAM	Selectable Lightweight Attack Munition
SLED	SOF Long Endurance Demonstrator
SLEP	Service Life Extension Program
SMAX	Special Operations Command Multipurpose Antenna, X-Band

## ACRONYMS

SMG	SOF Machine Gun
SMLD	Scatterable Media Long Duration
SMSD	Scatterable Media Short Duration
SMRS	Special Mission Radio System
SO	Special Operations
SOC	Special Operations Craft
SOC	Special Operations Command
SOCR	Special Operations Craft-Riverine
SOCRATES	Special Operations Command, Research, Analysis and Threat Evaluation System
SOEP	Special Operations Eye Protection
SOF	Special Operations Forces
SOFC	Solid Oxide Fuel Cell
SOFDK	SOF Demolition Kit
SOFIV	SOF Intelligence Vehicle
SOFLAM	SOF Laser Marker
SOFLRD	SOF Laser Range Finder and Designator
SOFPARS	SOF Planning and Rehearsal System
SOFTAPS	SOF Tactical Advanced Parachute System
SOFTACS	SOF Tactical Assured Connectivity System
SOIS	Special Operations Intelligence System
SOJICC	Special Operations Joint Interagency Collaboration Center
SOLL	Special Operations Low Level
SOMPE	Special Operations Mission Planning Environment
SOMROV	Special Operations Miniature Robotic Vehicle
SOMS	Special Operations Media Systems
SOPGM	Standoff Precision Guided Munition
SOPMOD	SOF Peculiar Modification
SOPMODM-4	SOF Peculiar Modification-M4 Carbine
SORBIS	Special Operations Resouce Business Information System
SOST	Special Operations Special Technology
SOTD	Special Operations Technology Development
SOTVS	Special Operations Tactical Video System

## ACRONYMS

SOVAS B/M	Special Operations Visual Aumentation System Binocular/Monocular
SOVAS HHI	Special Operations Visual Aumentation System Hand Held Imagers
SPEAR	SOF Personal Equipment Advanced Requirements
SPIKE	Shoulder Fired Smart Round
SPR	Special Purpose Rifle
SRC	Systems Readiness Center
SRC	Special Reconnaissance Capabilities
SRTC	Short Infrared Sensor
SRTV	Secure Real Time Video
SSE	Sensitive Site Exploitation
SSR	Sniper Support Rifle
SSGN	Nuclear Guided Missile Submarine
SSSAR	Solid State Synthetic Aperture Radar
S&T	Science & Technology
START	Special Threat Awareness receiver/Transmitter
STEP	Standard Tactical Entry Point
STD	Swimmer Transport Device
SW	Short-Wave
SWALIS	Special Warfare Automated Logistic Information System
SWIR	Short-Wave Infrared Sensor
SWORDS	Special Weapons Observation and Remote Direct-Action System
SYDET	Sympathetic Detonator
TA	Target Audiences
TACLAN	Tactical Local Area Network
TACTICOMP	Tactical Computer
TAT	To-Accompany Troops
TCCCE	Tactical Combat Casualty Care Equipment
TCCCEKIT	Tactical Combat Casualty Care Equipment Kit
TCV	Transit Case Variant
TDFD	Time Delay Firing Device
TDE	Technology Development Exploitation
TF/TA	Terrain Following/Terrain Avoidance

## *ACRONYMS*

TMPC	Theater Media Production Center
TPE	Theater Provided Equipment
TPED	Tactical Processing, Exploitation, and Dissemination
TEI	Technology Exploitation Initiative
TRR	Test Readiness Review
TRS	Tactical Radio System
TRS	Training and Rehearsal System
TSOC	Theater Special Operations Command
TT	Team Transportable
TTHM	Titanium Tilting Helmet Mount
TTL	Tagging, Tracking & Locating
TV	Television
UARRSI	Universal Aerial Refueling Receptacle Slipaway
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UBA	Underwater Breathing Apparatus
UGS	Unattended Ground Sensor
UGV	Unmanned Ground Vehicle
UHF	Ultra High Frequency
UHMS	Undersea and Hyperbaric Medicine Society
UK	United Kingdom
US	United States
UTB	Unclassified Test Bed
UTC	Unit Type Code
UV	Unmanned Vehicles
UVT	Unmanned Vehicle Targeting
VBL	Visible Bright Lights
VCUAS	Vehicle Craft Unmanned Aircraft System
VESTA	Vibro-Electronic Signature Target Analysis
VHF	Very High Frequency
VSD	Variable Speed Drogue
VSAT	Very Small Aperture Terminal

## *ACRONYMS*

VSWMCM	Very Shallow Water Mine Countermeasures
VTC	Video Teleconferencing
W	Watercraft
WIFI	Wireless Fidelity
WIN-T	Warfighter Information Network-Tactical
WIRED	Wind Tunnel Integrated 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
WST	Weapon System Trainer

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>			PE 1160401BB: <i>Special Operations Technology Development/S100</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	Continuing	Continuing
S100: <i>Special Operations (SO) Technology Development/Project S100</i>	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element enables USSOCOM to conduct studies and develop laboratory prototypes for applied research and advanced technology development, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental investments with DoD, other government agencies, and commercial organizations allows USSOCOM to influence the schedule and direction of technology developments, emerging technologies and capabilities for Special Operations Forces. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, and technology objectives.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	35.400	27.384	0.000	0.000	0.000
Current President's Budget	32.167	30.606	26.545	0.000	26.545
Total Adjustments	-3.233	3.222	26.545	0.000	26.545
• Congressional General Reductions		-2.853			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.075			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.378	0.000			
• SBIR/STTR Transfer	-0.855	0.000			
• Other Adjustment	0.000	0.000	26.545	0.000	26.545

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S100: *Special Operations (SO) Technology Development/Project S100*

<b>FY 2009</b>	<b>FY 2010</b>

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: *Flashlight Soldier-to-Soldier Combat ID System*

Congressional Add: *Foliage Penetrating Reconnaissance and Surveillance*

Congressional Add: *Extended Lifetime Radioisotope Batteries*

Congressional Add: *Unified Management Infrastructure System*

Congressional Add: *USSOCOM STAR-TEC Partnership Program*

Congressional Add Subtotals for Project: S100

Congressional Add Totals for all Projects

	FY 2009	FY 2010
Congressional Add: <i>Flashlight Soldier-to-Soldier Combat ID System</i>	5.584	4.500
Congressional Add: <i>Foliage Penetrating Reconnaissance and Surveillance</i>	3.191	0.000
Congressional Add: <i>Extended Lifetime Radioisotope Batteries</i>	1.595	0.000
Congressional Add: <i>Unified Management Infrastructure System</i>	1.196	0.000
Congressional Add: <i>USSOCOM STAR-TEC Partnership Program</i>	0.000	1.575
Congressional Add Subtotals for Project: S100	11.566	6.075
Congressional Add Totals for all Projects	11.566	6.075

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.233 million is due to Small Business Innovative Research transfer (-\$0.855 million), FY09 Omnibus reprogramming FY09-26PA (-\$1.600 million), and DD 1415-3 reprogramming action FY09-18IR (-\$0.778 million).

FY10: Net increase of \$3.222 million is due to a congressional mark (-\$2.750 million), a decrease of -\$0.103 million due to Section 8097 congressional general reduction, and two congressional adds:

- Flashlight Soldier-to-Soldier Combat ID System (\$4.500 million)
- United States Special Operations Command STAR-TEC Partnership Program (\$1.575 million)

FY11: Increase of \$26.545 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>				<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S100: Special Operations (SO) Technology Development/Project S100</i>	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	Continuing	Continuing

**Note**

In FY09, the Capability Areas were listed separately. Beginning in FY10, the Capability Areas were subsumed under the REITS Sub-Project umbrella. The FY09 funds and accomplishments associated with each Capability Area are listed under the REITS Sub-Project in this President’s Budget for clarity.

**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. Small incremental co-investments with DoD, other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, and technology 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. Sub-projects include:

- Rapid Exploitation of Innovative Technologies (REITS). REITS provides USSOCOM the ability to identify, assess and exploit emerging innovative technologies for SOF capability deficiencies and expedite technology transitions from the laboratory to operational use. These technologies provide new transformational capabilities and immediate operational impacts, while providing a compass for the direction of future SOF procurement. REITS supports both top-down and bottom-up approaches for USSOCOM Components, Theater Special Operations Commands and Special Operations Task Forces to articulate innovative technology recommendations. Requirements are submitted to USSOCOM for review and/or approval. The approval process is through the USSOCOM Quick Reaction Board (QRB). The senior approval authority is the USSOCOM Deputy Commander. Members include USSOCOM’s Director of Operations, Director of Requirements, Acquisition Executive, Science Advisor, and Interagency Task Force Director. The tenets of the QRB are to promote speed, evolution, collaboration, and engagement in three technology Capability Areas: 1) Command, Control, Communications, and Computers (C4); Intelligence, Surveillance and Reconnaissance (ISR); and Sensors; 2) Mobility; and 3) SOF Warrior Survivability and Medical. An individual Technology Activity can be submitted from every echelon of command through the USSOCOM “HardEdge” portal for initial evaluation and distribution to industry, academia, laboratories or our in-country mobile technology complex to build the solution. The process is detailed in a USSOCOM Directive, “Rapid Technology Support to Special Operations.”

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<p><input type="checkbox"/> C4, ISR, and Sensors Capability Area. Develop 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. Exploit and develop technologies to provide SOF with standoff capabilities for targeting and locating personnel and equipment. Exploit technologies to provide real-time active decision-making capabilities, increased situational awareness, improved multi-spectral sensors, and advanced processing and display 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</p> <p><input type="checkbox"/> Mobility Capability Area. Exploit and develop 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. This capability area exploits and develops technologies to enhance logistics support, reduce cost, and improve the performance of SOF mobility platforms.</p> <p><input type="checkbox"/> SOF Warrior Survivability and Medical Capability Area. Exploit and develop 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. Exploit and develop technologies that center on physiological, psychological, and ergonomic factors affecting the ability of SOF to perform missions. USSOCOM 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 capability area provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. This capability area also supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. The following technology activities are included in this capability area:</p> <ul style="list-style-type: none"> <li>o Combat Casualty Management Technology Activity: Reviews the emergency medical equipment currently used in the SOF community and compares it to currently available civilian technology, provides field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF, evaluates current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered and applies the latest concepts in casualty care to these circumstances, applies lessons learned from recent combat operations to enhance medical capabilities, and develops CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.</li> <li>o Decompression for SOF Diving Operations Technology Activity: Decreases the decompression obligation in SOF diving operations through the use of surface-interval oxygen breathing, which provides the basis for extended mission profiles, and investigates pre-oxygenation requirements for high-altitude SOF parachute operations and ground operations at extreme altitudes.</li> <li>o Exercise-related Injuries Technology Activity: Evaluates the effectiveness of applying sports medicine diagnostic, therapeutic and rehabilitative techniques in management of the traumatic and overuse injuries commonly encountered among SOF.</li> </ul>		

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<p>o Inhaled Gas Toxicology Technology Activity: Evaluates the feasibility of using pharmacologic intervention to reduce or eliminate the possibility of central nervous system toxicity.</p> <p>o Medical Sustainment Training Techniques Technology Activity: Examines novel ways of providing and documenting medical sustainment training for SOF corpsmen and physicians, provides capabilities to rapidly develop new protocol and equipment instructions, and develops a system for constantly upgrading the expertise of SOF medical personnel by incorporating new research reports and clinical information into a CD-ROM based computer system that can be used by medical personnel in isolated duty circumstances.</p> <p>o Thermal Protection Technology Activity: Researches various ensemble clothing and devices that may potentially enhance SOF operator performance.</p> <p>o Mission-related Physiology Technology Activity: Develops accurate measures to evaluate SOF mission-related performance, delineates nutritional strategies designed to help personnel apply known nutritional concepts to optimize performance in mission and training scenarios, evaluates potential ergogenic agents as they apply to enhancing mission-related performance, studies the safety and efficacy of various substances to increase performance in sustained operations; studies interfaces of new vision devices with refractive vision enhancements, and studies pharmacologic measures to prevent acute mountain sickness in high altitude SOF air and ground operations.</p> <ul style="list-style-type: none"><li>• Tagging, Tracking, and Locating (TTL) Sub-Project: TTL technologies are a key element in the ability of SOF to find, fix, and finish targets in overseas contingency operations (OCO). This sub-project invests in critical science and technology efforts to improve operational capabilities for TTL high value individuals and objects in support of the OCO.</li><li>• Classified Sub-Project (provided under separate cover).</li><li>• The following technology activities were added by congress in FY 2010:<ul style="list-style-type: none"><li><input type="checkbox"/> Flashlight Soldier-to-Soldier Combat ID System: Continue to develop a flashlight soldier-to-soldier combat identification system.</li><li><input type="checkbox"/> USSOCOM STAR-TEC Partnership Program: Establish an ultra-responsive, local resource tied to academia, science and industry to meet unique SOF requirements.</li></ul></li><li>• The following technology activities were added by congress in FY 2009:<ul style="list-style-type: none"><li><input type="checkbox"/> Flashlight Soldier-to-Soldier Combat ID System. Began development of a flashlight soldier-to-soldier combat identification system.</li><li><input type="checkbox"/> Foliage Penetrating Reconnaissance and Surveillance System. Developed and evaluated a multi-sensor foliage penetrating reconnaissance and surveillance system.</li></ul></li></ul>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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- Extended Lifetime Radioisotope Batteries. Developed power solutions to provide long-lasting, high density power for small autonomous devices.
- Unified Management Infrastructure System. Developed a network-based remote communication and control platform for monitoring, managing and controlling many different types of net-centric devices and platforms.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Rapid Exploitation of Innovative Technologies for SOF (REITS) - C4, ISR, and Sensors Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Continued the Enhanced Hostile Detection System, Night Vision Windshield/Advanced Distributed Aperture System (ADAS), Battlefield Helicopter Emulator, and the Short Wave Infrared Radar (SWIR) Identify Friend or Foe System, and Sea Eagle Technology Activities.  <i>FY 2010 Plans:</i> FY10 Continue the ADAS Joint Concept Technology Demonstration and development of the Advanced Dual Band Night Vision Goggles. Complete the Enhanced Hostile Detection System. Establish capabilities that can be exploited by SWIR sensors and transition to an acquisition program. Prototype flexible advanced optics and develop new color digital night vision technology. Develop a software solution for super resolution residing on focal plane arrays.  <i>FY 2011 Base Plans:</i> FY11 Develops advanced sensors, multi-spectral optics, high band-width technologies and multi-level security systems.	6.527	8.494	9.799	0.000	9.799
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Mobility Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Tested the Maverick Unmanned Aerial Vehicle (UAV).	1.675	1.500	2.500	0.000	2.500

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2010 Plans:</i> FY10 Continue to test the Maverick UAV using various payloads. Start developmental work on a Counter UAV Pulsed Energy Projectile.</p> <p><i>FY 2011 Base Plans:</i> FY11 Pursues low observable and counter low observable technologies to develop advanced lightweight armor and materials. Investigate multi-domain mobility platforms.</p>						
<p>Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - SOF Warrior Survivability and Medical Capability Area</p> <p><i>FY 2010 Plans:</i> FY10 Conduct concept studies to explore and validate mission-based experiments. Continue application of a blast-wave sensor for the detection of blast overpressure in the screening of mild traumatic brain injury. Develop a prototype altitude readiness management system decision aid, which will monitor the efficacy of pulse waves for mobile triage capability for SOF Medics. Study health hazards of breaching charges in complex environment.</p> <p><i>FY 2011 Base Plans:</i> FY11 Develop far-forward Tactical Combat Casualty Care. Pursue rapid assays/diagnostics, reduce operator load, and provide advanced protection.</p>		0.000	2.000	2.100	0.000	2.100
<p>Classified Sub project</p> <p><i>FY 2009 Accomplishments:</i> FY09 Details provided under separate cover.</p> <p><i>FY 2010 Plans:</i> FY10 Details provided under separate cover.</p>		1.674	2.094	2.037	0.000	2.037

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Details provided under separate cover.						
Tagging, Tracking, and Locating (TTL) Sub-Project  <i>FY 2009 Accomplishments:</i> FY09 Specific objectives, priorities, and technical approaches are classified. Continued projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiated projects identified in the USSOCOM/DoD Roadmap. Supported the Joint Chiefs of Staff TTL Quick Look Capability Assessment.  <i>FY 2010 Plans:</i> FY10 Specific objectives, priorities, and technical approaches are classified. Continue projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiate projects identified in the USSOCOM/DoD Roadmap. Support the Joint Chiefs of Staff TTL Quick Look Capability Assessment.  <i>FY 2011 Base Plans:</i> FY11 Specific objectives, priorities, and technical approaches are classified. Continues projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiates projects identified in the USSOCOM/DoD Roadmap. Supports the Joint Chiefs of Staff TTL Quick Look Capability Assessment.		10.725	10.443	10.109	0.000	10.109
Accomplishments/Planned Programs Subtotals		20.601	24.531	26.545	0.000	26.545
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Flashlight Soldier-to-Soldier Combat ID System		5.584	4.500			

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development to provide technology that reduces friendly fire casualties and increases combat effectiveness.</p> <p><i>FY 2010 Plans:</i> FY10 Continued from FY09 to provide technology that reduces friendly fire casualties and increases combat effectiveness.</p>		
<p>Congressional Add: Foliage Penetrating Reconnaissance and Surveillance</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development. Foliage penetrating synthetic aperture radar offers the capability for penetrating materials that are optically opaque, and thus, not visible by optical or infrared techniques.</p>	3.191	0.000
<p>Congressional Add: Extended Lifetime Radioisotope Batteries</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development to demonstrate small prototype integrated power systems that use radioisotope batteries to continuously trickle-charge larger batteries and capacitors.</p>	1.595	0.000
<p>Congressional Add: Unified Management Infrastructure System</p> <p><i>FY 2009 Accomplishments:</i> FY09 Developed a network-based remote communication and control platform for monitoring, managing and controlling many different types of net-centric devices and platforms.</p>	1.196	0.000
<p>Congressional Add: USSOCOM STAR-TEC Partnership Program</p>	0.000	1.575

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Establish an ultra-responsive, local resource that is tied to academia, science and industry to meet unique SOF requirements.			
Congressional Adds Subtotals		11.566	6.075
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S200: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.

**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 SOF to perform their missions. 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.

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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	2.452	0.000	0.000	0.000	0.000
Current President's Budget	2.361	2.390	0.000	0.000	0.000
Total Adjustments	-0.091	2.390	0.000	0.000	0.000
• Congressional General Reductions		-0.010			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.091	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S200: *Special Operations Forces (SOF) Medical Technology Development/S275*

Congressional Add: *Personalized Medicine Initiative*

Congressional Add Subtotals for Project: S200

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	0.000	2.390
	0.000	2.390
	0.000	2.390

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.091 million is due to Small Business Innovative Research transfer.

FY10: Net increase of \$2.390 million is due to a to Section 8097 congressional general reduction of (-\$.010 million) and a congressional add.  
- Personalized Medicine Initiative (\$2.400 million)

FY11: None.

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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S200: Special Operations Forces (SOF) Medical Technology Development/S275</i>	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.

**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 SOF to perform their missions. Special operations requires unique approaches to combat casualty care, medical equipment, and other life support capabilities including life support for high altitude parachuting, combat swimming, and other SOF unique missions. This project provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. The project supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. This effort is defined by the following seven areas of investigation:

- Combat casualty management will: (1) review the emergency medical equipment currently used in the SOF community and compare it to currently available civilian technology, and provide field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF; (2) evaluate current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered, and apply the latest concepts in casualty care to these circumstances; (3) apply lessons learned from recent combat operations to enhance medical capabilities; and (4) develop CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.
- Medical Informatics will study SOF operational medical lessons learned, initiate new studies to update SOF/Joint Medical Doctrine and procedures.
- Performance Enhancements will study flight proficiency and risk taking behavior during extended operations and adverse environments.
- Personalized Medicine Initiative. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Combat Casualty Care <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing recombinant hemostatic agent's studies for penetrating brain injury and SOCOM lab test. Initiated new studies to develop mission essential elements for enroute care.		0.479	0.000	0.000	0.000	0.000
Medical Informatics <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for SOF medical lessons learned and initiated new studies to update SOF/Joint Medical Doctrine and Procedures.		0.577	0.000	0.000	0.000	0.000
Performance Enhancements <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for comparison of flight proficiency and risk taking behavior in aviators given dextroamphetamine or modafinil during extended operations, the effects of exogenous erythropoietin on acute mountain sickness symptoms in humans and anti-clotting agents. Continued ongoing studies for biomarker and dynamic function tests for optimized health and performance, physical performance trainability limits on SOF standards used for recruitment and initial selection and metabolic markers to develop assays and optimize warfighter fitness. Initiated new studies for ergogenics, ergonomics, and operational performance in adverse environment studies.		1.305	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		2.361	0.000	0.000	0.000	0.000
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Personalized Medicine Initiative		0.000	2.390			

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 This initiative is a Congressional Add. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.			
Congressional Adds Subtotals		0.000	2.390
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing
S200: <i>1160402BB SO Advanced Technology Development S200</i>	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This element provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations (JCTDs). It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This element integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new programs and the insertion of appropriate technologies to acquisition programs. The element also addresses unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or are of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	65.684	31.675	0.000	0.000	0.000
Current President's Budget	78.836	56.727	30.806	0.000	30.806
Total Adjustments	13.152	25.052	30.806	0.000	30.806
• Congressional General Reductions		-2.988			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		28.040			
• Congressional Directed Transfers		0.000			
• Reprogrammings	14.222	0.000			
• SBIR/STTR Transfer	-1.070	0.000			
• Other Adjustment	0.000	0.000	30.806	0.000	30.806

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S200: *1160402BB SO Advanced Technology Development S200*

	FY 2009	FY 2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Congressional Add: Field Experimentation Program For SOF</i>	1.596	1.593
Congressional Add: <i>Congressional Add: Improved Information Transfer For Special Forces</i>	2.394	0.000
Congressional Add: <i>Congressional Add: Photovoltaic Power Supply</i>	2.394	0.000
Congressional Add: <i>Congressional Add: Advanced Distributed Aperture System Hostile Fire Indicating System</i>	21.067	1.036
Congressional Add: <i>Congressional Add: Advanced Craft Tech Demonstrations to Quantify and Mitigate Operator Injury</i>	1.995	0.000
Congressional Add: <i>Congressional Add: Autonomous Rendezvous/Formation Flight</i>	1.995	0.000
Congressional Add: <i>Congressional Add: Partnership for Defense Innovation WiFi Test Laboratory</i>	1.995	2.788
Congressional Add: <i>Congressional Add: Micro-Power Special Operations Generator</i>	1.596	0.000
Congressional Add: <i>Congressional Add: Small Assault Vehicle Expeditionary</i>	0.798	0.000
Congressional Add: <i>Congressional Add: Technology Infusion Cell</i>	0.997	0.000
Congressional Add: <i>Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine</i>	0.000	2.788
Congressional Add: <i>Congressional Add: Optical Surveillance Equipment</i>	0.000	1.992
Congressional Add: <i>Congressional Add: CBRN Detection Unmanned Aircraft</i>	0.000	1.593
Congressional Add: <i>Congressional Add: Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture</i>	0.000	1.593
Congressional Add: <i>Congressional Add: Program Increase Helicopter Situational Awareness and Survivability</i>	0.000	9.958
Congressional Add: <i>Congressional Add: Antennas and other CNT Devices for Intelligence/Special Military</i>	0.000	2.988
Congressional Add: <i>Congressional Add: Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System</i>	0.000	1.593
Congressional Add Subtotals for Project: S200	36.827	27.922
Congressional Add Totals for all Projects	36.827	27.922

**Change Summary Explanation**

Funding:

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>

FY09: Net increase of \$5.652 million is due to Small Business Innovative Research transfer (-\$1.070 million), FY09 Omnibus reprogramming action FY09-26PA (-\$3.205 million), reprogramming for Foliage Penetration efforts \$9.999 million, and a classified requirement (-\$0.072 million). Reprogramming for A160T \$7.500 million.

