

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE MAY 2009
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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160474BB SOF