FY10: Net increase of \$25.052 million is due to Section 8097 congressional general reduction (-\$.120), a congressional mark (-\$2.750 million) and the following congressional adds:

- Field Experimentation Program for SOF (\$1.600 million)
- Advanced Distributed Aperture System Hostile Fire Indicating System (\$1.040 million)
- Partnership for Defense Innovation WiFi Test Laboratory (\$2.800 million)
- Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine (\$2.800 million)
- Optical Surveillance Equipment (\$2.000 million)
- CBRN Detection Unmanned Aircraft (\$1.600 million)
- Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture (\$1.600 million)
- Program Increase Helicopter Situational Awareness and Survivability (\$10.000 million)
- Antennas and other CNT Devices for Intelligence/Special Military (\$3.000 million)
- Tiger Moth Air Launched Off Board Sensing Small Unmanned Aerial System (\$1.600 million)

FY11: Increase of \$30.806 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>				<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S200: 1160402BB SO Advanced Technology Development S200</i>	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing

**Note**

In FY09, the Capability Areas were listed separately. Beginning in FY10, the Capability Areas were subsumed under the REITS Sub-Project umbrella. The FY09 funds and accomplishments associated with each Capability Area are listed under the REITS Sub-Project in this President's Budget for clarity.

**A. Mission Description and Budget Item Justification**

This project conducts rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations (JCTDs). It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new sub-projects and the insertion of appropriate technologies to acquisition programs. The project also addresses unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or are of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase. Sub-projects include:

Rapid Exploitation of Innovative Technologies (REITS). REITS provides USSOCOM the ability to identify, assess and exploit emerging innovative technologies for SOF capability deficiencies and expedite technology transitions from the laboratory to operational use. These technologies provide new transformational capabilities and immediate operational impacts, while providing a compass for the direction of future SOF procurement. REITS supports both top-down and bottom-up approaches for USSOCOM Components, Theater Special Operations Commands and Special Operations Task Forces to articulate innovative technology recommendations. Requirements are submitted to USSOCOM for review and approval. The approval process is through the USSOCOM Quick Reaction Board (USSOCOM QRB). The USSOCOM QRB is chaired by the USSOCOM Deputy Commander. Members include the Director of Operations, Director of Requirements, the USSOCOM Acquisition Executive, Science Advisors, and the Interagency Task Force Director. The tenets of the QRB are to promote speed, evolution, collaboration, and engagement. An individual Technology Activity can be submitted from every echelon of command through the USSOCOM "HardEdge" portal for initial evaluation and distribution to industry, academia, laboratories or our in-country mobile technology complex to build the solution. The process is detailed in a USSOCOM Directive, "Rapid Technology Support to Special Operations."

C4, ISR and Sensors Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with a robust C4 and intelligence capability to ensure uninterrupted information exchange, influence situations to support mission accomplishments, and reduce an adversary's ability to use information. Exploit technologies to conduct ATDs that provide SOF with increased sensory performance. Achieve near real-time data fusion for sensor systems.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<p><input type="checkbox"/> Mobility, Power and Energy Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with survivable mobility capabilities on high threat areas and with enhanced situational awareness. Exploit emerging technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. Exploit power system technologies for signature reduction. Develop advanced energy storage for underwater vehicles.</p> <p><input type="checkbox"/> SOF Warrior Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with increased survivability and performance. Enhance individual operator capabilities.</p> <p><input type="checkbox"/> Weapons and Munitions Capability Area. Exploit technologies for tunable weapons.</p> <ul style="list-style-type: none"> <li>• Tagging, Tracking, and Locating (TTL) Technologies Sub-Project. Exploit emerging technologies to utilize the USSOCOM/DoD TTL Science &amp; Technology Roadmap and the TTL Quick Look Capabilities Assessment. Exploit emerging technologies to locate and track targets or items of interest. Pursue advanced development and prototyping of TTL capabilities that have been proven to be feasible and operationally useful in Special Operations Advanced Technology Development.</li> <li>• National to Theater Transition Sub-Project. Conduct additional testing required to transition items from our national forces to theater forces.</li> <li>• Classified Sub-Project (provided under separate cover).</li> <li>• Iridium-Global Positioning System (I-GPS) Sub-Project. Conduct a proof of concept study of I-GPS to evaluate the capability to provide handsets capable of using signals from iridium and GPS satellites to provide anti-jam, positioning, and timing accuracy capabilities.</li> </ul> <p>The following technology activities were added by Congress:</p> <p><input type="checkbox"/> Field Experimentation Program for Special Operations. Prototype and evaluate manned-unmanned platform and sensor networks to articulate new concepts of operation and employment for SOF.</p> <p><input type="checkbox"/> Improved Information Transfer for Special Forces. Apply real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations intelligence requirements.</p> <p><input type="checkbox"/> Photovoltaic Power Supply. Develop high efficiency photovoltaic power sources for the deployment of autonomous sensors.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<input type="checkbox"/> Advanced Distributed Aperture System (ADAS) Hostile Fire Indicating System (HFIS). Develop and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.		
<input type="checkbox"/> Advanced Craft Technology Demonstrations to Quantify and Mitigate Operator Injury. Rapidly field two operational demonstrators to evaluate a shock-mitigating craft with advanced composite materiel and advanced hull design to reduce operational injuries.		
<input type="checkbox"/> Autonomous Rendezvous/Formation Flight. Develop the capability for aircraft to maintain position while staying very stable in formation fixed to relative position of other aircraft conditions.		
<input type="checkbox"/> Partnership for Defense Innovation WiFi Test Laboratory. Rapidly evaluate and integrate commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) secure wireless network technologies that are relevant to the SOF Warrior.		
<input type="checkbox"/> Micro-Power Special Operations Generator. Develop a low-signature, rugged, 2-man-portable, multi-fuel, power generator for SOF missions.		
<input type="checkbox"/> Small Assault Vehicle Expeditionary. Upgrade and optimize the Small Versatile Maritime Mobility Craft platform through hull design and engine replacement.		
<input type="checkbox"/> Technology Infusion Cell. Provide independent, unbiased research and rapid prototype development of emerging technologies to assist SOF to successfully train and fight the war on terror.		
<input type="checkbox"/> Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine (SOC-R). Develop radar capable of penetrating the foliage in riverine and coastal environments at ranges consistent with mission parameters.		
<input type="checkbox"/> Optical Surveillance Equipment. This system will allow SOF to reproduce large-format/high-resolution calibration patterns used for performance analysis of surveillance systems in black and white, color, and multi-spectral bands.		
<input type="checkbox"/> Chemical, Biological, Radiological, and Nuclear (CBRN) Detection Unmanned Aircraft. Assess the capability and feasibility of operating an Advanced Developed CBRN Detection Payload integrated in a Vertical Take-off/Landing (VTOL) Unmanned Aerial Vehicle (UAV).		
<input type="checkbox"/> Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture. Develop an architecture to achieve near real-time data fusion for deployed sensor systems.		

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- Increase Helicopter Situational Awareness and Survivability. Continue to develop the Advanced Distributed Aperture System (ADAS) program (sensors, 3-D audio, and ADAS processor).
  
- Antennas and other Carbon Nano Tube (CNT) Devices for Intelligence/Special Military. Research, develop and demonstrate antennas and other devices for specialized intelligence and military communications.
  
- Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System (UAS). Demonstrate an inexpensive, compact UAV that can be launched from many types of vehicles (ground, sea and air) to enhance the capabilities and situational awareness of the warfighter.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - C4 /ISR/ Sensors Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Continued the Data Object Protection System, continued Harbor Intruder Joint Concept Technology Demonstration (JCTD), and developed better Fuel Cells for Unmanned Aerial Systems.  <i>FY 2010 Plans:</i> FY10 Continues the Harbor Intruder JCTD. Develops a secure wireless headset. Develops and transitions the Operational 3D JCTD. Initiates the Sea Tracker JCTD and Joint UAS Precision Targeting JCTD.  <i>FY 2011 Base Plans:</i> FY11 Develop advanced processing techniques, persistent surveillance, and advanced multi-function defined radios.	3.731	4.100	6.519	0.000	6.519
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Mobility/Power and Energy Capability Area	19.399	3.000	3.000	0.000	3.000

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Conducted planning, payload integration, air vehicle improvements, and training in support of multiple operational demonstrations to evaluate the military utility of the A-160T unmanned aerial vehicle. Integrated two electro-optical infrared sensors to be tested on the A-160T. Continued the Combat Autonomous Mobility System (CAMS) JCTD and the Small Unmanned Aerial System (SUAS) development.</p> <p><i>FY 2010 Plans:</i> FY10 Integrates the CAMS into SOF mobility platforms for ISR; develops a prototype Small Assault Vehicle Expeditionary (SAVE) Light Combatant Craft. Develops a multi-fuel outboard engine. Investigates application of graphite foam for heat transfer applications. Develops fuel cells for all environment capable variant.</p> <p><i>FY 2011 Base Plans:</i> FY11 Pursue low-observable and counter low-observable technologies. Develop advanced lightweight armor and materials. Investigate multi-domain mobility platforms.</p>					
<p>Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - SOF Warrior Survivability Technologies Capability Area</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued frangible ammunition project. Continued diver/crewman thermal protection technology.</p> <p><i>FY 2010 Plans:</i> FY10 Continued shock and vibration mitigation activity and diver/crewman thermal protection technology. Investigates state of technology of transparent armor. Pursue use of superhydrophobics.</p>	0.450	2.500	2.750	0.000	2.750

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Reduce the load of the operator. Provide advanced protection and visualization; and training systems.						
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Weapons and Munitions Capability Area <i>FY 2010 Plans:</i> FY10 Optimize small arms signature suppression.  <i>FY 2011 Base Plans:</i> FY11 Pursue precision guided munitions and tunable weapons.		0.000	2.394	2.250	0.000	2.250
Tagging, Tracking, and Locating (TTL) Technologies Sub-Project <i>FY 2009 Accomplishments:</i> FY09 Continued projects from the USSOCOM/DoD TTL project database. Exploited emerging technologies to locate and track targets or items of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.  <i>FY 2010 Plans:</i> FY10 Continue projects from the USSOCOM/DoD TTL project database that exploits and integrate TTL proven relevant technologies. Exploit emerging technologies to locate and track targets or items of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.  <i>FY 2011 Base Plans:</i> FY11 Continues projects from the USSOCOM/DoD TTL project database that exploits and integrate TTL proven relevant technologies. Exploits emerging technologies to locate and track targets or items		12.119	12.355	12.369	0.000	12.369

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.						
Classified Sub project <i>FY 2009 Accomplishments:</i> FY09 Details provided under separate cover.  <i>FY 2010 Plans:</i> FY10 Details provided under separate cover.  <i>FY 2011 Base Plans:</i> FY11 Details provided under separate cover.		4.236	2.491	1.974	0.000	1.974
National to Theater Transition Sub-Project <i>FY 2010 Plans:</i> FY10 Conducts additional testing and evaluation required on various equipment items being transitioned to the SOF Theater Forces.  <i>FY 2011 Base Plans:</i> FY11 Conduct additional testing and evaluation required on various equipment items being transitioned to the SOF Theater Forces.		0.000	1.965	1.944	0.000	1.944
Iridium Global Positioning System (I-GPS) Sub-Project <i>FY 2009 Accomplishments:</i> FY09 Conducted a proof-of-concept study of I-GPS to evaluate the capability to provide handsets capable of using signals from iridium and global positioning system satellites to provide anti-jam, positioning, and timing accuracy capabilities.		2.074	0.000	0.000	0.000	0.000

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Accomplishments/Planned Programs Subtotals		42.009	28.805	30.806	0.000	30.806
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Congressional Add: Field Experimentation Program For SOF <i>FY 2009 Accomplishments:</i> FY09 Effort focused on joint, coalition efforts exploiting emerging commercial communications, networks, and data handling solutions. <i>FY 2010 Plans:</i> FY10 Effort focuses on joint, coalition efforts exploiting emerging commercial communications, networks, and data handling solutions.		1.596	1.593			
Congressional Add: Congressional Add: Improved Information Transfer For Special Forces <i>FY 2009 Accomplishments:</i> FY09 Established a prototype global sensor network, research, development, test, and evaluation environment to migrate and integrate existing and future close-access and persistent intelligence, surveillance, and reconnaissance capabilities into the SOF information environment.		2.394	0.000			
Congressional Add: Congressional Add: Photovoltaic Power Supply <i>FY 2009 Accomplishments:</i> FY09 Developed of highly efficient photovoltaic solar cells to be used on autonomous sensors.		2.394	0.000			
		21.067	1.036			

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional Add: Advanced Distributed Aperture System Hostile Fire Indicating System  <i>FY 2009 Accomplishments:</i> FY09 Complete development and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.  <i>FY 2010 Plans:</i> FY10 Complete development and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.		
Congressional Add: Congressional Add: Advanced Craft Tech Demonstrations to Quantify and Mitigate Operator Injury  <i>FY 2009 Accomplishments:</i> FY09 Rapidly fielded two operational demonstrators for evaluation of a shock-mitigating craft with advanced composite materiel and advanced hull design to reduce operational injuries.	1.995	0.000
Congressional Add: Congressional Add: Autonomous Rendezvous/Formation Flight  <i>FY 2009 Accomplishments:</i> FY09 Developed the capability for aircraft to maintain position while staying very stable in formation fixed to relative position of other aircraft in instrument meteorological conditions.	1.995	0.000
Congressional Add: Congressional Add: Partnership for Defense Innovation WiFi Test Laboratory  <i>FY 2009 Accomplishments:</i> FY09 Rapidly evaluated and integrated COTS and GOTS secure wireless network technologies that are relevant to the SOF Warrior.	1.995	2.788

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Rapidly evaluate and integrate COTS and GOTS secure wireless network technologies that are relevant to the SOF Warrior.		
Congressional Add: Congressional Add: Micro-Power Special Operations Generator <i>FY 2009 Accomplishments:</i> FY09 Developed a low signature, rugged, 2-man-portable, multi-fuel, power generator for SOF missions.	1.596	0.000
Congressional Add: Congressional Add: Small Assault Vehicle Expeditionary <i>FY 2009 Accomplishments:</i> FY09 Provided upgrades and optimization to the Small Versatile Maritime Mobility Craft platform through hull design and engine replacement.	0.798	0.000
Congressional Add: Congressional Add: Technology Infusion Cell <i>FY 2009 Accomplishments:</i> FY09 Provided independent, unbiased research and rapid prototype development of emerging technologies to assist SOF to successfully train and fight in overseas contingency operations.	0.997	0.000
Congressional Add: Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine <i>FY 2010 Plans:</i> Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine	0.000	2.788

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>	
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Optical Surveillance Equipment  <i>FY 2010 Plans:</i> FY10 This system will allow the reproduction of large-format/high-resolution calibration patterns used for performance analysis of surveillance systems in black and white, color, and multi-spectral bands.		0.000	1.992
Congressional Add: Congressional Add: CBRN Detection Unmanned Aircraft  <i>FY 2010 Plans:</i> FY10 Assess the capability and feasibility of operating an Advanced Developed CBRN Detection Payload integrated in a Vertical Take-off/Landing Unmanned Aerial Vehicle.		0.000	1.593
Congressional Add: Congressional Add: Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture  <i>FY 2010 Plans:</i> FY10 This project fulfills an urgent need by Special Operating Forces (SOF) to achieve near real-time data fusion for deployed sensor systems. This project will supplement and enhance the SOF warfighters both in Iraq and Afghanistan.		0.000	1.593
Congressional Add: Congressional Add: Program Increase Helicopter Situational Awareness and Survivability  <i>FY 2010 Plans:</i> FY10 Continue the development of the Advanced Distributed Aperture System (ADAS) program (sensors, 3-D audio, and ADAS processor), which was started under the FY09 Congressional Add called ADAS.		0.000	9.958

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional Add: Antennas and other CNT Devices for Intelligence/Special Military <i>FY 2010 Plans:</i> FY10 Conduct research, development and demonstration of antennas and other devices for specialized intelligence and military communications.	0.000	2.988
Congressional Add: Congressional Add: Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System <i>FY 2010 Plans:</i> FY10 An inexpensive, compact UAV that can be launched from many types of vehicles (ground, sea and air) to enhance the capabilities and situational awareness of the warfighter.	0.000	1.593
<b>Congressional Adds Subtotals</b>	36.827	27.922

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>			PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing
SF101: <i>Aviation Engineering Analysis SF101</i>	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project provides rapid response capability for the investigation, evaluation, and demonstration of technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: sensor integration; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo location and specific emitter identification; navigation; target detection; and future SOF aircraft requirements.

**B. Program Change Summary (\$ in Millions)**

	<u><b>FY 2009</b></u>	<u><b>FY 2010</b></u>	<u><b>FY 2011 Base</b></u>	<u><b>FY 2011 OCO</b></u>	<u><b>FY 2011 Total</b></u>
Previous President's Budget	0.000	3.544	0.000	0.000	0.000
Current President's Budget	0.000	3.529	4.234	0.000	4.234
Total Adjustments	0.000	-0.015	4.234	0.000	4.234
• Congressional General Reductions		-0.015			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	4.234	0.000	4.234

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>

FY10: Decrease of -\$0.015 million is due to Section 8097 Congressional general reduction.

FY11: Increase of \$4.234 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>	<b>PROJECT</b> SF101: <i>Aviation Engineering Analysis SF101</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
SF101: <i>Aviation Engineering Analysis SF101</i>	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Provides a rapid response capability to support SOF fixed wing aircraft and unmanned aircraft systems. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction studies, and engineering analyses. This 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. Conduct risk reduction studies, analyses, and demonstrations to support emerging, time critical weapons and sensor enhancements.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Aviation Engineering Analysis <i>FY 2010 Plans:</i> FY10 Perform engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions.  <i>FY 2011 Base Plans:</i> FY11 Performs engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions.	0.000	3.529	4.234	0.000	4.234
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	3.529	4.234	0.000	4.234

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>	<b>PROJECT</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>	SF101: <i>Aviation Engineering Analysis SF101</i>

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing
<i>S225: SOF Information and Broadcast Systems Advanced Technology/S225</i>	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This Program Element (PE) conducts rapid prototyping, advanced technology demonstrations, and advanced concept technology demonstrations of information and broadcast systems technology. This includes planning, analysis, evaluation, and production information systems capabilities and distribution and dissemination broadcast systems capabilities. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This PE 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 PE 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	10.960	4.988	0.000	0.000	0.000
Current President's Budget	8.405	4.967	4.942	0.000	4.942
Total Adjustments	-2.555	-0.021	4.942	0.000	4.942
• Congressional General Reductions		-0.021			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.148	0.000			
• SBIR/STTR Transfer	-0.407	0.000			
• Other Adjustment	0.000	0.000	4.942	0.000	4.942

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>
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**Change Summary Explanation**

Funding:

FY09: Decrease of -\$2.555 million is due to Small Business Innovative Research transfer (-\$0.407 million) and reprogramming for Foliage Penetration efforts (-\$2.148 million).

FY10: Decrease of -\$0.021 million due to Section 8097 Congressional general reductions.

FY11: Increase of \$4.942 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>				<b>PROJECT</b> S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S225: SOF Information and Broadcast Systems Advanced Technology/S225</i>	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project conducts rapid prototyping of information and broadcast system technology. This includes cyber capabilities that predict the best media channels to reach potential target audiences, data mining and information collections tools, propaganda and social behavior analytical tools, cultural analysis toolsets and emerging technologies that support the planning and analytical needs for the Psychological Operations (PSYOP) forces. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project integrates efforts within this project and conducts technology demonstrations in conjunction with joint experiments and other assessment events and performs market research on emerging technologies that support all phases of PSYOP. 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.

Seeks technologies that will transform current PSYOP capabilities through two major objectives: 1) Exploit technologies capable of disseminating products to reach target audiences across a variety of media to include audiences in denied areas. 2) Automate and improve PSYOP planning and analytical capability through technologies that are integrated into SOF planning systems (Cultural Analysis, Targeting, Theme Development, Media & Product Selection, Distribution & Dissemination, and Measures of Effectiveness). Develop software applications that increase the efficiency and shorten the timeline to get PSYOP dissemination packages approved. Develop hardware/software tools that facilitate the collaboration and sharing of information and other critical data.

PSYOP Modernization. This initiative will initiate and continue development of emergent technologies available in the marketplace to transform and modernize PSYOP planning, analysis, development, broadcast, distribution, dissemination, and feedback capabilities. This initiative will also continue development of appropriate emerging technologies initially identified by ATDs and ACTDs to transition to acquisition programs. Technologies include: multi-frequency broadcasts systems; digital broadcast capabilities; remote controlled electronic paper; near real-time command and control of unattended PSYOP systems, especially in denied areas; focused/beam speaker sound technologies; visual projection technologies; advanced commercial broadcast technologies including amplitude modulation (AM) and frequency modulation (FM) radio transmitters and antenna; television (TV) transmitter and antenna systems; internet and telephony dissemination and broadcast systems, technologies capable of disseminating PSYOP products to reach target audiences across a wide variety of media into denied areas; and technologies that automate and improve PSYOP planning and analytical capability through integrated capabilities.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>	<b>PROJECT</b> S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
PSYOP "Global Reach" ACTD  <i>FY 2009 Accomplishments:</i> FY09 Demonstrated and performed an extended user evaluation (EUE) for the broadcast payloads on Predator type Unmanned Aerial Vehicle platforms. Demonstrated and performed EUE for the broadcast payload for High Altitude Unmanned Aerial System (Global Observer or HALE). Both of these EUEs will be in preparation for transition. In addition, demonstrated and performed EUE for the PSYOP Planning and Analysis System, which will lead to the transition of software/hardware.		2.684	0.000	0.000	0.000	0.000
PSYOP Modernization  <i>FY 2009 Accomplishments:</i> FY09 Explored emergent technologies available in the marketplace to transform and modernize PSYOP technology capabilities across several PSYOP shortcomings to include: the next generation loudspeaker system, long range broadcast system, PSYOP media displays, and next generation leaflet delivery system. These efforts will also enhance and modernize PSYOP broadcast systems and PSYOP print systems.  <i>FY 2010 Plans:</i> FY10 Continue exploring emerging technologies available in the marketplace to transform and modernize PSYOP technology capabilities across several PSYOP shortcomings to include: the next generation loudspeaker system, scatterable variants and modular systems that meet multiple concepts of operations scenarios, long range broadcast system, Commando SOLO and terrestrial capabilities that are air droppable, stand alone and networked, and next generation leaflet delivery capabilities. Efforts enhance and modernize PSYOP broadcast systems and PSYOP print systems. Develop toolsets to increase the ability of the PSYOP soldier to select appropriate dissemination assets for influence. Research analytic toolsets that focus on predicting human/cultural behavior and appropriate stimuli for influence.		5.721	4.967	4.942	0.000	4.942

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>		<b>PROJECT</b> S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2011 Base Plans:</i>  FY11 Transitions previously developed technologies to programs of record such as Fly-Away Broadcast System, Media Production Center and Commando SOLO. These capabilities developed under the PSYOP modernization effort will drastically enhance the legacy programs and position the warfighter to fight future wars.</p>								
Accomplishments/Planned Programs Subtotals				8.405	4.967	4.942	0.000	4.942
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								
<b>E. Performance Metrics</b>								
N/A								

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1105233BB: <i>RQ-7 UAV/S852</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	0.000	0.000	0.486	0.356	0.357	0.343	Continuing	Continuing
S851: <i>RQ-7 UAV/S852</i>	0.000	0.000	0.000	0.000	0.000	0.486	0.356	0.357	0.343	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF) - unique multi-mission Unmanned Aircraft Systems, intelligence payloads, and control systems. As the supported combatant command, USSOCOM has been designated as the DoD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value-targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This program element addresses the primary areas of intelligence, surveillance, reconnaissance, and target acquisition.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	0.000	0.000	0.000
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1105233BB: RQ-7 UAV/S852
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FY10: None.

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TITLE ***	0.000	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> [*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TEXT FOR PRIOR YEAR. ***]					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing
9999: <i>Special Applications for Contingencies (SAFC)/9999</i>	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The SAFC program element develops and deploys special capabilities to perform intelligence surveillance and reconnaissance for deployed Special Operations Forces (SOF) using non-traditional means. It provides a mechanism for SOF user combat evaluation of emerging sensor technologies. SAFC applies focused Research & Development (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/Office of the Secretary of Defense (OSD) chartered approval process.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	26.254	16.381	0.000	0.000	0.000
Current President's Budget	23.020	27.467	16.272	0.000	16.272
Total Adjustments	-3.234	11.086	16.272	0.000	16.272
• Congressional General Reductions		-0.114			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		11.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.634	0.000			
• SBIR/STTR Transfer	-0.600	0.000			
• Other Adjustment	0.000	0.000	16.272	0.000	16.272

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Special Applications for Contingencies (SAFC)/9999*

Congressional Add: *Congressional Add: Comprehensive Maritime Domain Awareness*

<b>FY 2009</b>	<b>FY 2010</b>
4.488	3.187

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Congressional Add: SAFC Advanced Technology Sensors and Payloads</i>	1.596	4.780
Congressional Add: <i>Congressional Add: SAFC Expeditionary Persistent Power</i>	1.596	0.000
Congressional Add: <i>Congressional Add: SAFC Unmanned Aerial Systems Test Facility</i>	2.394	2.390
Congressional Add: <i>Congressional Add: GMTI Radar for Class II UAVs</i>	0.000	0.797
Congressional Add Subtotals for Project: 9999	10.074	11.154
Congressional Add Totals for all Projects	10.074	11.154

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.234 million is due to Small Business Innovative Research transfer (-\$0.600 million) and FY09 Omnibus reprogramming FY09-26PA (-\$2.634 million).

FY10: Increase of \$11.200M for the following Congressional Adds: Advanced Technologies Sensors and Payloads/Unattended SIGINT Node \$4.800 million; Comprehensive Maritime Domain Awareness \$3.200 million; GMTI Radar for Class II UAVs \$0.800 million; UAV/UAS Test Facility \$2.400 million. Decrease of -\$0.114 million is due to Section 8097 Congressional general reductions.

FY11: Increase of \$16.272 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>				
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>				9999: <i>Special Applications for Contingencies (SAFC)/9999</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
9999: <i>Special Applications for Contingencies (SAFC)/9999</i>	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Applications for Contingencies (SAFC) project 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 sensor technologies. SAFC applies focused Research and Development 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 Research and Development 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 (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
SAFC - Contingencies	3.027	8.157	16.272	0.000	16.272
<p><i>FY 2009 Accomplishments:</i> FY09 Continued development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short notice requirements. Continued to evaluate counter-canopy technologies, persistent stare and quick reaction systems.</p> <p><i>FY 2010 Plans:</i> FY10 Continue development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short notice requirements. Continues to evaluate unique sensor technologies, persistent stare and quick reaction systems.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Continues development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short notice requirements. Continues to evaluate unique sensor technologies, persistent stare and quick reaction systems.						
SAFC – Sensors <i>FY 2009 Accomplishments:</i> FY09 Continued research and assessment of emerging ISR technologies for maritime, land and air domains. Continued research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continued development and evaluation of unique unmanned sensor systems. <i>FY 2010 Plans:</i> FY10 Continues research and assessment of emerging ISR technologies for maritime, land and air domains. Continues research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continues development and evaluation of unique unmanned sensor systems.		3.468	8.156	0.000	0.000	0.000
SAFC – Sensor Platform Systems <i>FY 2009 Accomplishments:</i> FY09 Continued to research, develop and evaluate emerging advances in ISR sensor platform capabilities. Continued to assess and improve persistence and acoustic profile. Continued to enhance and evaluate communication architectures including link performance and interoperability. Continued to develop, deploy and evaluate advanced sensor control technologies.		6.451	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		12.946	16.313	16.272	0.000	16.272

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Comprehensive Maritime Domain Awareness  <i>FY 2009 Accomplishments:</i> FY09 Continued establishment of a national center for maritime and port security to develop a maritime domain awareness prototype system.  <i>FY 2010 Plans:</i> FY10 Continues development of a maritime domain awareness prototype system.	4.488	3.187
Congressional Add: Congressional Add: SAFC Advanced Technology Sensors and Payloads  <i>FY 2009 Accomplishments:</i> FY09 Developed a suite of new communications, control, and data exploitation capabilities for use with small and tactical unmanned aerial system.  <i>FY 2010 Plans:</i> FY10 Develops an affordable, miniature wide band, SIGINT/COMINT payload for employment on small and mid-size UAS platforms and in ground sensors.	1.596	4.780
Congressional Add: Congressional Add: SAFC Expeditionary Persistent Power  <i>FY 2009 Accomplishments:</i> FY09 Developed alternative power and propulsion systems for SOF equipment.	1.596	0.000
Congressional Add: Congressional Add: SAFC Unmanned Aerial Systems Test Facility	2.394	2.390

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<p><i>FY 2009 Accomplishments:</i> FY09 Developed a test/training range within approved airspace to test, evaluate, and certify sensor payloads and platforms.</p> <p><i>FY 2010 Plans:</i> FY10 Continues to develop a test/training range within approved airspace to test, evaluate, and certify sensor systems.</p>		
<p>Congressional Add: Congressional Add: GMTI Radar for Class II UAVs</p> <p><i>FY 2010 Plans:</i> FY10 Develops ground moving target indicator (GMTI) sensor capabilities for deployment on smaller unmanned aerial vehicle platforms by miniaturizing the GMTI system.</p>	0.000	0.797
Congressional Adds Subtotals	10.074	11.154

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC:: SAFC	12.447									Continuing	Continuing
• PROC1:: STUASLO		12.185	12.148		12.148	12.470	12.808	13.025	13.246	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intelligence Surveillance and Reconnaissance Sensor and Networking Development	MIPR	VARIOUS VARIOUS	37.339	8.157	Jul 2010	16.272	Apr 2011	0.000		16.272	Continuing	Continuing	Continuing
Near Real Time Contingencies	MIPR	VARIOUS VARIOUS	18.186	8.156	Aug 2010	0.000		0.000		0.000	0.000	26.342	Continuing
Sensor Platform Capability Development	MIPR	VARIOUS VARIOUS	53.519	0.000		0.000		0.000		0.000	0.000	53.519	Continuing
Comprehensive Port and Maritime Domain Awareness	MIPR	NAVAIR NAVAIR	16.246	3.187	Jun 2010	0.000		0.000		0.000	0.000	19.433	Continuing
Advance Technology Sensors & Payloads	MIPR	NAVAIR NAVAIR	1.596	4.780	Jun 2010	0.000		0.000		0.000	0.000	6.376	Continuing
GMTI Radar for Class II UAS	MIPR	NAVAIR NAVAIR	0.000	0.797	Jun 2010	0.000		0.000		0.000	0.000	0.797	Continuing
Expeditionary Persistent Power	MIPR	NAVAIR NAVAIR	1.596	0.000		0.000		0.000		0.000	0.000	1.596	Continuing
<b>Subtotal</b>			128.482	25.077		16.272		0.000		16.272	0.000	108.063	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
UAS Test Facility Upgrade	MIPR	SPAWAR SPAWAR	2.394	2.390	Jun 2010	0.000		0.000		0.000	0.000	4.784	Continuing
<b>Subtotal</b>			2.394	2.390		0.000		0.000		0.000	0.000	4.784	

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	130.876	27.467		16.272		0.000		16.272	0.000	112.847	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>																									<b>Date:</b> FEBRUARY 2010							
Appropriation/Budget Activity					Program Element Number and Name										Project Number and Name																	
RDT&E/7					PE0304210BB/Special Applications for Contingencies										Project 9999/Special Applications for Contingencies																	
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
Intelligence Surveillance and Reconnaissance (ISR) Capabilities Development	▲																															△
ISR Technology Integration & Testing	▲																															△
ISR Prototype Demonstrations	▲																															△
ISR Combat Evaluation	▲																															△
Comprehensive Maritime Domain (Cong Add)	▲																															△
Advanced Technology Sensors and Payloads (Cong Add)	▲																															△
Expeditionary Persistent Power (Cong Add)	▲			▲																												
Unmanned Aerial Systems Test Facility Upgrade (Cong Add)	▲							△																								
GMTI Radar for Class II UAS (Cong Add)								▲				△																				

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Intelligence Surveillance and Reconnaissance (ISR) Capabilities Development	1	2009	4	2015
ISR Technology Integration & Testing	1	2009	4	2015
ISR Prototype Demonstrations	1	2009	4	2015
ISR Combat Evaluation	1	2009	4	2015
Comprehensive Maritime Domain Awareness	1	2009	4	2010
Advanced Technology Sensors and Payloads	1	2009	4	2010
Expeditionary Persistent Power	1	2009	4	2009
Unmanned Aerial Systems Test Facility Upgrade	1	2009	4	2010
GMTI Radar for Class II UAS	1	2010	4	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing
S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the identification, development, and testing of the Distributed Common Ground/Surface System (DCGS). This architecture interconnects the warfighter and sensors to "find and fix" terrorists and/or individuals. The program integrates tactical processing, exploitation, and dissemination data into the Special Operations Forces (SOF) information enterprise. The program develops and integrates SOF networks providing U. S. Special Operations Command with unique decision capabilities to include: measurement and signature data, sensor exploitation, data compressions and man-portable workstations. The program provides the supporting architecture to link the global sensor network to those who will interpret the data for rapid transmission to collaborative partners via the SOF information enterprise. The program will initially provide SOF with capabilities to conduct exploitation of full motion video from unmanned aerial vehicle assets organic to SOF. The program will integrate and implement the department-level system's integration backbone standards and architecture on the SOF information enterprise, which will support net-centric data sharing between SOF fixed, tactical capabilities and sensors. This program will employ non-developmental commercial and government off-the-shelf hardware and software and will leverage from existing technology as much as possible.

**B. Program Change Summary (\$ in Millions)**

	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>
Previous President's Budget	0.763	1.407	0.000	0.000	0.000
Current President's Budget	0.763	7.701	1.290	0.000	1.290
Total Adjustments	0.000	6.294	1.290	0.000	1.290
• Congressional General Reductions		-0.031			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.000			
• Congressional Directed Transfers		0.325			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	1.290	0.000	1.290

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S400A: *Distributed Common Ground/Surface Systems/S400A*

Congressional Add: *Congressional Add: DCGS Capabilities Modernization*

Congressional Add Subtotals for Project: S400A

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	0.000	5.969
Congressional Add Subtotals for Project: S400A	0.000	5.969
Congressional Add Totals for all Projects	0.000	5.969

**Change Summary Explanation**

Funding:

FY09: None.

FY10: Net increase of \$6.000 million due to Congressional Add for DCGS Capabilities Modernization and a decrease of -\$0.031 million due to Section 8097 Congressional general reductions. Additionally, an increase of \$0.325 million in FY 2010 Overseas Contingency Operations (OCO) funding to continue integration of processing exploitation and dissemination equipment.

FY11: Increase of \$1.290 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>				<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for the identification, development, and testing of the Distributed Common Ground/Surface System (DCGS). This architecture interconnects the warfighter and sensors to “find and fix” terrorists and/or individuals. The program integrates tactical processing, exploitation, and dissemination data into the Special Operations Forces (SOF) information enterprise. The program develops and integrates SOF networks providing U. S. Special Operations Command with unique decision capabilities to include: measurement and signature data, sensor exploitation, data compressions and man-portable workstations. The program provides the supporting architecture to link the global sensor network to those who will interpret the data for rapid transmission to collaborative partners via the SOF Information Enterprise. The program will initially provide SOF with capabilities to conduct exploitation of full motion video from unmanned aerial vehicle assets organic to SOF. The program will integrate and implement the department-level system’s integration backbone standards and architecture on the SOF information enterprise, which will support net-centric data sharing between SOF fixed, tactical capabilities, and sensors. This program will employ non-developmental commercial and government off-the-shelf hardware and software and will leverage from existing technology as much as possible.

- Project also include the following Congressional add:
- DCGS Capabilities Modernization addresses requirements for integrating multi-function intelligence processing, exploitation and dissemination (PED) capabilities into the SOF information enterprise and the DCGS architecture. This funding is also provided to develop a DCGS tool for SOF to expand the capability to exploit documents and media for tactical and timely intelligence in forward deployed operations.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Distributed Common Ground/Surface System	0.763	1.732	1.290	0.000	1.290

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Continued system development with test and evaluation of common ground/surface system enterprise architecture and unclassified test bed participation in the ISR-centric Empire Challenge 09 exercise. Initiated integration of the Counter-IED Operations Integration Center (COIC) software baseline into the Multi-Agency Collaboration Environment (MACE) provided hardware system configuration.</p> <p><i>FY 2010 Plans:</i> FY10 Continue development of common ground/surface system enterprise architecture and system test and integration of the COIC DCGS Integration Backbone-Joint (DIB-J) and Multi-INT Archive and Analysis System (MAAS) software package solution into the SOCRATES baseline. FY10 Overseas Contingency Operations (OCO) continues integration of processing exploitation and dissemination equipment.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continues to integrate the SOF-unique systems and Multi-INT sensors into service-common capabilities; commences developmental test and evaluation efforts and unclassified test bed. (UTB) software integration for DCGS-SOF v1.0 Phase II increment.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	0.763	1.732	1.290	0.000	1.290

	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: DCGS Capabilities Modernization	0.000	5.969

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<p><i>FY 2010 Plans:</i> FY10 Integrate multi-function intelligence PED capabilities into the SOF information enterprise and the DCGS architecture and expands capabilities to exploit documents and media in forward deployed operations.</p>		
Congressional Adds Subtotals	0.000	5.969

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>SOF Intelligence</i>	1.808	6.688	5.225		5.225	3.541		9.155	5.586	Continuing	Continuing

**D. Acquisition Strategy**

DCGS will leverage available funds against ongoing efforts by other government agencies to meet SOF-peculiar documented requirements. The technology will allow for seamless integration with DoD, interagency, or coalition Intelligence Surveillance and Reconnaissance tactical processing, exploitation, and dissemination systems.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prime Mission Equipment/Integration	MIPR	MITRE Bedford, MA	0.000	0.150	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Multimedia Analyst Archive System/DCGS-SOF Integration	MIPR	NGA Bethesda, MD	0.000	0.000		0.154	Jan 2011	0.000		0.154	Continuing	Continuing	Continuing
OCO - DCGS Integration	MIPR	JITC, Ft Huachuca, AZ	0.000	0.325	Jun 2010	0.000		0.000		0.000	0	0.325	Continuing
DCGS Capabilities Modernization	TBD/TBD	TBD TBD	0.000	5.969	Feb 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	6.444		0.154		0.000		0.154	0.000	0.325	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Support for Warfighter Workshop	MIPR	MITRE Bedford, MA	0.000	0.000		0.116	Nov 2010	0.000		0.116	0	0.116	Continuing
DCGS Support	TM	Booz Allen Hamilton Mclean, VA	0.405	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
	MIPR	MITRE	0.171	0.000		0.000		0.000		0.000	0.000	0.171	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Sensor Web Support		Bedford, MA											
<b>Subtotal</b>			0.576	0.000		0.116		0.000		0.116	0.000	0.287	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Test & Evaluation	MIPR	SPAWAR Charleston, SC	0.187	0.190	Mar 2010	0.215	Mar 2011	0.000		0.215	Continuing	Continuing	Continuing
DCGS Independent Verification and Validation	MIPR	MITRE Bedford, MA	0.000	0.871	Jan 2010	0.580	Nov 2010	0.000		0.580	Continuing	Continuing	Continuing
Interoperability Support	MIPR	JITC Ft Huachuca, AZ	0.000	0.196	Jan 2010	0.225	Nov 2010	0.000		0.225	0	0.421	Continuing
<b>Subtotal</b>			0.187	1.257		1.020		0.000		1.020	0.000	0.421	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																														
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																														
RDT&E/7	PE0305208BB/Distributed Common Ground/Surface Systems (MIP)	Project S400A/Distributed Common Ground/Surface Systems																														
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
Distributed Common Ground/Surface Systems Integration	▲	—	—	▲	▲	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△	△	—	—	△
DCGS Capabilities Modernization								△	—	—	—	△																				
Sensor Web Assessment				▲																												
DCGS Limited Objective Event (DLOE)												△	—	—	—	△																

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Distributed Common Ground/Surface Systems Integration	1	2009	4	2015
DCGS Capabilities Modernization	2	2010	4	2010
Sensor Web Assessment	4	2009	4	2009
DCGS Limited Objective Event (DLOE)	1	2011	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 0305219BB: <i>MQ-1 Predator A UAV/S400B</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	13.642	2.058	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing
S400B: <i>MQ-1 Predator A UAV/S400B</i>	13.642	2.058	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF) - unique mission kits on the MQ-1 Unmanned Aircraft System as a component of the Medium Altitude Long Endurance Tactical (MALET) Program. USSOCOM is designated as the DoD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations against terrorist networks. USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value-targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This program element addresses the primary areas of intelligence, surveillance, reconnaissance, and target acquisition.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	13.642	2.067	0.000	0.000	0.000
Current President's Budget	13.642	2.058	0.098	0.000	0.098
Total Adjustments	0.000	-0.009	0.098	0.000	0.098
• Congressional General Reductions		-0.009			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other adjustment	0.000	0.000	0.098	0.000	0.098

**Change Summary Explanation**

Funding:

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305219BB: <i>MQ-1 Predator A UAV/S400B</i>
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FY09: None.

FY10: Decrease of -\$0.009 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.098 million funds integration of MQ-1 SOF-unique mission kits.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MQ-1 Predator A UAV/ <i>FY 2009 Accomplishments:</i> MQ-1 Predator A UAV/  <i>FY 2010 Plans:</i> MQ-1 Predator A UAV/  <i>FY 2011 Base Plans:</i> MQ-1 Predator A UAV/	13.642	2.058	0.098	0.000	0.098
Accomplishments/Planned Programs Subtotals	13.642	2.058	0.098	0.000	0.098

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305219BB: <i>MQ-1 Predator A UAV/S400B</i>
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**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1150219BB: <i>MQ-9 UAV/S851</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	4.362	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing
S400B: <i>MQ-9 UAV/S851</i>	0.000	4.362	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

MISSION

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	4.380	0.000	0.000	0.000
Current President's Budget	0.000	4.362	0.098	0.000	0.098
Total Adjustments	0.000	-0.018	0.098	0.000	0.098
• Congressional General Reductions		-0.018			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	0.098	0.000	0.098

**Change Summary Explanation**

Funding:

FY09: None.

FY10: Decrease of -\$0.018 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.098 million to integrate MQ-9 SOF-unique mission kits.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1150219BB: <i>MQ-9 UAV/S851</i>
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Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1105219BB MQ-9 UAV <i>FY 2010 Plans:</i> 1105219BB MQ-9 UAV  <i>FY 2011 Base Plans:</i> 1105219BB MQ-9 UAV	0.000	4.362	0.098	0.000	0.098
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	4.362	0.098	0.000	0.098

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	10.206	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S050: <i>Small Business Innovative Research (SBIR)</i>	10.206	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Small Business Innovative Research (SBIR) program element consists of a highly competitive three-phase award system that 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 \$0.100 million 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 \$0.750 million 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.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	10.206	0.000	0.000	0.000	0.000
Total Adjustments	10.206	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	10.206	0.000			

**Change Summary Explanation**

Funding:

FY09: Increase of \$10.206 million is due to transfers from baseline accounts to fund the Small Business Innovative Research account.

FY10: None.

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Small Business Innovative Research	10.206	0.000	0.000	0.000	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>
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<b>C. Accomplishments/Planned Program (\$ in Millions)</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> Continued FY09 projects.					
Accomplishments/Planned Programs Subtotals	10.206	0.000	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing
SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: low probability of intercept/low probability of detection, terrain following/terrain avoidance radar; Precision Strike Package for MC-130W Multi-Mission Modification, AC-130H Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation, target detection, and identification technologies; digital broadcast capabilities; and aerial refueling.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	43.856	82.621	0.000	0.000	0.000
Current President's Budget	72.225	72.308	68.691	0.000	68.691
Total Adjustments	28.369	-10.313	68.691	0.000	68.691
• Congressional General Reductions		-15.513			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	29.860	0.000			
• SBIR/STTR Transfer	-1.491	0.000			
• Other Adjustment	0.000	0.000	68.691	0.000	68.691

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** SF100: *1160403BB Special Operations Aviation Systems Advanced Development/Project SF100*

Congressional Add: *Congressional add: Helicopter Cable Warning Obstacle Avoidance System*

Congressional Add: *EC-130J Multi-Mission Upgrades*

Congressional Add Subtotals for Project: SF100

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	0.000	1.195
	0.000	3.983
	0.000	5.178
	0.000	5.178

**Change Summary Explanation**

Funding:

FY09: Net increase of \$28.369 million is due to Small Business Innovative Research transfer (-\$1.491 million), a reprogramming for risk reduction efforts on a Precision Strike Package MC-130 Multi-Mission Modification (+\$7.600 million), and an above threshold reprogramming to fulfill an urgent USSOCOM requirement to rapidly arm and field multi-mission precision strike platforms (+\$22.260 million).

FY10: Net decrease of -\$10.313 million (decrease of -\$15.209 million in Avionics Modernization Program and -\$0.304 million due to Section 8097 congressional general reduction). Increase of \$1.200 million for Helicopter cable warning obstacle avoidance system as well as increase of \$4.000 million for EC-130J Multi-Mission Upgrades. The \$1.200 million add funding will be moved via DD Form 1415-3 reprogramming action to PE 1160482BB SOF Rotary Wing Aviation.

FY11: Increase of \$68.691 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for the investigation, evaluation, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: low probability of intercept/low probability of detection (LPI/LPD), terrain following/terrain avoidance (TF/TA) radar; Precision Strike Package MC-130W Multi-Mission Modification; AC-130H Recapitalization; and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation, target detection and identification technologies; digital broadcast capability; aerial refueling and develop cable warning obstacle avoidance system.

- SOF C-130 Avionics Modifications. Provides for development necessary to maintain current SOF-unique capabilities for SOF C-130 aircraft. Includes, but is not limited to, mission computers and display generators.
- EC-130J Commando Solo Upgrades. Provides for integration of SOF-unique implementation of the C-130J block cycle upgrade as installed on the EC-130J Commando Solo aircraft and development of digital broadcast capabilities.
- Aviation Engineering Analysis. Provides a rapid response capability to support SOF fixed wing aircraft and unmanned aircraft systems. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction 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. Conducts risk reduction studies, analyses, and demonstrations to support emerging, time critical weapons and sensor enhancements. Note: A new Program Element 1160422BB and Project SF101 were created for Aviation Engineering Analysis in Budget Activity 3. The resources moved beginning in FY 2010.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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- Acquisition Development Support. This funding is required to support systems engineering, analysis, and integration. Primary use of funds is to examine commonality and interoperability across systems. Funding will be used in a multitude of avenues across systems to support cost-benefit analysis; provide additional test support; and further reduce cost, schedule, and technical risk. As required, funds will support manpower costs for experts needed to meet certification, safety, reliability, and other requirements required by Office of the Secretary of Defense, Acquisition, Technology and Logistics, as well as commitments for joint programs.
- Precision Strike Package (PSP) MC-130W Multi-Mission Modification. This program fulfills an urgent combat requirement to rapidly arm and field multi-mission precision strike platforms. Provides an armed over-watch capability including sensors, communication systems, precision guided munitions, and a single medium-caliber gun. An interim kit is being fielded and funded under a Combat Mission Needs Statement in FY 2009. The MC-130W will return to its primary mobility role once PSP is fielded on recapitalized AC-130H aircraft.
- Precision Strike Package (PSP) for SOF Airborne Platforms. This funding is required to support systems engineering, analysis, and integration of the baseline PSP onto host MC-130J aircraft provided by the U.S. Air Force for AC-130H recapitalization as well as other SOF airborne platforms. Missions for the AC-130H recap aircraft include, but are not limited to, Close Air Support (CAS), Air Interdiction, Armed Reconnaissance, Escort, and Force Protection – Integrated Base Defense. PSP is modular, scalable, and platform neutral, and includes mission management, sensors, and weapons.
- SOF Common TF/TA Radar. Continues system design and development of a SOF common LPI/LPD radar (Silent Knight Radar) to defeat advanced passive detection threat while maintaining ability to fly safe TF. This radar is targeted for use on all MH-47G Heavy Assault helicopters, MH-60M Blackhawk helicopters, MC-130H Combat Talon II and CV-22 Tilt-Rotor aircraft.
- C-130 Terrain Following Radar System. This funding integrates a TF/TA radar with an on-board processor to provide a multi-mode terrain following capability. This system is targeted for the MC-130W, MC-130H and MC-130J platforms.
- Cable Obstacle Avoidance System. Congressional add to develop a cable warning obstacle avoidance system. This system will allow aircraft to perform evasive actions, significantly increasing the aircrew’s probability of survival during a hostile fire engagement. The funding will be moved via DD 1415 reprogramming action to PE 1160482BB SOF Aviation.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF C-130 Avionics Modifications	0.000	4.800	24.542	0.000	24.542

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2009 Accomplishments:</i> [*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TEXT FOR PRIOR YEAR. ***]</p> <p><i>FY 2010 Plans:</i> FY10 Initiates development and integration of aircraft modifications to maintain SOF-unique capabilities.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continue development and integration of aircraft modifications to maintain SOF-unique capabilities which will be executed via an incremental acquisition strategy based on SOF C-130 avionics obsolescence dates</p>						
<p>EC-130J Commando Solo Upgrades</p> <p><i>FY 2009 Accomplishments:</i> FY09 Initiated integration of SOF-unique implementation of the C-130J Block Cycle 7.0 Upgrade as installed on the EC-130J Commando Solo aircraft.</p> <p><i>FY 2010 Plans:</i> FY10 Continues development and integration of SOF-unique implementation of the C-130J Block Cycle 7.0 Upgrade as installed on the EC-130J Commando Solo aircraft.</p> <p><i>FY 2011 Base Plans:</i> FY11 Develop and integrate digital broadcast capability for incorporation on EC-130J.</p>		0.486	0.974	0.581	0.000	0.581
Aviation Engineering Analysis		12.965	0.000	0.000	0.000	0.000

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY09 Continued engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions. Conducted risk reduction studies, analyses, and demonstrations to support Precision Strike Package (PSP) MC-130W Multi-Mission Modification concepts.					
Acquisition Development Support  <i>FY 2010 Plans:</i> FY10 Conducts engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability across systems; to support cost-benefit analyses; to provide additional test support; and to further reduce cost, schedule, and technical risk.  <i>FY 2011 Base Plans:</i> FY11 Conduct engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability across systems; to support cost-benefit analyses; to provide additional test support; and to further reduce cost, schedule, and technical risk.	0.000	0.407	2.094	0.000	2.094
Precision Strike Package (PSP) MC-130W Multi-Mission Modification  <i>FY 2009 Accomplishments:</i> FY09 Integrated and tested PSP on a MC-130W aircraft, mission training device development, and training systems improvements.  <i>FY 2010 Plans:</i> FY10 Continues integration and testing for offensive systems, sensors, and mission management of the PSP on a MC-130W aircraft.	22.260	27.148	0.000	0.000	0.000
Precision Strike Package (PSP) for SOF Airborne Platforms	0.000	0.000	4.279	0.000	4.279

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Initiate development and integration of the PSP on a MC-130J aircraft.						
SOF Common Terrain Following /Terrain Avoidance (TF/TA) Radar – Silent Knight <i>FY 2009 Accomplishments:</i> FY09 Continued engineering and manufacturing development (EMD) of SOF Common TF/TA radar. Continued hardware and software design and integration, and refinement of developmental test plans for MH-47G platform. <i>FY 2010 Plans:</i> FY10 Continues EMD of SOF Common TF/TA radar. Continues prototype integration and testing. Begins developmental contractor flight testing and kit build for development/qualification flight test, platform integration, and test planning. <i>FY 2011 Base Plans:</i> FY11 Continue EMD of SOF Common TF/TA radar. Continue contractor flight testing, and platform integration and begin developmental flight testing.		36.514	33.801	35.205	0.000	35.205
MC-130W Terrain Following Radar System <i>FY 2011 Base Plans:</i> FY11 Initiates development and integration of the Terrain Following Radar System onto the MC-130W.		0.000	0.000	1.990	0.000	1.990
Accomplishments/Planned Programs Subtotals		72.225	67.130	68.691	0.000	68.691
		<b>FY 2009</b>	<b>FY 2010</b>			
		0.000	1.195			

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional add: Helicopter Cable Warning Obstacle Avoidance System <i>FY 2010 Plans:</i> FY10 Develop a Cable Warning Obstacle Avoidance System. Funding will be moved via DD 1415-3 reprogramming action to PE 1160482BB, SOF Aviation.		
Congressional Add: EC-130J Multi-Mission Upgrades <i>FY 2010 Plans:</i> FY10 Expand existing capability to a multi-mission configuration to support additional special operations forces capabilities.	0.000	3.983
<b>Congressional Adds Subtotals</b>	0.000	5.178

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>EC130 Mods</i>	0.728	0.000	0.808		0.808	0.776	0.000	0.000	0.000	Continuing	Continuing
• PROC1:: <i>PSP for SOF Airborne Platforms</i>	0.000	0.000	0.000		0.000	46.410	133.350	190.043	213.740	Continuing	Continuing
• PROC2:: <i>MC-130 Terrain Following</i>							2.932	17.637	19.845	Continuing	Continuing
• PROC3:: <i>PS[ MC-130W Multi-Mission Mod</i>	141.300	32.326	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**D. Acquisition Strategy**

• SOF C-130 Avionics Modifications. Restoration and integration of existing SOF-unique capabilities will be executed via an incremental acquisition strategy based on SOF C-130 avionics obsolescence dates.

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<ul style="list-style-type: none"> <li>• EC-130J Commando Solo Upgrades. Block 7.0 will be procured by the Air Force program office using existing development and production contracts. Digital broadcast capabilities will be procured through an incremental acquisition strategy to incorporate readily available equipment into the EC-130J aircraft.</li> <li>• Acquisition Development Support. Conduct engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability issues to ensure cost, schedule and technical issues are addressed.</li> <li>• Precision Strike Package (PSP) MC-130W Multi-Mission Modifications. Provides incremental acquisition strategy with integration and testing for offensive systems, sensors, and mission management.</li> <li>• PSP for SOF Airborne Platforms. Provides incremental acquisition strategy to integrate and test the PSP on MC-130J aircraft provided by the U.S. Air Force and other SOF airborne platforms.</li> <li>• Terrain Following/Terrain Avoidance Radar (Silent Knight). Incremental acquisition strategy with the MH-47G as the lead platform. A competitive engineering and manufacturing development contract with an option for six low-rate initial production (LRIP) units was awarded to Raytheon in FY 2007. A follow-on radar production contract using LRIP price points will be awarded. MH-47G installation and follow-on platform group A design and integration efforts will be awarded.</li> <li>• MC-130W Terrain Following Radar System. A competitive engineering and manufacturing development contract will be awarded for integration and test.</li> <li>• SOF Aviation. Develop cable warning obstacle avoidance system.</li> </ul> <p><b><u>E. Performance Metrics</u></b> N/A</p>		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE: February 2010</b>			
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF C-130 Avionics Modification	TBD	TBD TBD	0.000	4.800	Jul 2010	21.084	Jun 2011	0.000		21.084	Continuing	Continuing	Continuing
EC-130J Block Cycle Engineering	C/CPIF	Lockheed Martin Aero Marietta, GA	1.128	0.974	Dec 2009	0.581	Dec 2010	0.000		0.581	Continuing	Continuing	Continuing
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	8.486	23.862	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Precision Strike Package SOF Air	TBD/TBD	TBD TBD	0.000	0.000		4.000	Dec 2010	0.000		4.000	Continuing	Continuing	Continuing
Terrain Following/Terrain Avoidance (TF/TA) Radar Risk Reduction	C/CPIF	Raytheon and Northrop Grumman McKinney, TX ; Baltimore, MD	8.042	0.000		0.000		0.000		0.000	0.000	8.042	Continuing
TF/TA Radar Eng & Mfr Dev (EMD)	C/CPIF	Raytheon Dallas, TX	28.676	0.000		0.000		0.000		0.000	0.000	28.676	Continuing
TF/TA Radar Eng & Mfr Dev (EMD) Prime Mission Product	C/CPIF	Raytheon Dallas, TX	57.230	17.046	Dec 2009	3.511	Dec 2010	0.000		3.511	Continuing	Continuing	Continuing
TF/TA Radar Eng & Mfr Dev (EMD) Systems Engineering	C/CPIF	Raytheon Dallas, TX	9.992	3.259	Dec 2009	0.944	Dec 2010	0.000		0.944	Continuing	Continuing	Continuing
MC-130W Terrain Following	TBD/TBD	TBD TBD	0.000	0.000		1.990	Dec 2010	0.000		1.990	Continuing	Continuing	Continuing
<b>Subtotal</b>			113.554	49.941		32.110		0.000		32.110	0.000	36.718	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Aviation Engineering Analysis	Various/ Various	VARIOUS VARIOUS	75.864	0.000		0.000		0.000		0.000	0.000	75.864	Continuing
Acquisition Development Support	Various/ Various	VARIOUS VARIOUS	0.000	0.407		2.094		0.000		2.094	0.000	2.501	Continuing
PSP MC-130W Dev Spt	TBD/TBD	VARIOUS VARIOUS	1.050	0.498	Oct 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Precision Strike Package SOF Air	TBD/TBD	VARIOUS VARIOUS	0.000	0.000		0.279	Dec 2010	0.000		0.279	Continuing	Continuing	Continuing
SOF C-130 Avionics Modernization	Various/ Various	656th AESS Wright Patterson, OH	0.000	0.000		3.458	Apr 2011	0.000		3.458	Continuing	Continuing	Continuing
PSP MC-130W Training	Various/ Various	VARIOUS VARIOUS	6.200	0.000		0.000		0.000		0.000	0.000	6.200	Continuing
<b>Subtotal</b>			83.114	0.905		5.831		0.000		5.831	0.000	84.565	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	0.000	2.290		0.000		0.000		0.000	Continuing	Continuing	Continuing
TF/TA Radar EMD	C/CPIF	Raytheon Dallas, TX	0.000	5.583	Dec 2009	25.470	Dec 2010	0.000		25.470	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	7.873		25.470		0.000		25.470			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	0.000	0.498		0.000		0.000		0.000	Continuing	Continuing	Continuing
TF/TA Radar EMD	C/CPIF	Raytheon Dallas, TX	6.091	7.913	Dec 2009	5.280	Dec 2010	0.000		5.280	Continuing	Continuing	Continuing
EC-130 130J Multi-Mission Upgrades (CP)	TBD/TBD	TBD TBD	0.000	3.983		0.000		0.000		0.000	Continuing	Continuing	Continuing
Helicopter Cable Warning and Obstacle Avoidance (CP)	TBD/TBD	TBD TBD	0.000	1.195		0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			6.091	13.589		5.280		0.000		5.280			

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	202.759	72.308	68.691	0.000	68.691	0.000	121.283	

**Remarks**

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>	<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
C-130 Avionics Modification	4	2010	4	2015
EC-130J Commando Solo Upgrades	2	2009	4	2015
Aviation Engineering Analysis	1	2009	1	2010
C-130 Avionics Study	1	2009	3	2009
PSP Studies and Analyses	1	2009	1	2010
Acquisition Development Support	1	2010	3	2011
Precision Strike Package MC-130W Multi-Mission Modifications	1	2010	4	2011
Precision Strike Package for SOF Airborne Platforms	1	2011	4	2013
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - System Design	1	2009	4	2009
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Critical Design Review	1	2009	1	2009
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Prototype Integration and Testing	2	2009	4	2010
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Developmental Testing	3	2010	3	2013
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Operational Testing	3	2013	1	2014
	1	2013	4	2015

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>	<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Follow-On Platform Integration and Testing				
MC-130W Terrain Following Radar System	1	2011	4	2014

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing
S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized automation 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 (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	19.884	6.182	0.000	0.000	0.000
Current President's Budget	15.143	6.845	1.582	0.000	1.582
Total Adjustments	-4.741	0.663	1.582	0.000	1.582
• Congressional General Reductions		-4.617			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.280			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-4.251	0.000			
• SBIR/STTR Transfer	-0.490	0.000			
• Other Adjustment	0.000	0.000	1.582	0.000	1.582

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S710: *Special Operations (SO) Tactical Systems (Automation) Development/S710*

Congressional Add: *Congressional Add: Advanced Long Endurance Unattended Ground Sensors*

Congressional Add: *Congressional Add: Common Unmanned Ground Vehicle Command and Control for PSYOP Programs*

Congressional Add: *Congressional Add: Integration of Force XXI Battle Command, Bridge and Below with Tactical Handheld Digital Devices*

Congressional Add: *Congressional Add: Covert Waveform Communications for SOF*

Congressional Add: *Congressional Add: SOC-R Armor Development for Small Arms Armor Piercing Ammo*

Congressional Add Subtotals for Project: S710

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	3.588	0.000
	0.797	0.000
	1.196	0.000
	1.594	2.759
	0.000	2.499
	7.175	5.258
	7.175	5.258

**Change Summary Explanation**

Funding:

FY09: Net decrease of -\$4.741 million is due to FY 2009 Omnibus 1415-1 Prior Approval Reprogramming (09-26 PA) (-\$2.000 million), Small Business Innovative Research transfer (-\$0.490 million), and reprogramming to support Foliage Penetration efforts (-\$2.251 million).

FY10: Net increase of \$0.663 million is due to Congressional Adds for Covert Communication for Software Defined Radios (\$2.765 million) and for SOC-R Armor Development for Small Arms Armor Piercing Ammo (\$2.499 million), decrease of -\$4.588 million for a Congressional reduction against the Special Operations Resource Business Information System, and -\$0.029 million due to Section 8097 Congressional general reduction. Funding for SOC-R Armor Development for Small Arms Armor Piercing Ammo Congressional Add will be moved via 1415 reprogramming action into PE 1160481BB SOF Munitions.

FY11: Increase of \$1.582 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>				<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S710: Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) Automation Systems Project provides for automation systems to meet emergent requirements to support SOF. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF Automation Systems is a continuing effort to procure interoperable SOF Command, Control, Communications, and Computer (C4) capabilities.

United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computer and Intelligence (C4I) systems continue to provide SOF with the required capabilities throughout the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and the timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the Global Information Grid (GIG). The GIG infosphere is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments. The C4 programs funded in this project meet annual emergent requirements.

**OPERATIONAL ELEMENT (TEAM)**

- The Tactical Local Area Network program provides SOF operational commanders and forward deployed forces advanced automated data processing and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The program consists of suites, mission planning kits and field computing devices. Each suite consists of three easily transportable, multiple integrated networks; 60 general use laptops; 10 intelligence laptops; routers; and ancillary equipment used by SOF Command and Control Nodes, forming a deployed Local Area Network (LAN). Mission planning kits consist of four general use laptops and ancillary equipment used by SOF teams for detailed mission planning support. Field computing devices are small hand-held computing devices used by the most forward deployed SOF teams to automatically interface with the suite via tactical communications.
- Advanced Long Endurance Unattended Ground Sensors is an FY 2009 Congressional Add that will continue the research and development of small, low power, unattended ground sensor technologies.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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- Common Unmanned Ground Vehicle (UGV) Command and Control for PSYOP Programs is an FY 2009 Congressional add. The device will provide a wireless command and control capability. The device will consist of a hand-held computer that will be wirelessly connected to a payload or multiple payloads.
- Integration of Force XXI Battle Command, Brigade and Below Tactical Handheld Digital Devices is an FY 2009 Congressional add that will provide vertical and horizontal integration of the digital battlespace at the brigade and below tactical unit levels.
- Covert Communications for SOF is an FY 2009 Congressional Add that will advance the development of covert waveform technologies.

**ABOVE OPERATIONAL ELEMENT**

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

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Tactical Local Area Network  <i>FY 2009 Accomplishments:</i> FY09 Continued development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver and Distributed Common Ground System data sharing capabilities.  <i>FY 2010 Plans:</i> FY10 Continue development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver and Distributed Common Ground System data sharing capabilities.	2.051	1.587	1.582	0.000	1.582

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY11 Continues development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver, and Distributed Common Ground System data sharing capabilities.					
Special Operations Resource Business Information System <i>FY 2009 Accomplishments:</i> FY10 Completed software application testing and implementation for resource planning, programming, and budgeting capabilities.	5.917	0.000	0.000	0.000	0.000
<b>Accomplishments/Planned Programs Subtotals</b>	7.968	1.587	1.582	0.000	1.582

	FY 2009	FY 2010
Congressional Add: Congressional Add: Advanced Long Endurance Unattended Ground Sensors <i>FY 2009 Accomplishments:</i> FY09 Continues the research and development of small, low power, unattended ground sensor technologies.	3.588	0.000
Congressional Add: Congressional Add: Common Unmanned Ground Vehicle Command and Control for PSYOP Programs <i>FY 2009 Accomplishments:</i> FY09 Continue development of a wireless command and control capability. This capability is applicable to the Next Generation Loudspeaker System Unmanned Ground Vehicle Variant.	0.797	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional Add: Integration of Force XXI Battle Command, Bridge and Below with Tactical Handheld Digital Devices  <i>FY 2009 Accomplishments:</i> FY09 Integrate vertical and horizontal digital battlespace at the brigade and below tactical unit levels.	1.196	0.000
Congressional Add: Congressional Add: Covert Waveform Communications for SOF  <i>FY 2009 Accomplishments:</i> FY09 Continue development of new covert communication capability. Develop Low Probability of Intercept/Low Probability of Detection waveforms for SOCOM tactical radio application, an effort that began in FY 2005 under project S700.  <i>FY 2010 Plans:</i> FY10 Continue development of LPI/LPD.	1.594	2.759
Congressional Add: Congressional Add: SOC-R Armor Development for Small Arms Armor Piercing Ammo  <i>FY 2010 Plans:</i> FY10 Develop armor for the Special Operations Craft-Riverine (SOC-R) that can withstand small arms fire.	0.000	2.499
<b>Congressional Adds Subtotals</b>	7.175	5.258

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC:: <i>SOF Automation Systems</i>	55.373	54.966	52.353		52.353	54.090	54.467	54.366	56.681	Continuing	Continuing
• PROC1:: <i>Communications Equipment and Electronics</i>			0.498		0.498	0.979	2.497	2.466	4.580	Continuing	Continuing

**D. Acquisition Strategy**

- Tactical Local Area Network is a post-Milestone C fielded program that is being upgraded to reduce the footprint of deployable networks and related equipment.
- Special Operations Resource Business Information System acquisition strategy seeks to optimize a cost, schedule, and performance mix, pursuing a commercial-off-the-shelf materiel solution through full and open competition. Commercial and government agency sources will be leveraged for required certifications, functional and operational test, and acceptance support.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Tactical Local Area Network - Develop/ Integrate Evolutionary Technology Insertion Capabilities	TBD/TBD	iGov Technologies Tampa, FL	2.051	1.587	Oct 2009	1.582	Oct 2010	0.000		1.582	Continuing	Continuing	Continuing
Advanced Long Endurance Unattended Ground Sensors	TBD/TBD	TBD TBD	3.588	0.000		0.000		0.000		0.000	0.000	3.588	Continuing
<b>Subtotal</b>			5.639	1.587		1.582		0.000		1.582	0.000	3.588	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Special Operations Resource Business Information System - Software Application Implementation & Training	C/CPFF	IBM Bethesda, MD	5.917	0.000		0.000		0.000		0.000	0.000	5.917	Continuing
	MIPR	SPAWAR	0.797	0.000		0.000		0.000		0.000	0.000	0.797	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Common UGV Command and Control for PSYOP Programs		SPAWAR											
<b>Subtotal</b>			6.714	0.000		0.000		0.000		0.000	0.000	6.714	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integration of FBCB2 Tactical Handheld Digital Devices	MIPR	USASPO Alexandria, VA	1.196	0.000		0.000		0.000		0.000	0.000	1.196	Continuing
Covert Communications for SOF	MIPR	Air Force Research Laboratory (AFRL) Rome, NY	1.594	2.759	Jan 2010	0.000		0.000		0.000	0.000	4.353	Continuing
SOC-R Armor Development for Small Arms Armor Piercing Ammo	TBD/TBD	TBD TBD	0.000	2.499	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Subtotal</b>			2.790	5.258		0.000		0.000		0.000	0.000	5.549	

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
	15.143	6.845		1.582		0.000		1.582	0.000

Remarks

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																														
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																														
RDT&E/7	PE1160404BB/Special Operations Tactical Systems (Automation) Development	Project S710/SO Tactical Systems (Automation)																														
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
Tactical Local Area Network - Develop/Integrate Evolutionary Technology Insertion Capabilities		▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	
Special Operations Resource Business Information System - Software Application Development				▲																												
Covert Waveform Communications for SOF - Congressional Add			▲	▲			▲	▲																								
SOC-R Armor Development for Small Arms Armor Piercing Ammo - Congressional Add							▲	▲																								

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Tactical Local Area Network - Develop/Integrate Evolutionary Technology Insertion Capabilities	2	2009	4	2015
Special Operations Resource Business Information System - Software Application Development	4	2009	4	2009
Covert waveform Communications for SOF - Congressional Add	3	2009	4	2010
SOC-R Armor Development for Small Arms Armor Piercing Ammo - Congressional Add	2	2010	4	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing
S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing

**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 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 employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	39.866	21.273	0.000	0.000	0.000
Current President's Budget	39.866	41.223	23.879	9.440	33.319
Total Adjustments	0.000	19.950	23.879	9.440	33.319
• Congressional General Reductions		-0.170			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		20.120			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	23.879	9.440	33.319

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S400: *Special Operations (SO) Intelligence Systems Development/S400*

Congressional Add: *Congressional Add: Multi-Spectral Laboratory & Services*

Congressional Add: *Congressional Add: Advanced Tactical Threat Warning Radio*

Congressional Add: *Congressional Add: Picoceptor and Processor for Manportable Threat Warning*

Congressional Add: *Congressional Add: Biometrics Signature Research*

Congressional Add: *Signal Intelligence (SIGINT) and Electronic Warfare (EW) Development for Integration of SOF Systems*

Congressional Add: *Advanced Long Endurance Unattended Ground Sensor*

Congressional Add: *SOCRATES High Assurance Program*

Congressional Add: *CAPS*

Congressional Add Subtotals for Project: S400

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	1.596	1.992
	1.197	0.000
	3.491	3.187
	1.995	5.975
	1.596	0.000
	0.000	3.904
	0.000	0.990
	0.000	3.901
Congressional Add Subtotals for Project: S400	9.875	19.949
Congressional Add Totals for all Projects	9.875	19.949

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Change Summary Explanation**

Funding:

FY09: None.

FY10: Net increase is due to a decrease of -\$0.133 million for Section 8097 Congressional general reductions and the following Congressional Adds (\$20.120 million):

- Multi-Spectral Laboratory & Services (\$2.000 million)
- Picoceptor and Processor for Manportable Threat Warning (\$3.200 million)
- Biometrics Optical Surveillance System (BOSS) (\$6.000 million)
- Advanced Long Endurance Unattended Ground Sensor (\$3.920 million)
- Counter-Proliferation Analysis and Planning System (CAPS) (\$4.000 million)
- SOCRATES High Assurance Program (\$1.000 million)

FY11: Increase of \$33.319 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>				<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project provides for the identification, development, and testing of SOF intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. The systems acquired in this line item are Special Operations Command, Research, Analysis and Threat Evaluation System (SOCRATES); Special Operations Tactical Video System (SOTVS); Joint Threat Warning System (JTWS); Tactical Local Area Network (TACLAN); Special Operations Joint Interagency Collaboration Center (SOJICC); Hostile Forces-Tagging, Tracking, and Locating (HF-TTL); Distributed Common Ground System (DCGS); and Sensitive Site Exploitation (SSE).

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 employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows 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) and Above Operational Element (Garrison).

**OPERATIONAL ELEMENT (TEAM)**

- The National Systems Support to SOF (NSSS) is a research and development rapid prototyping program which functions as HQSOCOM's TENCAP (Tactical Exploitation of National Capabilities) program. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands (TSOCs) by leveraging National Agency and Service development efforts focused on improving space-based intelligence products and communications and special communications capabilities to tactical SOF units, to include GEOINT, SIGINT, and Intelligence Fusion and Processing. The R&D efforts pursued by NSSS are of a rapid development, fielding and deployment character and focus on USSOCOM's manhunting mission. Though not exclusive, they are usually adjunct support efforts to USSOCOM's existing MIP programs, to include SOCRATES, Global Video Surveillance, HF-TTL, JTWS, DCGS-SOF, and TACLAN.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<p>• Joint Threat Warning System (JTWS) is an evolutionary acquisition (EA) program that provides threat warning, force protection, enhanced situational awareness, and target identification/acquisition information to SOF via signal intercept, direction finding and Signals Intelligence (SIGINT). JTWS will employ continuing technology updates to address the changing threat environment. SOF SIGINT operators are globally deployed and fully embedded within SO teams and aircrews in every operational environment. This state-of-the-art technology enables SOF operators to provide critical time sensitive targeting and actionable intelligence to the operational commander during mission execution. Intelligence derived from operations supports campaign objectives and the National Military Strategy. This system has variants that utilize common technologies and interfaces allowing operators to task, organize, and scale equipment based on anticipated signal environments and areas of operation. Variants will be modular; lightweight with minimal power requirements; and configurable to support body worn/mobile or static, air, maritime and precision geo-location operations in support of all SOF missions. Each variant, except static, will be capable of operation by a single trained operator. The four variants are Ground SIGINT Kit (GSK) body worn/mobile and Team Transportable Ground SIGINT Kit static, Air, Maritime, and Precision Geo-Location.</p> <p>ABOVE OPERATIONAL ELEMENT (GARRISON)</p> <p>• Counter-Proliferation Analysis and Planning System (CAPS). Department of Defense (DoD) has a planning mission for counter-proliferation (CP) contingency operations. The Office of the Secretary of Defense (OSD) has identified CAPS as the standard CP planning toolset for DoD, and the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Program has consolidated RDT&amp;E funding at USSOCOM for overall program management. U.S. Strategic Command serves as the coordinator for CAPS production requirements and provides O&amp;M funding. The 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 to support consequence engineering to meet changing threats.</p> <p>• The Special Operations Command Research, Analysis and Threat Evaluation System (SOCRATES) is an umbrella program that acquires and supports the network and computing infrastructure for Special Operations Forces (SOF) intelligence information up to and including the Top Secret, Sensitive Compartmented Information (TS/SCI) level. SOCRATES integrates intelligence information from national, theater, Service and SOF-specific databases; provides news service and message traffic; automated imagery processing, dissemination, and archival; analyst-to-analyst electronic mail and collaborative tools; web interfaces/search capabilities and browse-down capability to Secret web servers;</p> <p>and secure voice and facsimile. It provides a seamless and interoperable interface enabling SOF-unique intelligence support to mission planning and intelligence preparation of the battlespace. Effective FY2010 the Joint Interagency Collaboration Center program becomes part of the SOCRATES program.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<ul style="list-style-type: none"> <li>• The Special Operations Joint Interagency Collaboration Center (SOJICC) is an executive agency program providing a state-of-the-art capability designed to process, analyze, visualize and collaborate operations and intelligence data supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. Its applications fuse data from both open source and classified intelligence and operational data for use by SOF mission planners and intelligence personnel as directed by the Commander, USSOCOM. The program continues to employ technology updates to bridge the gap between operations and intelligence to support deliberate and crisis action planning while addressing the changing threat environment. Operational Preparation of the Environment provides a mechanism for research, awareness for pre-deployment, and a bridge to mitigate the information gaps and seams between theaters. Effective FY2010 the Joint Interagency Collaboration Center program becomes part of the SOCRATES program.</li> <li>• The Hostile Forces-Tagging, Tracking, and Locating (HF-TTL) Program provides SOF with the capability to tag, track and locate targets such as enemy personnel, mobility platforms and objects using TTL devices. The HF-TTL capability portfolio includes tagging/tracking, close-target audio and video tracking, optical tracking, and close-target reconnaissance systems. The HF-TTL Program annually fields state-of-the-art, SOF user defined mission sets to each Component and Theater SOC, based upon dynamic and emergent SOF operational requirements.</li> <li>• Classified. FY11 Overseas Contingency Operations (provided under separate cover).</li> <li>• Projects also include the following Congressional adds:             <ul style="list-style-type: none"> <li>• University Multi-Spectral Laboratory &amp; Services is a research effort concentrating on next-generation, multi-spectral sensors to support both the warfighter and first responder communities. Testing of biometrics and Psychological Operations efforts is conducted. Also performs testing, integration and commercialization of chemical, biological, radiological, nuclear and explosive (CBRNE) and command, control, communications computers intelligence surveillance, reconnaissance (C4ISR), sensor-related technologies.</li> <li>• Advanced Tactical Threat Warning Radio. Develop a handheld threat warning and communications radio through the use of reconfigurable software radio techniques. Radio should be minimal in size, weight and power consumption. Include innovative use of reliable and durable packaging for mixed-signal product.</li> <li>• Picoceptor and Processor for Manportable Threat Warning. This is a continuation of an FY2007 initiative for pico-processor development. The proof-of concept was tested in FY2008. FY09 continued development of Picoceptor and processor for Manportable Threat Warning for insertion into GSK as an Evolutionary Technology Insertion (ETI). FY10 completes prototype development and initiates conduct of operational and integration testing.</li> <li>• Biometric Signature Research project will develop 3-dimensional facial identification software and integrate it with existing Special Operations Tactical Video System collection platforms. This effort will leverage research gained from an ongoing project that is working to develop an independent (self-contained) system capable of collecting images from a distance and generating 3-dimensional images of subjects that can be stored and matched against full or partial facial images.</li> </ul> </li> </ul>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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- The Signals Intelligence (SIGINT) and Electronic Warfare (EW) development for integration of SOF Systems will be used for further development and integration of Advanced SIGINT and EW Capabilities into the networked Joint Threat Warning System.
- The Advanced Long Endurance Unattended Ground Sensor development. This effort conducts research and development of advanced, low power unattended ground sensor (UGS) technologies that will provide the special operations warfighter with total, reliable and up-to-the minute situational awareness.
- SOCRATES High Assurance Program will establish the High Assurance Platform (Trusted Virtual Environment) to provide the capability for a secure solution allowing the user to access multi-level information (TS/SCI) to unclassified, as well as, a multi-domain information (NATO, Coalition) on a single desktop/laptop. Significant cost savings will be realized by the DoD throughout the life cycle of this technology while combating the Global War on Terrorism (GWOT).
- Counter-Proliferation Analysis and Planning System (CAPS) will support military planners and intelligence analysts in identifying facilities and buildings that are critical nodes in the weapons of mass destruction manufacturing process.

**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
National Systems Support to SOF	0.995	0.972	0.979	0.000	0.979
<p><i>FY 2009 Accomplishments:</i> FY09 Continued to leverage space Intelligence Surveillance and Reconnaissance (ISR) technology developments with SOF utility from the National Community and Military Services. Assessed the operational utility of leveraged and developed technology.</p> <p><i>FY 2010 Plans:</i> FY10 Develop Special Operations Force SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the National Intelligence Community (NIC), while coordinating with other SOCOM and NIC Programs of Record for production and operational fielding of the successful capabilities. Emphasis areas include Intelligence, Surveillance, and Reconnaissance (ISR) support for Tagging, Tracking, and higher-accuracy Geolocating hostile</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>forces as well as Blue-Force Tracking, especially in system-challenged environments. Focus areas are prioritized associated with projected effects on regions of higher planned SOF activities.</p> <p><i>FY 2011 Base Plans:</i> FY11 Develops Special Operations Force SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the National Intelligence Community (NIC), while coordinating with other SOCOM and NIC Programs of Record for production and operational fielding of the successful capabilities. Emphasis areas will include Intelligence, Surveillance, and Reconnaissance (ISR) support for Tagging, Tracking, and higher-accuracy Geolocating hostile forces as well as Blue-Force Tracking, especially in system-challenged environments.</p>						
<p>Joint Threat Warning System</p> <p><i>FY 2009 Accomplishments:</i> FY09 Completed Ground Signal Intelligence Kit (GSK) mobile and static test and evaluation. Build units and complete environmental testing for Air DF system.</p> <p><i>FY 2010 Plans:</i> FY10 Fund integration of GSK body worn/mobile/static networking solution. Funds the purchase of two engineering development models and evaluates coherent DF solution. Initiate development of new Maritime Variant.</p> <p><i>FY 2011 Base Plans:</i> FY11 Completes ETI development and testing to integrate Picoceptor into GSK body worn/mobile and static systems. Integrates Precision Geo-location capabilities into Air Variant payloads. Continues development of new Maritime Variant.</p>		4.535	3.788 2	3.883	0.000	3.883
Counter-Proliferation Analysis and Planning System (CAPS)		19.990	15.014	17.501	0.000	17.501

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Began Spiral 9 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.</p> <p><i>FY 2010 Plans:</i> FY10 Complete Spiral 9 and begin Spiral 10 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.</p> <p><i>FY 2011 Base Plans:</i> FY11 Completes Spiral 10 and begins Spiral 11 development of CAPS engineering assessments, analytical process tools, and network interfaces for product dissemination to DoD and Combatant Command mission planners.</p>						
<p>Special Operations Command, Research, Analysis, and Threat Evaluation (SOCRATES)</p> <p><i>FY 2010 Plans:</i> FY10 Begin Spiral 3 development of the SOF Intelligence Data Management System (SIDMS). Develop, integrate, and test technology upgrades and experimental technologies to include advanced data automation; testing of techniques for integrating metadata into existing SOF data repositories; develop a Java-compliant machine language translation; protection level 3 integration; and multiple technology insertions.</p> <p><i>FY 2011 Base Plans:</i> FY11 Completes Spiral 3 development of the SIDMS and begins Spiral 4. Develops, integrates, and tests technology upgrades and experimental technologies to include advanced data automation; testing of techniques for integrating metadata into existing SOF data repositories; developing a Java-compliant machine language translation; protection level 3 integration; developing data warehousing</p>		0.000	1.500	1.516	0.000	1.516

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>		<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
capability; and multiple technology insertions. In collaboration with the Distributed Common Ground System – Special Operations Forces (DCGS-SOF) program, SIDMS will support net-centric data sharing with USSOCOM partners.								
Joint Interagency Collaboration Center <i>FY 2009 Accomplishments:</i> FY09 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.				2.975	0.000	0.000	0.000	0.000
Hostile Forces Tagging, Tracking, and Locating <i>FY 2009 Accomplishments:</i> FY09 Provided capability to rapidly integrate commercial/government available tagging, tracking, and locating hardware into specialized mission products.				1.496	0.000	0.000	0.000	0.000
Classified <i>FY 2011 Base Plans:</i> None.  <i>FY 2011 OCO Plans:</i> FY11 Overseas Contingency Operations. Classified (provided under separate cover).				0.000	0.000	0.000	9.440	9.440
Accomplishments/Planned Programs Subtotals				29.991	21.274	23.879	9.440	33.319
				<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Congressional Add: Multi-Spectral Laboratory & Services				1.596	1.992			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Continued research of sensor-related technologies.</p> <p><i>FY 2010 Plans:</i> FY10 Performs testing, integration and commercialization of Chemical, Biological, Radiological, Nuclear, high-yield Explosives (CBRNE) and Command, Control, Communications, and Computers (C4) Intelligence, Surveillance, and Reconnaissance (ISR) sensor-related technologies.</p>		
<p>Congressional Add: Congressional Add: Advanced Tactical Threat Warning Radio</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued to develop a handheld threat warning and communications radio using reconfigurable software radio techniques.</p>	1.197	0.000
<p>Congressional Add: Congressional Add: Picoceptor and Processor for Manportable Threat Warning</p> <p><i>FY 2009 Accomplishments:</i> FY09 Initiated for Picoceptor and-processor development.</p> <p><i>FY 2010 Plans:</i> FY10 Completes Picoceptor prototype development and effects conduct of operational and integration testing to JTWS GSK Bodyworn/Mobile and Static systems.</p>	3.491	3.187
<p>Congressional Add: Congressional Add: Biometrics Signature Research</p> <p><i>FY 2009 Accomplishments:</i> FY09 Included research focused on developing 3-dimensional facial identification software that can be used with existing SOF imagery collection systems</p>	1.995	5.975

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Enable BOSS to develop prototypes for the Department of Defense and provide them with a new capability to use remote monitoring of unique biometric identifiers to increase national security.		
Congressional Add: Signal Intelligence (SIGINT) and Electronic Warfare (EW) Development for Integration of SOF Systems  <i>FY 2009 Accomplishments:</i> FY09 Further development and integration of Advanced SIGINT and EW capabilities into the networked Joint Threat Warning System.	1.596	0.000
Congressional Add: Advanced Long Endurance Unattended Ground Sensor  <i>FY 2010 Plans:</i> FY10 Conduct research and development of advanced, low power unattended ground sensor (UGS) technologies that will provide the special operations warfighter with total, reliable and up-to-the minute situational awareness.	0.000	3.904
Congressional Add: SOCRATES High Assurance Program  <i>FY 2010 Plans:</i> FY 2010 Establish the High Assurance Platform (Trusted Virtual Environment) to provide the capability for a secure solution allowing users to access multi-level information to unclassified on a single desktop/laptop.	0.000	0.990
Congressional Add: CAPS	0.000	3.901

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> FY 2010 Support military planners and intelligence analysts in identifying facilities and buildings that are critical nodes in the weapons of mass destruction manufacturing process.		
Congressional Adds Subtotals	9.875	19.949

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>SOF Intelligence Systems</i>	66.448	95.846	81.117		81.117	72.197	66.134	74.075	71.274	Continuing	Continuing

**D. Acquisition Strategy**

- National Systems Support to SOF is a project to introduce and integrate national systems capabilities into the SOF force structure and operations. 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.
- Joint Threat Warning System is an EA program that provides threat warning, force protection, enhanced situational awareness, and target identification/ acquisition information to SOF via signals intercept, direction finding and signals intelligence SIGINT. This program will employ continuing technology updates to address the changing threat environment.
- Counter-Proliferation Analysis and Planning System is an on-going developmental initiative chartered by the Assistant to the Secretary of
- Defense for Nuclear, Chemical and Biological Defense Programs, which was transferred to USSOCOM from the Defense Threat Reduction Agency to develop, integrate and test "leading edge technology" for operational planning to provide engineering analysis and support consequence engineering tools to meet changing threats.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
<ul style="list-style-type: none"><li>• Special Operations Command, Research, Analysis and Threat Evaluation System will integrate 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.</li></ul>		
<b><u>E. Performance Metrics</u></b> N/A		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Threat Warning System Air Increment 2	MIPR	SPAWAR Charleston, SC	1.125	0.920	Mar 2010	0.945	Nov 2010	0.000		0.945	Continuing	Continuing	Continuing
Joint Threat Warning System Team Transportable - GSK Static	MIPR	SPAWAR Charleston, SC	8.790	0.258	Mar 2010	0.266	Nov 2010	0.000		0.266	Continuing	Continuing	Continuing
Joint Threat Warning System Ground Signal Intelligence Kit, Increment 2	MIPR	SPAWAR Charleston, SC	11.914	2.028	Mar 2010	2.073	Nov 2010	0.000		2.073	Continuing	Continuing	Continuing
Joint Threat Warning System Advanced Tactical Threat Warning Radio	Reqn	Agilent Technologies Santa Clara, CA	2.786	0.000		0.000		0.000		0.000	0.000	2.786	Continuing
Joint Threat Warning System Picoceptor and Processor for Manportable Threat Warning	Reqn	DRS Signal Solutions Merrimack, NH	5.876	3.187	Sep 2010	0.000		0.000		0.000	0.000	9.063	Continuing
Joint Threat Warning System Signal Intel and Elec Warfare Deve	Reqn	SRC Charleston, SC	1.596	0.000		0.000		0.000		0.000	0.000	1.596	Continuing
Counter-Proliferation Analysis and Planning System (CAPS)	MIPR	Lawrence Livermore National Labs Livermore, CA	94.439	18.465	Nov 2009	16.800	Nov 2010	0.000		16.800	Continuing	Continuing	Continuing
	MIPR	VARIOUS	1.834	0.496	Dec 2009	0.426	Nov 2010	0.000		0.426	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
National System Support to SOF		VARIOUS											
Special Operations Command, Research, Analysis, and Threat Evaluation	Reqn	SRC Charleston, SC	0.000	2.490	Dec 2009	1.516	Nov 2010	0.000		1.516	0.000	4.006	Continuing
Biometric Signatures Research	Reqn	EWA Bowling Green, KY	1.995	5.975	Sep 2010	0.000		0.000		0.000	0.000	7.970	Continuing
University Multi Spectral Lab and Analytical Services Center	Reqn	Oklahoma State University Stillwater, OK	1.596	1.992	Sep 2010	0.000		0.000		0.000	0.000	3.588	Continuing
Advanced Long Endurance Unattended Ground Sensor	TBD/TBD	TBD TBD	0.000	3.904	Sep 2010	0.000		0.000		0.000	0.000	3.904	Continuing
FY11 Overseas Contingency Operations (Classified)	TBD/TBD	TBD TBD	0.000	0.000		0.000		9.440	Dec 2010	9.440	0.000	9.440	Continuing
Joint Threat Warning System Maritime	MIPR	SPAWAR Charleston, SC	0.000	0.198	Mar 2010	0.204	Nov 2010	0.000		0.204	0.000	0.402	Continuing
<b>Subtotal</b>			131.951	39.913		22.230		9.440		31.670	0.000	42.755	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CAPS Support	MIPR	VARIOUS VARIOUS	3.976	0.450	Nov 2010	0.701	Nov 2010	0.000		0.701	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.976	0.450		0.701		0.000		0.701			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Threat Warning System	MIPR	JITC Ft. Huachuca, AZ	0.903	0.384	Jun 2010	0.395	Jun 2011	0.000		0.395	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.903	0.384		0.395		0.000		0.395			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Interagency Collaboration Center	MIPR	MITRE Tampa, FL	9.384	0.000		0.000		0.000		0.000	0.000	9.384	Continuing
Joint Interagency Collaboration Center	C/CPAF	L3 Communications Tampa, FL	3.309	0.000		0.000		0.000		0.000	0.000	3.309	Continuing
National System Support to SOF Program Support	C/CPAF	Jacobs Tampa, FL	3.380	0.476	Oct 2009	0.553	Oct 2010	0.000		0.553	Continuing	Continuing	Continuing
Hostile Forces-Tagging, Tracking, and Locating	C/CPFF	AT&T TBD	2.992	0.000		0.000		0.000		0.000	0.000	2.992	Continuing
<b>Subtotal</b>			19.065	0.476		0.553		0.000		0.553	0.000	15.685	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	155.895	41.223	23.879	9.440	33.319	0.000	58.440	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																										
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																										
RDT&E/T	PE1160405BB/Special Operations Intelligence Systems Development (MIP)	Project S400/SO Intelligence Systems																										
Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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
National Systems Support to SOF Participation in Space Technology Development and Demonstrations	▲																								△			
Joint Threat Warning System Ground - Signal Intelligence Kit Future Increment Development	▲																								△			
Joint Interagency Collaboration Center Integration and Test				▲				△																				
Counter-Proliferation Analysis and Planning System Integration	▲																								△			
Special Operations Command, Research, Analysis, and Threat Evaluation				△																					△			
Hostile Forces-Tagging, Tracking, and Locating			▲					△																				
FY11 Overseas Contingency Operations Classified (provided under separate cover)											△	—		△														
Counter-Proliferation Analysis and Planning System Integration (Cong Add)											△	—		△														
Special Operations Command, Research, Analysis, and Threat Evaluation High Assurance Platform (Cong Add)											△	—		△														
Biometric Optical Surveillance System (Cong Add)											△	—		△														
Picoceptor and Processor or Man-portable Threat Warning (Cong Add)											△	—		△														
Multi-Spectral Laboratory & Services (Cong Add)											△	—		△														
Advanced Long Endurance Unattended Ground Sensor (Cong Add)											△	—		△														

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
National Systems Support to SOF Participation in Space Technology Development and Demonstrations	1	2009	4	2015
Joint Threat Warning System Ground - Signal Intelligence Kit Future Increment Development	1	2009	4	2015
Joint Interagency Collaboration Center Integration and Test	4	2009	3	2010
Counter-Proliferation Analysis and Planning System Integration	1	2009	4	2015
Special Operations Command, Research, Analysis, And Threat Evaluation	1	2010	4	2015
Hostile Forces-Tagging, Tracking, and Locating	3	2009	2	2010
FY11 Overseas Contingency Operations Classified (provided under separate cover)	1	2011	4	2011
Counter-Proliferation Analysis and Planning System Integration (Cong Add)	4	2010	3	2011
Special Operations Command, Research, Analysis, And Threat Evaluation High Assurance Platform (Cong Add)	4	2010	3	2011
Biometric Optical Surveillance System (Cong Add)	4	2010	3	2011
Picoceptor and Processor or Man-portable Threat Warning (Cong Add)	4	2010	3	2011
Multi-Spectral Laboratory & Services (Cong Add)	4	2010	3	2011
Advanced Long Endurance Unattended Ground Sensor (Cong Add)	4	2010	3	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537

**A. Mission Description and Budget Item Justification**

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment was completed in FY 2007, and the Block 20 increment started in FY 2008.

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

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, more robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Design and Development started in FY 2008.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	40.120	12.687	0.000	0.000	0.000
Current President's Budget	30.970	12.634	14.406	0.000	14.406
Total Adjustments	-9.150	-0.053	14.406	0.000	14.406
• Congressional General Reductions		-0.053			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-7.600	0.000			
• SBIR/STTR Transfer	-1.550	0.000			
• Other Adjustment	0.000	0.000	14.406	0.000	14.406

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$9.150 million is due to Small Business Innovative Research transfer (-\$1.550 million) and a reprogramming for risk reduction efforts on a Precision Strike Package MC-130 Multi-Mission Modification (-\$7.600 million).

FY10: Decrease of -\$0.053 million is due to Section 8097 congressional general reduction.

FY11: Net increase of \$14.406 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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R-1 Line Item #256

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>				SF200: <i>Special Operations CV-22 Development/SF200</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments supported with rapid prototyping. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment completed in FY 2007, and the Block 20 increment started in FY 2008.

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

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Development and Demonstration started in FY 2008.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
CV-22 Block 20	30.970	12.634	14.406	0.000	14.406

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Continued flight test support and design and development of Block 20.</p> <p><i>FY 2010 Plans:</i> FY10 Continues flight test support and design and development of Block 20.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continue flight test support and design and development of Block 20.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	30.970	12.634	14.406	0.000	14.406

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC:: CV-22 SOF MOD	155.030	114.200	124.035		124.035	108.002	114.185	84.158	6.308	Continuing	Continuing

**D. Acquisition Strategy**

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIRSYSCOM PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 Research, Development, Testing, and Evaluation funding was sent from USSOCOM to NAVAIRSYSCOM to be placed on contract with the V-22 prime contractor. Block 10 capability is required for compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document. Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with NAVAIRSYSCOM PMA-275 ensuring the integration of SOF-unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV 22.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	384.605	0.000		0.000		0.000		0.000	0.000	384.605	Continuing
Integration, Assembly, Test, and Checkout (Block 20)	SS/CPFF	Bell-Boeing Amarillo, TX	36.012	0.000		6.513	Dec 2010	0.000		6.513	2.874	45.399	Continuing
Systems Engineering	SS/CPFF	Raytheon Indianapolis, IN	5.882	4.709	Dec 2009	0.012	Dec 2010	0.000		0.012	0.000	10.603	Continuing
<b>Subtotal</b>			426.499	4.709		6.525		0.000		6.525	2.874	440.607	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	43.653	0.000		0.000		0.000		0.000	0.000	43.653	Continuing
Systems Test and Evaluation (Block 20)	Various/ Various	Bell-Boeing, Amarillo, TX, and 413FLTS Hurlburt Field, FL	2.250	3.786	Nov 2009	5.117	Nov 2010	0.000		5.117	3.780	14.933	Continuing
System Test and Evaluation (ATA)	Various/ Various	Bell-Boeing and DynCorp	9.565	4.139	Dec 2009	2.764	Nov 2010	0.000		2.764	2.876	19.344	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total		Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date			
		Amarillo, TX ;Fort Worth, TX												
<b>Subtotal</b>			55.468	7.925		7.881		0.000		7.881	6.656	77.930		

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	481.967	12.634		14.406		0.000		14.406	9.530	518.537	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																															
Appropriation/Budget Activity		Program Element Number and Name																Project Number and Name															
RDT&E/7		PE1160421BB/Special Operations CV-22 Development																SF200/CV-22															
Fiscal Year		2009				2010				2011				2012				2013				2014				2015							
		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				
CV-22 Block 20 Development/Test		▲																															
CV-22 Initial Operational Capability			▲																														

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
CV-22 Block 20 Development/Test	1	2009	4	2012
CV-22 Initial Operational Capability	2	2009	2	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197
S0419: <i>Joint Multi-Mission Submersible</i>	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197

**A. Mission Description and Budget Item Justification**

The Joint Multi-Mission Submersible (JMMS) is a manned, dry combatant submersible that provides a clandestine mobility platform. It will be capable of operating in a wide range of littoral and threat environments and will be tactically transported by specially modified submarines. The JMMS will provide improved performance over the Advanced SEAL Delivery System and will permit small, highly trained forces to operate in denied areas increasingly controlled by a sophisticated threat. The project provides RDT&E funds for materiel solutions analysis and technology development phase efforts.

**B. Program Change Summary (\$ in Millions)**

	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>
Previous President's Budget	0.000	43.412	0.000	0.000	0.000
Current President's Budget	0.000	33.273	14.924	0.000	14.924
Total Adjustments	0.000	-10.139	14.924	0.000	14.924
• Congressional General Reductions		-10.139			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	14.924	0.000	14.924

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>

FY10: Congressional reduction in FY10.

FY11: Funds were added to continue the development through FY 2011.

Schedule: Program was restructured to continue the technology development phase and other Milestone A activities through FY 2011.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>				<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
S0419: <i>Joint Multi-Mission Submersible</i>	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
<p>The Joint Multi-Mission Submersible (JMMS) is a manned, dry combatant submersible that provides a clandestine mobility platform. It will be capable of operating in a wide range of littoral and threat environments and will be tactically transported by specially modified submarines. The JMMS will provide improved performance over the Advanced SEAL Delivery System and will permit small, highly trained forces to operate in denied areas increasingly controlled by a sophisticated threat. The project provides RDT&amp;E funds for materiel solutions analyses and technology development phase efforts.</p>												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
JMMS						0.000	33.273	14.924	0.000	14.924		
<p><i>FY 2010 Plans:</i> Conduct materiel solutions analyses and technology development phase efforts prior to lead ship detailed design. Pursue common component development or commercial-off-the-shelf solutions for submersible subsystems such as, but not limited to, batteries and sonar.</p> <p><i>FY 2011 Base Plans:</i> Completes materiel solutions analyses and technology development phase. Lead ship design is funded in the procurement appropriation.</p>												
Accomplishments/Planned Programs Subtotals						0.000	33.273	14.924	0.000	14.924		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>JMMS</i>						102.990	151.917	207.302	79.273	Continuing	Continuing

**D. Acquisition Strategy**

• The competitive acquisition strategy is still in development. The draft acquisition strategy includes a full and open competition leading to the selection of at least two capable offerors based on a best value source selection in FY10 for pre-design refinement contracts with options for detailed design and construction. Technology risk will be reduced by encouraging re-use of the reliable technology proven in the Advanced Seal Delivery System, while permitting industry to compete and propose a low risk design solution for JMMS.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Pre-Design refinement	C/FFP	TBD TBD	0.000	10.000	Aug 2010	0.000		0.000		0.000	0	10.000	Continuing
Batteries, sonar, other subsystems	Various/ Various	TBD TBD	0.000	13.718		7.928		0.000		7.928	0	21.646	Continuing
<b>Subtotal</b>			0.000	23.718		7.928		0.000		7.928	0.000	31.646	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mgmt & Government Support	Various/ Various	Various Various	0.000	9.555		6.996		0.000		6.996	0	16.551	Continuing
<b>Subtotal</b>			0.000	9.555		6.996		0.000		6.996	0.000	16.551	

**Remarks**

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		0.000	33.273		14.924		0.000	14.924	0.000	48.197	

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
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**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>													<b>Date: FEBRUARY 2010</b>																			
Appropriation/Budget Activity					Program Element Number and Name												Project Number and Name															
RDT&E/7					PE1160423BB/Joint Multi-Mission Submersible												Project S0419/Joint Multi-Mission															
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
JMMS																																
Matériel Solution Analysis & Technology Development						▲	—————						▲																			
Milestone A				□		▲																										
Component Design & Development						▲	—————						▲																			
Pre-Design Refinement								▲	—————				▲																			
Milestone B												▲																				

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Matériel Solution Analysis & Technology Development	1	2010	1	2012
Milestone A	3	2010	3	2010
Component Development & Demonstration	2	2010	4	2011
Pre-Design Refinement	4	2010	4	2011
Milestone B	4	2011	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342
S0418: <i>SO Advanced SEAL Delivery System Dev</i>	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342

**A. Mission Description and Budget Item Justification**

This program element provides for development, testing, and integration of specialized equipment for the Advanced SEAL Delivery System (ASDS). Specifically, this program element provides for the ASDS-1 Improvement Program with the goal of improving the performance to the required level and insertion of technologies to avoid obsolescence. The Improvement Program consisted of integration, testing and installation of reliability improvements resulting from a series of critical system reviews. Congressional add funding will continue studies and analysis of improved components for future systems.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	8.666	1.321	0.000	0.000	0.000
Current President's Budget	5.643	3.485	0.000	0.000	0.000
Total Adjustments	-3.023	2.164	0.000	0.000	0.000
• Congressional General Reductions		-1.321			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		3.485			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.806	0.000			
• SBIR/STTR Transfer	-0.217	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S0418: *SO Advanced SEAL Delivery System Dev*

Congressional Add: *Lithium Battery Safety Detection*

Congressional Add: *Materiel Design and Fabrication Solutions for External Structural Components*

	<u>FY 2009</u>	<u>FY 2010</u>
	1.556	1.500
	0.000	1.985

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add Subtotals for Project: S0418	1.556	3.485
Congressional Add Totals for all Projects	1.556	3.485

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.023 million is due to Small Business Innovative Research transfer (-\$0.217 million), FY09 Omnibus reprogramming action FY09-26PA (-\$1.073 million), and reprogramming for Foliage Penetration efforts (-\$1.733 million).

FY10: Net increase of \$2.164 is due to congressional mark and two congressional adds (\$3.485):

- Lithium-ion Battery Safety Detection and Control (\$1.500 million)
- Materiel Design and Fabrication Solutions for External Structural Components (\$1.985 million)

FY11: None.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>				S0418: <i>SO Advanced SEAL Delivery System Dev</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S0418: <i>SO Advanced SEAL Delivery System Dev</i>	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for development, testing, and integration of specialized equipment for the Advanced SEAL Delivery System (ASDS). Specifically, this project provides for the ASDS-1 Improvement Program (AIP) with the goal of improving the performance to the required level and insertion of technologies to avoid obsolescence and address emergent issues. The AIP consisted of a series of critical system reviews, at sea operations, and the development, integration, and testing of a series of modifications to improve the performance of the ASDS-1.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
ASDS	4.087	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> Executed the AIP. A fire in November 2008 severely damaged many ASDS sub-systems that are no longer in production. The AIP supported planning for fire repair efforts by examining, developing, and testing alternate technology and sub-systems to replace obsolete fire-damaged systems.					
Accomplishments/Planned Programs Subtotals	4.087	0.000	0.000	0.000	0.000
	<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Lithium Battery Safety Detection	1.556	1.500			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>	<b>PROJECT</b> S0418: <i>SO Advanced SEAL Delivery System Dev</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2009 Accomplishments:</i> Continues research and development of failure detection and control for an improved battery system.		
<i>FY 2010 Plans:</i> Continues research and development of failure detection and control for an improved battery system.		
Congressional Add: Materiel Design and Fabrication Solutions for External Structural Components  <i>FY 2010 Plans:</i> Performs research on improved materiel and structural components for the hull system.	0.000	1.985
Congressional Adds Subtotals	1.556	3.485

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u> <u>Continuing</u>
• PROC: ASDS-1	0.243									Continuing	Continuing

**D. Acquisition Strategy**

Industry proposals for technology development activities will be solicited via competitive processes or modification to existing previously competed contracts.

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	Continuing	Continuing
<i>S750: Mission Training and Preparation Systems (MTPS)</i>	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element funds the definition, design, development, prototyping, integration, and testing of Mission Training and Preparation Systems (MTPS) to support training, avoid obsolescence, and maintain simulator concurrency with weapon systems' configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Forces (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS program element also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse SOF training systems.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	5.637	3.192	0.000	0.000	0.000
Current President's Budget	5.496	3.178	2.915	0.000	2.915
Total Adjustments	-0.141	-0.014	2.915	0.000	2.915
• Congressional General Reductions		-0.014			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.141	0.000			
• Other Adjustments	0.000	0.000	2.915	0.000	2.915

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S750: *Mission Training and Preparation Systems (MTPS)*

<b>FY 2009</b>	<b>FY 2010</b>

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: : *Distributed Mission Training Rehearsal System – (DMTRS)*

Congressional Add Subtotals for Project: S750

Congressional Add Totals for all Projects

FY 2009	FY 2010
1.556	0.000
1.556	0.000
1.556	0.000

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.141 million is due to Small Business Innovative Research transfer.

FY10: Decrease is due to Section 8097 congressional general reduction (-\$0.014 million).

FY11: Increase of \$2.915 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>				<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S750: Mission Training and Preparation Systems (MTPS)</i>	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b>											
<p>This project funds the definition, design, development, prototyping, integration, and testing of Mission Training and Preparation Systems (MTPS) to support training, avoid obsolescence, and maintain simulator concurrency with weapon systems' configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Force (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse SOF training systems.</p> <p>Sub-projects include:</p> <ul style="list-style-type: none"> <li>• <b>Distributed Mission Training Rehearsal System:</b> Consolidates existing common environment and common database components and conducts further development of those components to provide a complete system for Distributed Mission Operations, Training and Rehearsal. This development is focused on a common database and common environment solution that can be applied to all MTPS. The development builds on an existing SOF Common Database specification. The mission rehearsal capability will enable the SOF community to plan and rehearse a mission utilizing virtual simulation technologies. This capability is focused on ground and maritime forces.</li> <li>• <b>Special Operations Mission Planning Environment (SOMPE):</b> Develops, integrates, tests, and validates enhancements required to meet SOF-unique requirements for, and correct deficiencies to, mission planning, preview, rehearsal and execution tools to support all phases of SOF operations from deliberate to time critical. The SOMPE project automates time-sensitive planning activities and provides enhanced situational awareness during mission execution. SOMPE provides the interoperable environment for SOF adaptive planning to integrate global operations including, but not limited to, Precision Strike Software, Digital Navigation, and Unmanned Aerial Systems Command &amp; Control. This project also provides the integration of SOMPE with three-dimensional visualization systems, providing immersive mission rehearsal in minimal timeframes from the SOMPE mission plan. Spanning all elements of USSOCOM, SOMPE is embedded in the USSOCOM Headquarters, Theater Special Operations Commands, Joint Special Operations Task Force, Joint Special Operations Aviation Components, SOF warfighters, and SOF warfighting platforms.</li> </ul>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Special Operations Mission Planning Environment (SOMPE)  <i>FY 2009 Accomplishments:</i> Continued software development for mission data loading software to interface with mission planning and rehearsal systems. Improved ground and maritime planning modules and capabilities.  <i>FY 2010 Plans:</i> Continue software development for mission data loading software to interface with mission planning and rehearsal systems and improvement of ground and maritime planning modules and capabilities. Integrate virtual mission rehearsal system into the software baseline.  <i>FY 2011 Base Plans:</i> Continues software development for mission data loading software to interface with mission planning system and integration of virtual mission rehearsal system into the software baseline.		3.940	3.178	2.915	0.000	2.915
Accomplishments/Planned Programs Subtotals		3.940	3.178	2.915	0.000	2.915
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: : Distributed Mission Training Rehearsal System – (DMTRS)  <i>FY 2009 Accomplishments:</i> Initiated systems interoperability studies to support integration, systems engineering requirements, configuration management of MTPS and Distributed Mission Operations, Training and Rehearsal.		1.556	0.000			
Congressional Adds Subtotals		1.556	0.000			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>MTPS</i>	36.044	20.865	28.354		28.354	33.777	16.882	18.083	17.224	Continuing	Continuing

**D. Acquisition Strategy**

- DMTRS: Funding is sent from USSOCOM to program management offices to be placed on contracts via competition or sole source with selected contractors. Individual acquisition strategies are developed as projects are identified.
  
- SOMPE: Funding is sent from USSOCOM to program management offices to be awarded via competition or sole source with various contractors under each project. Individual acquisition strategies are developed as projects are identified.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration	TBD/TBD	PM STS, PEO STRI Orlando, FL	1.556	0.000		0.000		0.000		0.000	0	1.556	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	CAS Huntsville, AL	0.500	0.000		0.000		0.000		0.000	0	0.500	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	SS/CPFF	Naval Surface Warfare Div Crane, IN	0.290	0.250	Mar 2010	0.000		0.000		0.000	0	0.540	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	TM	Tybrin Ft. Walton Beach, FL	0.000	0.485	Nov 2009	0.000		0.000		0.000	0	0.485	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	Various	Various Various	1.920	0.000		0.895	Jan 2011	0.000		0.895	Continuing	Continuing	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	SS/CPFF	Redstone Arsenal Huntsville, AL	2.081	1.773	May 2010	0.235	Mar 2011	0.000		0.235	Continuing	Continuing	Continuing
Special Operations Mission Planning	SS/CPFF	FTI/BAI San Diego, CA	0.293	0.000		1.098	Dec 2010	0.000		1.098	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Environment (SOMPE) Software Development													
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	Navy Systems Mgmt Activity Crane, IN	0.215	0.000		0.000		0.000		0.000	0	0.215	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	SPAWARS Charleston, SC	0.256	0.000		0.000		0.000		0.000	0	0.256	Continuing
<b>Subtotal</b>			7.111	2.508		2.228		0.000		2.228	0.000	3.552	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE Development Support	Various	Special Operations Mission Planning Office Ft Eustis, VA	0.230	0.239	Dec 2009	0.244	Mar 2011	0.000		0.244	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.230	0.239		0.244		0.000		0.244			

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE DT&E / OT&E	C/CPFF	CAS Huntsville, AL	0.418	0.431	Dec 2009	0.443	Feb 2011	0.000		0.443	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.418	0.431		0.443		0.000		0.443			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	7.759	3.178		2.915		0.000		2.915	0.000	3.552	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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Exhibit R-4, RDT&E Program Schedule Profile																Date: FEBRUARY 2010															
Appropriation/Budget Activity								Program Element Number and Name								Project Number and Name															
RDT&E/7								PE1160427BB/Mission Training and Preparation Systems (MTPS)								Project S750/MTPS															
Fiscal Year		2009				2010				2011				2012				2013				2014				2015					
		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		
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration		▲					▲																								
Special Operations Mission Planning Environment (SOMPE) - Software Development		▲																											▲		
SOMPE Development Support		▲																											▲		
SOMPE Test & Evaluation		▲																											▲		
SOMPE Test & Evaluation; Command and Control Mission Manager Spiral 5		▲			▲																										

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration	1	2009	2	2010
Special Operations Mission Planning Environment (SOMPE) - Software Development	1	2009	4	2015
SOMPE Development Support	1	2009	4	2015
SOMPE Test & Evaluation	1	2009	4	2015
SOMPE Test & Evaluation: Command and Control Mission Manager Spiral 5	1	2009	4	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	41.352	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S850: <i>Unmanned Vehicles</i>	41.352	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element addresses spiral development efforts validated in requirements documents; supports development testing; and integrates system upgrades for increased aircraft endurance, reduced aircraft signature, increased telemetry range, and increased payload capacity for the Small Unmanned Aircraft System, Multi-Mission Unmanned Aircraft System, and Global Observer to meet Special Operations Forces mission requirements.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	41.409	0.000	0.000	0.000	0.000
Current President's Budget	41.352	0.996	0.000	0.000	0.000
Total Adjustments	-0.057	0.996	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.996			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.057	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S850: *Unmanned Vehicles*

Congressional Add: *Global Observer*

Congressional Add: *Lethal Miniature Air Munitions System*

Congressional Add Subtotals for Project: S850

	FY 2009	FY 2010
	39.886	0.000
	0.000	0.996
<b>Congressional Add Subtotals for Project: S850</b>	<b>39.886</b>	<b>0.996</b>

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 United States Special Operations Command	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>
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<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Totals for all Projects	39.886	0.996

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.057 million is due to a Small Business Innovative Research adjustment.

FY10: Increase is due to a congressional add, less economic assumptions.

FY11: None.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>	<b>PROJECT</b> S850: <i>Unmanned Vehicles</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S850: <i>Unmanned Vehicles</i>	41.352	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project addresses spiral development efforts validated in requirements documents; supports development testing; integrates system upgrades under an evolutionary acquisition strategy to obtain objective SOF mission requirements; develops upgrades which include improved flight endurance for the Rucksack Portable Unmanned Aircraft System (RPUAS); high altitude, long endurance unmanned aircraft system development with the Global Observance (GO) Joint Capability Technology Demonstration; and hand-held, lethal small unmanned aircraft system technologies with the Lethal Miniature Air Munitions System.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RPUAS <i>FY 2009 Accomplishments:</i> Develop and test RPUAS aircraft flight endurance improvements.	1.466	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	1.466	0.000	0.000	0.000	0.000

	FY 2009	FY 2010
Congressional Add: Global Observer <i>FY 2009 Accomplishments:</i> This initiative was a Congressional Add for Global Observer JCTD. Designs, develops, test, and evaluate high-altitude, long-endurance unmanned aircraft system technologies	39.886	0.000
	0.000	0.996

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>	<b>PROJECT</b> S850: <i>Unmanned Vehicles</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Lethal Miniature Air Munitions System <i>FY 2010 Plans:</i> This initiative is a Congressional Add. Develops, tests, and evaluates hand-held, lethal small unmanned aircraft system technologies		
Congressional Adds Subtotals	39.886	0.996

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>Unmanned Vehicle</i>	41.362	0.996								0	239.909

**D. Acquisition Strategy**

Preplanned product improvements to be implemented as evolutionary upgrades to RPUAS.

Hand-held, lethal small unmanned aircraft system technologies implemented into LMANS

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing
S875: <i>MC-130J SOF Tanker Recapitalization</i>	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) MC-130J SOF Tanker Recapitalization program element funds core SOF-unique modifications to recapitalize aging MC-130E Combat Talon I, MC-130P Combat Shadow, and AC-130H Spectre airframes. These platforms perform clandestine or low visibility, single- or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; airdrop of leaflets, small special operations teams, resupply bundles and combat rubber raiding craft; and close air support (CAS), air interdiction, armed reconnaissance, escort, and force protection – integrated base defense. Additional capabilities include low-light navigation and in-flight refueling as a receiver. The Air Force will procure and field basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to incorporate SOF capabilities onto the aircraft.

Variable Speed Drogue: Develop, integrate, and test a variable speed air refueling drogue that will permit refueling over a wide range of speed supporting both helicopters and tilt-rotor aircraft without tanker aircraft reconfiguration.

SOF Unique Modification Development & Analysis: Conduct trade-off analysis, development, integration, and testing of aircraft enhancements to meet SOF-unique mission requirements. Enhancements include, but are not limited to, SOF communications, aircraft performance enhancements, situational awareness enhancements, survivability systems, and integration of the Precision Strike Package.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	4.646	5.957	0.000	0.000	0.000
Current President's Budget	4.474	5.932	7.624	0.000	7.624
Total Adjustments	-0.172	-0.025	7.624	0.000	7.624
• Congressional General Reductions		-0.025			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.172	0.000			
• Other Adjustment	0.000	0.000	7.624	0.000	7.624

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.172 million is due to Small Business Innovative Research transfer.

FY10: Decrease of -\$0.025 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$7.624 million for the integration of the Precision Strike Package on the AC-130H.

Schedule: None.

Technical: None.

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R-1 Line Item #261

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>				<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S875: <i>MC-130J SOF Tanker Recapitalization</i>	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) MC-130J SOF Tanker Recapitalization program element funds core SOF-unique modifications to recapitalize aging MC-130E Combat Talon I, MC-130P Combat Shadow, and AC-130H Spectre airframes. These platforms perform clandestine or low visibility, single- or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; airdrop of leaflets, small special operations teams, resupply bundles and combat rubber raiding craft; and close air support (CAS), air interdiction, armed reconnaissance, escort, and force protection – integrated base defense. Additional capabilities include low-light navigation and in-flight refueling as a receiver. The Air Force will procure and field basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to incorporate SOF capabilities onto the aircraft.

Variable Speed Drogue: Complete development, integration, and test of a variable speed air refueling drogue to meet SOF Initial Operational Capability.

SOF-Unique Modification Development & Analysis: Trade-off analysis, development, integration, and testing of aircraft enhancements to meet SOF-unique mission requirements.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Variable Speed Drogue <i>FY 2009 Accomplishments:</i> Completed development of the variable speed drogue and conducted flight test.	1.524	0.000	0.000	0.000	0.000
SOF-Unique Modification Dev & Analysis	2.950	5.932	7.624	0.000	7.624

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Continued development of SOF-unique mission improvements to include SOF communications, aircraft performance enhancement, situational awareness enhancements and defensive systems.</p> <p><i>FY 2010 Plans:</i> Continues development of SOF-unique mission improvements to include SOF communications, aircraft performance enhancement, situational awareness enhancements and defensive systems.</p> <p><i>FY 2011 Base Plans:</i> Continue development of SOF-unique mission improvements and initiate integration of Precision Strike Package.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	4.474	5.932	7.624	0.000	7.624

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC1: <i>SOF C-130 Recap</i>	11.253	34.095	19.996		19.996	62.542	75.890	80.651	104.429	Continuing	Continuing
• PROC2: <i>PSP for SOF Airborne platform</i>						46.410	133.350	190.043	213.740	Continuing	Continuing
• RDTE: <i>SF100</i>	72.225	72.308	68.691		68.691	76.041	78.689	55.581	35.267	Continuing	Continuing

**D. Acquisition Strategy**

The MC-130J SOF Tanker Recapitalization aircraft will be acquired under the United States Air Force HC/MC-130J Recapitalization procurement program. USSOCOM will fund development, integration, test, and production/retrofit of SOF-unique mission equipment under this program and the USSOCOM Precision Strike Package for SOF Airborne Platform program.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Variable Speed Drogue	C/CPIF	Various Various	7.409	0.000		0.000		0.000		0.000	0	7.409	Continuing
SOF Unique Mod Dev & Anal	TM	Lockheed Martin Aero Marietta, GA	6.232	5.932	Mar 2010	7.624	Mar 2011	0.000		7.624	Continuing	Continuing	Continuing
<b>Subtotal</b>			13.641	5.932		7.624		0.000		7.624	0.000	7.409	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support	Allot	668 AESS Wright Patterson AFB, OH	0.613	0.000		0.000		0.000		0.000	0	0.613	Continuing
<b>Subtotal</b>			0.613	0.000		0.000		0.000		0.000	0.000	0.613	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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Exhibit R-4, RDT&E Program Schedule Profile												Date: FEBRUARY 2010																
Appropriation/Budget Activity				Program Element Number and Name												Project Number and Name												
RDT&E, Defense-Wide/7				PE1160429BB/MC-130J SOF Tanker Recapitalization												Project S875/MC-130J SOF Tanker Recapitalization												
Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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
Variable Speed Drogue																												
Development																												
Integration and Test																												
SOF-Unique Modification Development & Analysis																												
<div style="display: flex; justify-content: space-between; width: 100%;"> <span>Increment 3</span> <span>Increment 4</span> </div>																												
Development																												
Integration and Test																												
<div style="display: flex; justify-content: space-between; width: 100%;"> <span>Increment 3</span> <span>Increment 4</span> </div>																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Variable Speed Drogue: Development	1	2009	2	2010
Variable Speed Drogue: Integration and Test	1	2009	2	2010
SOF-Unique Mod Development & Analysis: Development	1	2009	1	2014
SOF-Unique Mod Development & Analysis: Integration and Test	1	2009	4	2015

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	Continuing	Continuing
S700: <i>SOF Communications Equipment and Electronics Systems</i>	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

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

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.733	0.000	0.000	0.000
Current President's Budget	0.000	0.730	1.922	0.000	1.922
Total Adjustments	0.000	-0.003	1.922	0.000	1.922
• Congressional General Reductions		-0.003			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	1.922	0.000	1.922

**Change Summary Explanation**

Funding:

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>

FY09: None.

FY10: Decrease of -\$0.003 million is due to Section 8097 Congressional general reductions.

FY11: Increase of \$1.922 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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R-1 Line Item #262

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>S700: SOF Communications Equipment and Electronics Systems</i>	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

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

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

**OPERATIONAL ELEMENT (TEAM)**

- The SOF Deployable Node provides new technology for the next generation antenna capability for all systems: heavy, medium, and light. This program consists of a family of deployable super high frequency, multi-band, satellite communications assemblages capable of supporting high-capacity, voice, data, video teleconferencing and video at all levels of classification.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Deployable Node  <i>FY 2010 Plans:</i> Develop and test next generation antennas for the family of SOF Deployable Nodes. Continue to develop, test and evaluate an interim mobile strategic entry point. Refine, test and evaluate tropospheric beyond line of sight capability. Test and evaluate new 1.2 meter Hawkeye III Lite antenna. Test and evaluate communications-on-the-move capability and the AN/PSC-14 Broadband Global Area Network SATCOM.  <i>FY 2011 Base Plans:</i> Develop, test, and evaluate next generation SOF Deployable Node4 Lite manpack and multi-purpose baseband, and the next generation SOF Deployable Medium terminal. Test and evaluate migration to Ka-band 1.6 meter antenna. Develop and test next generation enhanced line of sight capability. Test and evaluate new wideband SATCOM systems and encryption devices.	0.000	0.730	1.922	0.000	1.922
Accomplishments/Planned Programs Subtotals	0.000	0.730	1.922	0.000	1.922

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PROC: <i>Comm/Equip and Electronics</i>	83.162	56.910	58.390		58.390	79.935	99.202	79.884	74.911	Continuing	Continuing

**D. Acquisition Strategy**

- SOF Deployable Node is a fielded program being upgraded for next generation evolutionary technology insertions for all systems: heavy, medium, and light variants.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF Deployable Node Antenna	MIPR	AFRL AFRL	0.000	0.730	Apr 2010	1.922	Apr 2011	0.000		1.922	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.730		1.922		0.000		1.922			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	0.730	1.922	0.000	1.922			

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>	<b>Date:</b> FEBRUARY 2010
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<b>Appropriation/Budget Activity</b>	<b>Program Element Number and Name</b>	<b>Project Number and Name</b>
RDT&E7	PE1160474BB/SOF Communications Equipment and Electronics Systems	Project S700/SOF Communications Equipment and Electronics Systems

Fiscal Year	2009				2010				2011				2012				2013				2014				2015											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
SOF Deployable Node Evolutionary Technology Insertions							▲	▲			▲	▲	▲			▲	▲	▲	▲	▲			▲	▲	▲	▲	▲	▲			▲	▲	▲	▲	▲	▲

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SOF Deployable Node Evolutionary Technology Insertions	3	2010	4	2015

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/S725</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>S725: SOF Tactical Radio Systems</i>	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) Tactical Radio Systems program element is for development of all SOF tactical radio programs. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility.

United States Special Operations Command has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. The Tactical Radios provide the critical Command, Control, and Communication link between SOF Commanders and SOF Teams involved in overseas contingency operations (OCO) and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied foreign forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed Command and Control communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	2.368	0.000	0.000	0.000
Current President's Budget	0.000	2.358	2.347	0.000	2.347
Total Adjustments	0.000	-0.010	2.347	0.000	2.347
• Congressional General Reductions		-0.010			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	2.347	0.000	2.347

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/S725</i>
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**Change Summary Explanation**

Funding:

FY09: None.

FY10: Decrease of -\$0.010 million is due Section 8097 Congressional general reductions.

FY11: Increase of \$2.347 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None

Technical: None

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/ S725</i>	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>S725: SOF Tactical Radio Systems</i>	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The SOF Tactical Radio Systems project is for development of all SOF radio programs. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. Sub-project:

- Special Mission Radio System (SMRS). Effort develops Low Probability of Intercept/Low Probability of Detection (LPI/LPD) waveforms for SOCOM tactical radio application.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SMRS	0.000	2.358	2.347	0.000	2.347
<i>FY 2010 Plans:</i> Develop and test LPI/LPD transceiver board upgrades and waveforms for SOCOM tactical radio application.					
<i>FY 2011 Base Plans:</i> Continue developing and testing LPI/LPD transceiver board upgrades and waveforms for SOCOM tactical radio application.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	2.358	2.347	0.000	2.347

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1: <i>Tactical Radios</i>	30.973	62.306	35.234		35.234	71.915	74.814	70.779	62.808	Continuing	Continuing
• PROC2: <i>Comm/Equip &amp; Electronics</i>	83.162	56.910	58.390		58.390	79.935	99.202	79.884	74.911	Continuing	Continuing

**D. Acquisition Strategy**

- SMRS LPI/LPD transceiver board upgrades and waveform development continues under Technical Support Group management and oversight.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Special Mission Radio System	MIPR	Technical Support Group (TSG) Norfolk, VA	0.000	2.358	Jan 2010	2.347	Jan 2011	0.000		2.347	0	4.705	Continuing
<b>Subtotal</b>			0.000	2.358		2.347		0.000		2.347	0.000	4.705	

**Remarks**

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract										
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost													
<b>Project Cost Totals</b>											0.000	2.358		2.347		0.000		2.347	0.000	4.705	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>																Date: FEBRUARY 2010															
Appropriation/Budget Activity																Program Element Number and Name								Project Number and Name							
RDT&E7																PE1160476BB/SOF Tactical Radio Systems								Project S725/SOF Tactical Radio Systems							
Fiscal Year	2009				2010				2011				2012				2013				2014				2015						
	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			
Special Mission Radio System																															
Waveform Development																															

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Special Mission Radio System Waveform Development	2	2010	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160477BB: <i>SOF Weapon Systems/S375</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.857	1.077	0.479	0.000	0.479	0.249	0.249	0.253	0.255	Continuing	Continuing
S375: <i>SOF Weapon Systems</i>	3.857	1.077	0.479	0.000	0.479	0.249	0.249	0.253	0.255	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

SOF Weapon Systems

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.952	1.081	0.000	0.000	0.000
Current President's Budget	3.857	1.077	0.479	0.000	0.479
Total Adjustments	-0.095	-0.004	0.479	0.000	0.479
• Congressional General Reductions		-0.004			
• Congressional Directed Reductions					
• Congressional Rescissions	0.000				
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	0.000				
• SBIR/STTR Transfer	-0.095				
• Other Adjustments	0.000		0.479	0.000	0.479

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.095 million is due to Small business Innovation Research transfer.

FY10: Decrease of -\$0.004 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.479 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160477BB: <i>SOF Weapon Systems/S375</i>
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Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Weapon Systems	3.857	1.077	0.479	0.000	0.479
<i>FY 2009 Accomplishments:</i> SOF Weapon Systems					
<i>FY 2010 Plans:</i> SOF Weapon Systems					
<i>FY 2011 Base Plans:</i> SOF Weapon Systems					
<b>Accomplishments/Planned Programs Subtotals</b>	3.857	1.077	0.479	0.000	0.479

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160478BB: <i>SOF Soldier Protection and Survival Systems/S385</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.040	0.594	0.593	0.000	0.593	0.599	0.909	0.927	0.942	Continuing	Continuing
S385: <i>SOF Soldier Protection and Survival Systems</i>	3.040	0.594	0.593	0.000	0.593	0.599	0.909	0.927	0.942	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

N/A

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.181	0.597	0.000	0.000	0.000
Current President's Budget	3.040	0.594	0.593	0.000	0.593
Total Adjustments	-0.141	-0.003	0.593	0.000	0.593
• Congressional General Reductions		-0.003			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.141	0.000			
• Other Adjustments	0.000	0.000	0.593	0.000	0.593

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.141 million is due to a Small Business Innovative Research transfer.

FY10: Decrease of -\$0.003 million is due to Section 8097 congressional reduction.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160478BB: <i>SOF Soldier Protection and Survival Systems/S385</i>
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FY11: Increase of \$0.593 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Soldier Protection and Survival Systems	3.040	0.594	0.593	0.000	0.593
<i>FY 2009 Accomplishments:</i>					
SOF Soldier Protection and Survival Systems.					
<i>FY 2010 Plans:</i>					
SOF Soldier Protection and Survival Systems					
<i>FY 2011 Base Plans:</i>					
SOF Soldier Protection and Survival SystemsSOF Soldier Protection and Survival Systems					
<b>Accomplishments/Planned Programs Subtotals</b>					<b>0.593</b>

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems/S395</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	6.485	8.533	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S395: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	6.485	8.533	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

MISSION

**A. Mission Description and Budget Item Justification**

N/A

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	6.967	3.369	0.000	0.000	0.000
Current President's Budget	6.485	8.533	0.000	0.000	0.000
Total Adjustments	-0.482	5.164	0.000	0.000	0.000
• Congressional General Reductions		-0.036			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.364	0.000			
• SBIR/STTR Transfer	-0.118	0.000			

**Change Summary Explanation**

Funding:

FY09: Net decrease of -\$0.482 million due to Small Business Innovative Research transfer (-\$0.118 million) and decreased for higher command priorities (-\$0.364 million).

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems/S395</i>
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FY10: Net increase of \$5.164 million due to decrease of (-\$.036 million) due to Section 8097 congressional general reduction and an increase of \$5.200 million for three congressional adds:

- Thermal Pointer/Illuminator for Force Protection (\$1.600 million)
- ASIC Miniaturizations for Lasers and Sensors Development (\$2.400 million)
- Miniature Day Night Sight for Crew Served Weapons (\$1.200 million)

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Visual Augmentation, Lasers and Sensor Systems	6.485	8.533	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> SOF Visual Augmentation, Lasers and Sensor Systems					
<i>FY 2010 Plans:</i> SOF Visual Augmentation, Lasers and Sensor Systems					
Accomplishments/Planned Programs Subtotals	6.485	8.533	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 1160479BB: *SOF Visual Augmentation, Lasers and Sensor Systems/S395*

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing
S910: <i>SOF Tactical Vehicles</i>	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the development and testing of a variety of spiral upgrades to Special Operations Vehicles and ancillary equipment. The current family of Special Operations Forces (SOF) tactical vehicles include: individual mobility vehicles (lightweight all terrain vehicles), light mobility vehicles, medium mobility vehicles (ground mobility vehicle), non-standard commercial vehicles and heavy mobility vehicles (Mine Resistant Ambush Protected). The SOF mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	1.600	1.973	0.000	0.000	0.000
Current President's Budget	1.600	1.965	1.994	0.000	1.994
Total Adjustments	0.000	-0.008	1.994	0.000	1.994
• Congressional General Reductions		-0.008			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	1.994	0.000	1.994

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>

FY10: Decrease of -\$0.008 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$1.994 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S910: <i>SOF Tactical Vehicles</i>	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project funds the development, testing, and evaluation of Special Operations vehicles. The Special Operations Forces (SOF) mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability. The current family of SOF tactical vehicles include: individual mobility vehicle, light mobility vehicle, medium mobility vehicles, non-standard commercial vehicles and heavy mobility vehicles. Sub-projects funded in this project include:

- Light mobility vehicle/ internally transportable vehicles. This FY2009 Congressional add develops and improves a lightweight, highly mobile, wheeled vehicle platform capable of transport by the family of V-22 aircraft.
- Medium mobility vehicle. This initiative provides for product improvements in the areas of suspension, power management, armor protection, and unique vehicle design for all SOF tactical vehicle configurations. Improvements include, but are not limited to, new engineering change proposals (ECPs), field safety issues, and theater endorsed needs. These various engineering modifications make it essential to keep up with the increased weight and minimize the impact that it has on the basic vehicle.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Light Mobility Vehicle/Internally Transportable Vehicles <i>FY 2009 Accomplishments:</i> Initiated development of a prototype light mobility vehicle and testing for safety and certification for family of V-22 aircraft	1.600	0.000	0.000	0.000	0.000
Medium Mobility Vehicles	0.000	1.965	1.994	0.000	1.994

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> Initiate development of ECPs that implement spiral upgrades and improve the design and manufacturing process for the medium mobility tactical vehicles currently in production.</p> <p><i>FY 2011 Base Plans:</i> development of ECPs that implement spiral upgrades and improve the design of the medium mobility vehicles.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	1.600	1.965	1.994	0.000	1.994

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Tactical Vehicles Procurement: <i>Tactical Vehicles Procurement</i>	163.591	26.226	63.379		63.379	28.837	43.858	44.742	59.034	Continuing	Continuing

**D. Acquisition Strategy**

- Vehicle improvements integrate emerging technology or commercial-off-the-shelf/non-developmental items to correct problems with the current suspension, electrical, and armor of the existing vehicles.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Internally Transportable Vehicle /Light Mobility Vehicle Prototyping	Reqn	TBD TBD	1.270	0.000		0.000		0.000		0.000	0	1.270	Continuing
<b>Subtotal</b>			1.270	0.000		0.000		0.000		0.000	0.000	1.270	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Change Proposal Development	MIPR	Letterkenny Army Depot Chambersburg, PA	0.000	0.223	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Engineering Change Proposal Development	MIPR	Tank Automotive Research Development Engineering Command Warren, MI	0.000	0.250	Jan 2010	0.494	Dec 2010	0.000		0.494	Continuing	Continuing	Continuing
Engineering Change Proposal Development	MIPR	Naval Air Systems Command	0.000	0.492	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>				<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>					

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Patuxent, MD											
Engineering Change Proposal Development	Reqn	TBD TBD	0.000	1.000	Jan 2010	1.500	Dec 2010	0.000		1.500	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	1.965		1.994		0.000		1.994			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification	MIPR	Naval Air System Command Patuxent, MD	0.230	0.000		0.000		0.000		0.000	0.000	0.230	Continuing
Internally Transportable Vehicle /Light Mobility Vehicle Testing and Safety	MIPR	Aberdeen Test Center Aberdeen MD	0.100	0.000		0.000		0.000		0.000	0.000	0.100	Continuing
<b>Subtotal</b>			0.330	0.000		0.000		0.000		0.000	0.000	0.330	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	1.600	1.965	1.994	0.000	1.994	0.000	1.600	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>	<b>Date:</b> FEBRUARY 2010
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Appropriation/Budget Activity	Program Element and Name																Project Number and Name																														
	RDT&E/7																PE1160480BB/SOF Tactical Vehicles																Project S910/SOF Tactical Vehicles														
Fiscal Year	2009				2010				2011				2012				2013				2014				2015																						
	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																			
Engineering Change Proposals Development					▲	—	▲	▲	▲	—	▲	▲	▲	—	▲	▲	▲	—	▲	▲	▲	—	▲	▲	▲	—	▲	▲																			
Internally Transportable Vehicle/Light Mobility Vehicle Prototyping					▲	—	▲																																								
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification					▲	—	▲																																								
Innternally Transportable Vehicle /Light Mobility Vehicle Testing and Safety					▲	—	▲																																								

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Engineering Change Proposal Development	2	2010	4	2015
Internally Transportable Vehicle/Light Mobility Vehicle Prototyping	2	2010	3	2010
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification	1	2010	2	2010
Internally Transportable Vehicle /Light Mobility Vehicle Testing and Safety	1	2010	2	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing
D615: <i>SOF Rotary Wing Aviation</i>	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element develops/upgrades SOF rotary wing aircraft systems that operate in increasingly hostile environments. Rotary wing aircraft supported by this project include: MH-60L/K/M, MH-47D/E/G, and A/MH-6M. These aircraft provide aviation support to Special Operations Forces (SOF) in worldwide contingency operations and low-intensity conflicts. They must be capable of rapid deployment; undetected penetration of hostile areas; and 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.162	18.863	0.000	0.000	0.000
Current President's Budget	3.202	18.784	14.473	0.000	14.473
Total Adjustments	0.040	-0.079	14.473	0.000	14.473
• Congressional General Reductions		-0.079			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.040	0.000			
• Other Adjustments	0.000	0.000	14.473	0.000	14.473

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** D615: *SOF Rotary Wing Aviation*

Congressional Add: *Cable Warning Obstacle Avoidance System*

FY 2009	FY 2010
0.799	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: *Hostile Fire Indicating System*

Congressional Add Subtotals for Project: D615

Congressional Add Totals for all Projects

FY 2009	FY 2010
0.799	0.000
1.598	0.000
1.598	0.000

**Change Summary Explanation**

Funding:

FY09: Increase of \$0.040 million is due to restoration of congressional add funds transferred to Small Business Innovative Research account.

FY10: Decrease is due to Section 8097 congressional general reduction (-\$0.079 million).

FY11: Increase of \$14.473 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
D615: <i>SOF Rotary Wing Aviation</i>	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project develops/upgrades SOF rotary wing aircraft systems that operate in increasingly hostile environments. Rotary wing aircraft supported by this project include: MH-60L/K/M, MH-47E/G, and A/MH-6M. These aircraft provide aviation support to SOF in worldwide contingency operations and low-intensity conflicts, and they must be capable of rapid deployment; undetected penetration of hostile areas; and 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. Efforts include:

- MH-47/MH-60/A/MH-6M Aircraft. (1) Develops the Reduced Optical Signature Emission Solution (ROSES), which reduces the optical signature output of the current infrared expendable decoys for purposes of reducing Army Special Operations Aviation aircraft vulnerabilities. This flare solution will have the capability to decoy currently fielded infrared missiles and more sophisticated emerging threats, and is an interim solution pending flare technology advancements. (2) Develops an improved integrated seat system for A/MH-6M aircraft that will provide ballistic protection, crash attenuation, and restraint system upgrades.
- MH-47/MH-60 Survivability Equipment/Sensors. (1) Develops the Aircraft Occupant Ballistic Protection System to reduce weight to permit additional critical payloads on mission aircraft, while maintaining or improving armor effectiveness; (2) Develops and qualifies the Forward Looking Infrared Radar (FLIR) Pre-Planned Product Improvements (P3I), which will provide increased detection ranges, a sensor suite capable of target recognition, short wave infrared marker identification, and illuminator detection regardless of ambient and cultural lighting conditions.
- Congressional Add to develop a Cable Warning Obstacle Avoidance system. This system will allow aircraft to perform evasive actions, significantly increasing the aircrew's probability of survival during a hostile fire engagement.
- Congressional Add to develop a Hostile Fire Indicating System that detects, classifies, and alerts the aircrew to the presence of small caliber weapons fire for SOF rotary wing platforms.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/ D615</i>		<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>		
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
MH-47/MH-60/A/MH-6M Aircraft <i>FY 2010 Plans:</i> Begin development of ROSES and the improved integrated crashworthy seat system for the A/MH-6M. <i>FY 2011 Base Plans:</i> Continue development of both ROSES and the integrated crashworthy seat system for the A/MH-6M		0.000	7.336	6.787	0.000	6.787
MH-47/MH-60 – Survivability Equipment /Sensors <i>FY 2009 Accomplishments:</i> Continued development of the Aircraft Occupant Ballistic Protection System <i>FY 2010 Plans:</i> Begin development of the FLIR P3I program and begin development of Hostile Fire Indicating System <i>FY 2011 Base Plans:</i> Continue development of both the FLIR P3I and the Hostile Fire Indicating System programs.		1.604	11.448	7.686	0.000	7.686
Accomplishments/Planned Programs Subtotals		1.604	18.784	14.473	0.000	14.473
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Cable Warning Obstacle Avoidance System <i>FY 2009 Accomplishments:</i> Began the development of a Cable Warning Obstacle Avoidance System.		0.799	0.000			
Congressional Add: Hostile Fire Indicating System		0.799	0.000			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2009 Accomplishments:</i> Began the development of a Hostile Fire Indicating System		
Congressional Adds Subtotals	1.598	0.000

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>Rotary Wing Upgs &amp; Sust</i>	93.391	90.936	79.840		79.840	82.562	104.805	104.796	107.595	Continuing	Continuing

**D. Acquisition Strategy**

- A/MH-6M - This effort develops and qualifies the necessary protection from crash loads and airframe vibrations by upgrading the current A/MH-6M seat and restraint system to meet current MIL-STD 1290 requirements. A competitive source selection process will be conducted for the crashworthy seat system replacement to the extent possible. Proprietary considerations may direct some efforts to the original equipment manufacturer.
  
- MH-47/MH-60 Aircraft - This effort develops and qualifies a flare solution that discharges fewer expendables per dispense and emits less visible light to improve aircrew's ability to survive in sophisticated threat environments. A competitive source selection process will be conducted for the Reduced Optical Signature Emissions Solution to the extent possible. Proprietary considerations may direct some efforts to the original equipment manufacturer.
  
- MH-47/MH-60 Survivability Equipment/Sensors - Develops next-generation improvements, enhancements, and upgrades to survivability equipment and sensors. Active and passive survivability acquisition will be conducted using competitive processes to the maximum extent practicable. Proprietary considerations may direct some efforts to the original equipment manufacturer.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/ D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MH-6/47/60 Survivability Equipment Reduced Optical Signature Emissions Solution	Various	PM TAPO Ft Eustis VA	0.000	3.772	Jan 2010	3.954	Jan 2011	0.000		3.954	Continuing	Continuing	Continuing
Aircraft Occupant Ballistic Protection System	Various	PM TAPO Ft Eustis, VA	2.558	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Forward Looking Infrared Radar	Various	PM TAPO Ft Eustis, VA	26.499	8.975	Jan 2010	3.732	Jan 2011	0.000		3.732	0	39.206	Continuing
Hostile Fire Indicating System	Various	PM TAPO Ft Eustis, VA	0.799	2.473	Jan 2010	3.935	Jan 2011	0.000		3.935	0	7.207	Continuing
Cable Warning Obstacle Avoidance System	TBD/TBD	TBD TBD	0.799	0.000		0.000		0.000		0.000	0	0.799	Continuing
A/MH-6M Improved Seat System	Various/ Various	PM MELB Ft. Eustis, VA	0.000	3.564	Jan 2010	2.852	Jan 2011	0.000		2.852	0	6.416	Continuing
<b>Subtotal</b>			30.655	18.784		14.473		0.000		14.473	0.000	53.628	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract			
<b>Project Cost Totals</b>		30.655	18.784		14.473		0.000	14.473	0.000	53.628	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: SOF Rotary Wing Aviation/ D615	<b>PROJECT</b> D615: SOF Rotary Wing Aviation
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Exhibit R-4, RDT&E Program Schedule Profile													Date: FEBRUARY 2010																			
Appropriation/Budget Activity	Program Element and Name																Project Number and Name															
RDT&E/7	PE1160482BB/Special Operations Forces (SOF) Rotary Wing Aviation																Project D615/SOF Aviation															
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
Reduced Optical Signature Emissions Solution Development/Qualification/Test								▲	▲	▲	▲	▲	▲	▲	▲	▲																
Aircraft Occupant Ballistic Protection System Development/Qualification/Test	▲	▲	▲	▲																					▲	▲	▲	▲	▲	▲	▲	▲
Next Generation Forward Looking Infrared Development/Qualification Testing								▲	▲	▲	▲	▲	▲	▲	▲	▲																
A/MH-6 Improved Seat System Development								▲	▲	▲	▲	▲	▲	▲	▲	▲																
Hostile Fire Indicating System Development (Cong Add)				▲				▲	▲	▲	▲	▲	▲	▲	▲	▲																
Helicopter Cable Warning Obstacle Avoidance System (Cong Add)	▲	▲	▲	▲																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**Schedule Details**

Event	Start		End	
	Quarter	Year	Quarter	Year
Reduced Optical Signature Emissions Solution Development/Qualification/Test	2	2010	4	2012
Aircraft Occupant Ballistic Protection System Development/Qualification/Test	1	2009	4	2015
Next Generation Forward Looking Infrared Development/Qualification Testing	2	2010	4	2011
A/MH-6 Improved Seat System Development	2	2010	4	2011
Hostile Fire Indicating System Development (Cong Add)	4	2009	4	2011
Helicopter Cable Warning Obstacle Avoidance System (Cong Add)	2	2009	4	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing
S0417: <i>SOF Underwater Systems</i>	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for engineering & manufacturing development and operational systems development of small combat underwater submersibles and underwater support systems and equipment. This program element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, systems, and equipment are used by Special Operations Forces (SOF) in the conduct of infiltration/extraction, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	8.727	3.452	0.000	0.000	0.000
Current President's Budget	8.572	18.774	13.986	0.000	13.986
Total Adjustments	-0.155	15.322	13.986	0.000	13.986
• Congressional General Reductions		-0.014			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		15.336			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.155	0.000			
• Other Adjustments	0.000	0.000	13.986	0.000	13.986

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S0417: *SOF Underwater Systems*

Congressional Add: *Combat Submersibles Sub-Project: Integrated Combat System*

	<b>FY 2009</b>	<b>FY 2010</b>
	3.118	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Combat Submersibles Sub-Project: Technology for Shallow Water Mobility</i>	2.395	2.880
Congressional Add: <i>Combat Submersibles Sub-Project: Alternative SOF Submersible Concept Design Study</i>	0.000	1.000
Congressional Add: <i>Combat Submersibles Sub-Project: Transformer Technology for Combat Submersibles</i>	0.000	3.600
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Future Dry Deck Shelter</i>	0.000	4.336
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Undersea Special Warfare Engineering Support Office</i>	0.000	2.000
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Non-Gasoline Burning Outboard Engine</i>	0.000	1.520
Congressional Add Subtotals for Project: S0417	5.513	15.336
Congressional Add Totals for all Projects	5.513	15.336

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.155 million is due to transfer to Small Business Innovative Research.

FY10: Net increase of \$15.322 million due to decrease of (-\$.014 million) due to Section 8097 general congressional reduction and an increase of \$15.336 for six congressional adds:

- Technology for Shallow Water Mobility (\$2.880 million)
- Alternative SOF Submersible Concept Design Study (\$1.000 million)
- Transformer Technology for Combat Submersibles (\$3.600 million)
- Future Dry Deck Shelter (\$4.336 million)
- Undersea Special Warfare Engineering Support Office (\$2.000 million)
- Non-Gasoline Burning Outboard Engine (\$1.520 million)

FY11: Increase of \$13.986 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>
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Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S0417: <i>SOF Underwater Systems</i>	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for engineering & manufacturing development and operational systems development of small combat underwater submersibles and underwater support systems and equipment. Also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, systems, and equipment are used by Special Operations Forces (SOF) in the conduct of infiltration/extraction, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

Sub-projects include:

- **Combat Submersibles:** Includes conducting product improvement efforts for the in-service SEAL Delivery Vehicle MK 8 and conducting technology development and engineering & manufacturing development for the follow-on combat submersibles such as the various types of shallow water combat submersibles. The shallow water combat submersibles uses an evolutionary acquisition approach to develop a family of submersibles, to include a new wet submersible capable of operating from existing Dry Deck Shelters, and more capable wet or dry submersibles that will operate from future large submarine shelters/systems and/or surface ships. The combat submersible sub-project leverages existing seal delivery vehicle components, develops new state-of-the-art components where appropriate, and leases or purchases commercial-off-the-shelf components and vehicles for test and evaluation and operational assessment.
- **Underwater Support Systems and Equipment:** Includes conducting product improvement efforts for in-service submarine support systems such as the Dry Deck Shelters, unmanned underwater vehicles such as the Semi-autonomous Hydrographic Reconnaissance vehicle, and diver equipment such as the Hydrographic Mapping Unit, Non-gasoline Burning Outboard Engines and Diver Propulsion Devices. Also provides for technology development and engineering & manufacturing development for follow-on underwater support systems and equipment.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command			<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Combat Submersibles Sub-Project: SEAL Delivery Vehicle <i>FY 2009 Accomplishments:</i> Continued concept and technology development for follow-on platform.		3.059	0.000	0.000	0.000	0.000
Combat Submersibles Sub-Project: Shallow Water Combat Submersible <i>FY 2010 Plans:</i> Continue concept and technology development for a new Shallow Water Combat Submersible and conduct source selection activities.  <i>FY 2011 Base Plans:</i> Continues design and development for a new Shallow Water Combat Submersible capability.		0.000	3.438	13.986	0.000	13.986
Accomplishments/Planned Programs Subtotals		3.059	3.438	13.986	0.000	13.986
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Combat Submersibles Sub-Project: Integrated Combat System <i>FY 2009 Accomplishments:</i> Integrated electronics suite backbone for combat submersibles.		3.118	0.000			
Congressional Add: Combat Submersibles Sub-Project: Technology for Shallow Water Mobility <i>FY 2009 Accomplishments:</i> Developed advanced hull technologies for combat submersibles.		2.395	2.880			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> Continue to develop advanced hull technologies for combat submersibles.		
Congressional Add: Combat Submersibles Sub-Project: Alternative SOF Submersible Concept Design Study <i>FY 2010 Plans:</i> Study alternative concepts for combat submersibles and surface ship support systems.	0.000	1.000
Congressional Add: Combat Submersibles Sub-Project: Transformer Technology for Combat Submersibles <i>FY 2010 Plans:</i> Develop advanced hull technologies for combat submersibles.	0.000	3.600
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Future Dry Deck Shelter <i>FY 2010 Plans:</i> Perform studies and analysis of potential designs for next generation dry deck shelter capability.	0.000	4.336
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Undersea Special Warfare Engineering Support Office <i>FY 2010 Plans:</i> Provide engineering support for combat submersibles, support systems and equipment.	0.000	2.000
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Non-Gasoline Burning Outboard Engine	0.000	1.520

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> Develop and test incremental capabilities of the Non-Gasoline Burning Outboard Engines.		
Congressional Adds Subtotals	5.513	15.336

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1: <i>SOF Maritime Equip</i>	13.410	2.768	0.804		0.804	1.060	1.057	1.075	1.093	Continuing	Continuing
• PROC2: <i>MK8 MOD1 Seal</i>	7.040	1.458	0.823		0.823					Continuing	Continuing
<i>Delivery Vehicle</i>											
• PROC3: <i>Combat Submersibles</i>						1.492	27.094	25.228	25.568	Continuing	Continuing

**D. Acquisition Strategy**

- **Combat Submersibles:** The acquisition program for Block I will use full and open competition and competitive prototyping to award contracts to develop and produce test articles with options to produce production systems and provide contractor logistics support. The acquisition strategy for other combat submersible systems is under development. Additionally, existing contracts are utilized where appropriate for various component development and prototypes.
- **Underwater Support Systems & Equipment:** Existing contracts are utilized where appropriate, and various new contracts are awarded as necessary.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SEAL Delivery Vehicle MK 8	WR	NSWC Panama City, FL	3.059	0.000		0.000		0.000		0.000	0	3.059	Continuing
Shallow Water Combat Submersible	Various/Various	TBD TBD	0.000	2.342	Aug 2010	9.867	Jun 2011	0.000		9.867	Continuing	Continuing	Continuing
Submersibles Eng & Analysis	TBD/TBD	TBD TBD	0.000	0.000		2.000	Nov 2010	0.000		2.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.059	2.342		11.867		0.000		11.867	0.000	3.059	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technology for Shallow Water Mobility	TBD/TBD	TBD TBD	2.395	2.880	Nov 2010	0.000		0.000		0.000	0	5.275	Continuing
Integrated Combat System	TBD/FFP	TBD TBD	3.118	0.000		0.000		0.000		0.000	0	3.118	Continuing
Cong Adds: Various	TBD/TBD	TBD TBD	0.000	12.456		0.000		0.000		0.000	0	12.456	Continuing
<b>Subtotal</b>			5.513	15.336		0.000		0.000		0.000	0.000	20.849	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Shallow Water Combat Submersible	SS/TBD	Various Comunbia, MD; Panama City, FL; Washington, DC	0.000	0.491	Mar 2010	1.502	Jan 2011	0.000		1.502	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.491		1.502		0.000		1.502			

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Shallow Water Combat Submersible	Various/ Various	Various Washington, DC; Panama City, FL	0.000	0.605	Mar 2010	0.617	Jan 2011	0.000		0.617	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.605		0.617		0.000		0.617			

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		8.572	18.774	13.986	0.000	13.986	0.000	23.908

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																														
Appropriation/Budget Activity	Program Element Number and Name	Project Number and Name																														
RDT&E/7	PE1160483BB/Special Operations Forces Underwater Systems	Project S0417/Underwater System Advanced Development																														
Fiscal Year	2009				2010				2011				2012				2013				2014				2015							
	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				
SEAL Delivery Vehicle																																
Develop and Test Improved Electronics	▲				▲																											
Shallow Water Combat Submersible																																
Milestone A (FY08)																																
Technology Development	▲				▲																											
Milestone B					▲																											
Engineering & Manufacturing Development (Block 1)					▲				▲				▲				▲															
Developmental Test									▲				▲																			
Tech Eval													▲				▲															
Operational Test																	▲				▲											
First Article Test																									▲				▲			
Congressional Add: Technology for Shallow Water Mobility									▲				▲																			
Congressional Add: Integrated Combat Systems	▲				▲																											
Congressional Add: Alternative SOF Submersible Concept Design Study					▲				▲																							
Congressional Add: Transformer Technology for Combat Submersibles					▲				▲				▲																			
Congressional Add: Future Dry Deck Shelter					▲				▲																							
Congressional Add: Undersea Special Warfare Eng Spt Office					▲				▲																							
Congressional Add: Non-Gasoline Burning Engine					▲				▲																							

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SEAL Delivery Vehicle: Develop and Test Improved Electronics	1	2009	4	2009
Shallow Water Combat Submersible Milestone A (FY08): Technology Development	1	2009	2	2010
Shallow Water Combat Submersible Milestone B: Engineering & Manufacturing Development (Block I)	4	2010	4	2013
Shallow Water Combat Submersible Milestone B: Developmental Test	2	2012	4	2013
Shallow Water Combat Submersible Milestone B: Tech Eval	2	2013	4	2013
Shallow Water Combat Submersible Milestone B: Operational Test	4	2013	2	2014
Shallow Water Combat Submersible Milestone B: First Article Test	3	2015	3	2015
Congressional Add: Technology for Shallow Water Mobility	4	2010	2	2012
Congressional Add: Integrated Combat Systems	4	2009	4	2010
Congressional Add: Alternative SOF Submersible Concept Design Study	3	2010	3	2011
Congressional Add: Transformer Technology for Combat Submersibles	4	2010	4	2011
Congressional Add: Future Dry Deck Shelter	4	2010	4	2011
Congressional Add: Undersea Special Warfare Eng Spt Office	4	2010	4	2011
Congressional Add: Non-Gasoline Burning Engine	4	2010	3	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing
S1684: <i>SOF Surface Craft</i>	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for engineering & manufacturing development (formerly system development & demonstration) and operational systems development of small to medium surface craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). This program element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development & prototypes) to quickly respond to possible new requirements for surface craft and equipment, such as the notional light and heavy combatant crafts that are currently being studied in the Joint Capabilities Integration and Development System process. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	6.392	12.250	0.000	0.000	0.000
Current President's Budget	6.232	9.959	2.933	0.000	2.933
Total Adjustments	-0.160	-2.291	2.933	0.000	2.933
• Congressional General Reductions		-2.291			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.160	0.000			
• Other Adjustments	0.000	0.000	2.933	0.000	2.933

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S1684: *SOF Surface Craft*

Congressional Add: *Special Operations Craft Riverine Integrated Bridge System (IBS)*

FY 2009	FY 2010
1.167	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add Subtotals for Project: S1684	1.167	0.000
Congressional Add Totals for all Projects	1.167	0.000

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.160 million is due to a Small Business Innovative Research transfer.

FY10: Decrease of -\$2.250 million due to new start delay.

FY11: Increase of \$2.933 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>S1684: SOF Surface Craft</i>	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for engineering & manufacturing development and operational systems development of small to medium surface craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development & prototypes) to quickly respond to possible new requirements for surface craft and equipment, such as the notional light and heavy combatant crafts that are currently being studied in the Joint Capabilities Integration Development System process. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

- The Medium Combatant Craft sub-project provides a family of next generation craft to replace the current rigid inflatable boat. This sub-project is a continuation of the Rigid Inflatable Boat replacement craft originally started in FY2008 under the RIB sub-project. One version of these craft will be reconfigurable, multi-mission surface tactical mobility craft with a primary mission of insertion and extraction of SOF in a medium threat environment. It will incorporate additional performance capabilities such as shock mitigation, low observability, improved maneuverability and SOF war fighting capabilities required to operate in future threat environments. Other versions of craft will be developed to support foreign security assistance missions and operations in low or permissive threat environments.
- The Rigid Inflatable Boat program provides engineering support for design and specification development of a multi-mission craft with improved sea keeping and maneuverability, reduced detectability with enhanced shock mitigation, and human systems integration. Requirements include being air transportable, air droppable, and increased reliability and maintainability.
- The Forward Looking Infrared sub-project provides for engineering and development of performance improvements to the current system on all SOF combatant craft.
- The Special Operations Craft Riverine sub-project provides for development of performance improvements to the current Riverine craft and pre-acquisition activities for follow-on Riverine craft.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Medium Combatant Craft <i>FY 2010 Plans:</i> Conducts risk reduction activities, completes source selection and develops components and advanced prototypes.  <i>FY 2011 Base Plans:</i> Build and test components and advanced prototypes	0.000	9.959	2.933	0.000	2.933
Rigid Inflatable Boat <i>FY 2009 Accomplishments:</i> Completed risk reduction activities and requested proposal for design, prototypes, production and sustainment for a replacement combatant craft, initiated source selection activities for next generation crafts.	3.892	0.000	0.000	0.000	0.000
Forward Looking Infrared <i>FY 2009 Accomplishments:</i> Completed developmental testing and conducted operational testing.	1.173	0.000	0.000	0.000	0.000
<b>Accomplishments/Planned Programs Subtotals</b>	5.065	9.959	2.933	0.000	2.933

	FY 2009	FY 2010
Congressional Add: Special Operations Craft Riverine Integrated Bridge System (IBS) <i>FY 2009 Accomplishments:</i> Integration and testing of IBS.	1.167	0.000
<b>Congressional Adds Subtotals</b>	1.167	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>SOF Combatant Craft</i>	21.427	11.122	11.706		11.706	20.757	23.497	26.519	27.635	Continuing	Continuing

**D. Acquisition Strategy**

- Medium Combatant Craft acquisition strategy is a full and open competition using a two phase source selection process. Phase I involves a Small Business Set Aside competition for two or more companies to design and build test articles. Phase II selects a single company to produce a fully integrated baseline craft for test and evaluation with options for production and contractor logistics support. Acquisition strategies for other craft may be based on the rapid acquisition of available non-developmental commercial off-the-shelf/government-off-the-shelf craft.
  
- Forward Looking Infrared (FLIR) will develop spiral improvements by utilizing existing contract with FLIR Systems, Inc., Boston, MA.
  
- SOC Riverine develops and tests improvements using various contracts strategies, including Small Business Innovative Research and Broad Area Announcements.

**E. Performance Metrics**

N/A

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>				<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>					

**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Combatant Craft	TBD/TBD	TBD TBD	0.000	7.959	Apr 2009	0.982	Nov 2010	0.000		0.982	Continuing	Continuing	Continuing
Forward Looking Infrared	C/CPFF	FSI Boston, MA	1.196	0.000		0.000		0.000		0.000	0	1.196	Continuing
Integrated Bridge System	TBD/TBD	TBD TBD	1.474	0.000		0.000		0.000		0.000	0	1.474	Continuing
Integrated Combat System	TBD/TBD	USMI TBD	1.548	0.000		0.000		0.000		0.000	0	1.548	Continuing
<b>Subtotal</b>			4.218	7.959		0.982		0.000		0.982	0.000	4.218	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Rigid Inflatable Boat	Various/ Various	VARIOUS VARIOUS	5.832	0.000		0.000		0.000		0.000	0	5.832	Continuing
Medium Combatant Craft	TBD/TBD	NSWC Norfolk VA; Crane, IN	0.000	1.750	Jan 2010	1.705	Jan 2011	0.000		1.705	Continuing	Continuing	Continuing
Forward Looking Infrared	C/CPFF	FSI Boston, MA	0.659	0.000		0.000		0.000		0.000	0.000	0.659	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Forward Looking Infrared	C/CPFF	FSI Boston, MA	0.369	0.000		0.000		0.000		0.000	0.000	0.369	Continuing
<b>Subtotal</b>			6.860	1.750		1.705		0.000		1.705	0.000	6.860	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Combatant Craft	TBD/TBD	NSWC Norfolk, VA	0.000	0.250	Jan 2010	0.246	Jan 2011	0.000		0.246	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.250		0.246		0.000		0.246			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	11.078	9.959		2.933		0.000		2.933	0.000	11.078	

**Remarks**

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Combatant Craft Medium: Risk Reduction Activities & Prepare Request for Proposal	1	2009	4	2009
Combatant Craft Medium: Proposals & Source Selection	4	2009	3	2010
Combatant Craft Medium: Build Competitive Prototypes	4	2010	3	2011
Combatant Craft Medium: Developmental Test /Operational Test and Analysis	4	2011	1	2012
Combatant Craft Medium: Final Downselect	2	2012	2	2012
Combatant Craft Medium: Integration (C4ISR)	2	2012	4	2012
Combatant Craft Medium: Developmental Test/Operational Test	4	2012	1	2013
Combatant Craft Medium: Low Rate Initial Production	4	2012	2	2013
Combatant Craft Medium: Operational Evaluation	3	2013	3	2013
Combatant Craft Medium: Initial Operational Capability	4	2013	4	2013
Forward Looking Infrared: P3I Development Program	1	2009	4	2010
Forward Looking Infrared: Engineering & Development	1	2009	2	2009
Forward Looking Infrared: Testing	3	2009	4	2009
Forward Looking Infrared: Production Verification	4	2009	1	2010
Congressional Adds: Special Operations Craft Riverine Integrated Bridge System Development, Integration and Testing	1	2009	2	2011

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing
D476: <i>SOF PSYOPS</i>	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The SOF PSYOP program element provides for the development, test and integration of Psychological Operations (PSYOP) equipment. PSYOP are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This program element funds transformational systems and equipment to conduct PSYOP in support of combatant commanders.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	15.124	9.887	0.000	0.000	0.000
Current President's Budget	8.251	9.846	4.193	0.000	4.193
Total Adjustments	-6.873	-0.041	4.193	0.000	4.193
• Congressional General Reductions		-0.041			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-6.298	0.000			
• SBIR/STTR Transfer	-0.575	0.000			
• Other Adjustments	0.000	0.000	4.193	0.000	4.193

**Change Summary Explanation**

FY09: Decrease of -\$6.873 million is due to reprogramming for Foliage Penetration efforts (-\$2.688 million), Small Business Innovative Research transfer (-\$0.575 million), and FY09 Omnibus reprogramming FY09-26PA (-\$3.584 million), and other program adjustments (\$0.026 million).

FY10: Decrease of -\$0.041 million is due to Section 8097 Congressional general reductions.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 1160488BB: *SOF PSYOP/D476*

FY11: Increase of \$4.193 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
D476: <i>SOF PSYOPS</i>	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

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

- The PSYOP Broadcast System consists of fixed and deployable multi-media production facilities for radio and television programming, distribution systems, and dissemination systems to provide PSYOP support to theater commanders. This program is comprised of several interfacing systems that can stand alone or interoperate with other PSYOP systems as determined by mission requirements. This program includes the fixed site media production center; a lightweight, deployable media production capability; a distribution system that provides a product distribution link to systems worldwide; a media system; a transit case fly-away broadcast systems that consists of a combination of amplitude modulation (AM), frequency modulation (FM), shortwave (SW), and television (TV) transmitters, and radio/TV production systems; software defined radio and a long range broadcast system which transmits analog and digital broadcasts. The long range broadcast system will include unmanned aerial vehicle payloads, scatterable media, telephony, and Internet broadcast. PSYOP media displays will consist of easily transportable, state of the art, electronic media displays designed to disseminate and direct broadcast electronic messages, which will influence foreign target audiences, and will support the PSYOP direct broadcast mission requirements. The Special Operations Media System-B is a tactical deployable radio and television broadcast system. It is designed to act as the forward deployed broadcast platform of products. It has limited production capabilities and consists of two independent systems: a mobile radio broadcast system (AM, FM, SW) and a mobile television broadcast system (VHF, UHF) capable of receiving audio and video products for broadcasting. Additionally, lightweight and tactical media development work stations will allow soldiers to produce PSYOP products in deployed locations.
- The Family of Loudspeakers program consists of modular amplifiers and speakers that can be interconnected to form sets of loudspeakers that will provide high quality recorded audio, live dissemination, and acoustic deception capability. Equipment is transported, operated, and mounted in ground vehicles, watercraft, and rotary wing aircraft, and dismounted for ground operations (tripod/manpack). This capability permits loudspeaker missions to be conducted over larger areas than previous equipment and provides a greater standoff distance for U.S. Forces/assets. The next generation loudspeaker system will consist of seven variants: manpack; ground vehicle/watercraft; unmanned air vehicle; unmanned ground vehicle; scatterable media long duration; scatterable media short duration; and sonic projection

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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(focused sound). The next generation system will provide capability improvements to include wireless networking, improved acoustic performance, unmanned ground and air vehicle transportability, scatterable speaker, long distance sonic projection sound and solid state modular amplifiers/speakers that can be interconnected using secure wireless technology to form sets of loudspeakers that provide high quality recorded audio, live dissemination, and acoustic deception capability.

Commando Solo: Commando Solo supports combat operations by flying broadcast missions for the purpose of broadcasting analog and digital radio and/or television signals deep into denied territory. These broadcasts are made from EC-130J aircraft that are equipped with high powered transmitters and large antenna arrays that operate in the 0.45 - 1,000 MHz frequency range. The Commando Solo program acquisition strategy includes conducting engineering analyses to develop digital broadcast capabilities for the EC-130J and C-130J aircraft. Commando SOLO will leverage development and hardware from the Fly-Away Broadcast System.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
PSYOP Broadcast System  <i>FY 2009 Accomplishments:</i> Continued primary hardware development, systems engineering, and developmental test and evaluation (DT&E) on the long range broadcast technology, broadcast modernization efforts and media displays.  <i>FY 2010 Plans:</i> Continue primary hardware development, systems engineering, and DT&E on the long range broadcast technology, broadcast modernization efforts and media displays.  <i>FY 2011 Base Plans:</i> Continues primary hardware development, systems engineering, and DT&E on the long range broadcast technology, broadcast modernization efforts and media displays.	4.039	8.036	3.169	0.000	3.169
Family of Loudspeakers	4.212	0.828	0.000	0.000	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Conducted primary hardware and software development, systems engineering, and DT&amp;E on the next generation unmanned ground vehicle, unmanned aerial vehicle, scatterable media long duration and scatterable media short duration variants.</p> <p><i>FY 2010 Plans:</i> Conduct primary hardware and software development, systems engineering and DT&amp;E on sonic projection variant.</p>					
<p>Commando SOLO</p> <p><i>FY 2010 Plans:</i> Initiate engineering study of government and commercial digital broadcast technologies applicable to PSYOP.</p> <p><i>FY 2011 Base Plans:</i> Continues engineering study of government and commercial digital broadcast technologies applicable to PSYOP leading to the development of a performance specification.</p>	0.000	0.982	1.024	0.000	1.024
<b>Accomplishments/Planned Programs Subtotals</b>	8.251	9.846	4.193	0.000	4.193

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC: <i>PSYOP Equipment</i>	31.024	42.948	25.266		25.266	4.809	1.367	2.016	1.909	Continuing	Continuing

**D. Acquisition Strategy**

• PSYOP Broadcast System consists of wide-area systems providing radio, television programming and multi-media production, distribution and dissemination support to the theater commander. This system is comprised of several interfacing systems that can stand alone or interoperate with other systems as determined by mission

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
<p>requirements. These various sub-programs are in a post-Milestone C or various stages of milestone decisions. Media displays consist of electronic media displays, modular systems, electronic paper, and electronic games. The program acquires and modifies, as necessary, commercial off-the-shelf /government off-the-shelf (COTS)/ (GOTS) systems and equipment to provide the system capabilities. The Family of Loudspeakers Next Generation Loudspeaker System consists of seven variants. The program acquires and modifies, as necessary, COTS/GOTS systems and equipment to replace or enhance current system capabilities.</p> <ul style="list-style-type: none"><li>• Commando Solo funds modifications of the Commando Solo special mission equipment that broadcasts television and radio messages to target audiences in denied areas. Enhancements are periodically required to meet theater commander operational requirements and maintain compatibility with forces equipment upgrades to allow in-flight receipt of products for dissemination. The program acquires and integrates into the EC-130J commercial and GOTS systems to replace or enhance current system capabilities and address equipment shortfalls due to obsolescence.</li></ul>		
<b><u>E. Performance Metrics</u></b> N/A		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>				<b>PROJECT</b> D476: <i>SOF PSYOPS</i>					

**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PSYOP Broadcast System	Various/ Various	Various Various	9.877	8.036	Jan 2010	3.169	Jan 2011	0.000		3.169	2.990	24.072	Continuing
Family of Loudspeakers	Various/ Various	Various Various	4.937	0.828	Jan 2010	0.000		0.000		0.000	0	5.765	Continuing
Commando SOLO	TBD/TBD	TBD TBD	0.000	0.982	Jan 2010	1.024		0.000		1.024	0	2.006	Continuing
<b>Subtotal</b>			14.814	9.846		4.193		0.000		4.193	2.990	31.843	

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	14.814	9.846		4.193		0.000		4.193	2.990	31.843	

**Remarks**

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PSYOP Broadcast System-Long Range Broadcast System Unmanned Aerial Vehicle-Payload Hardware Development and Testing	1	2009	4	2012
Family of Loudspeakers Next Generation Loudspeaker	1	2009	4	2010
Commando Solo	2	2010	4	2011

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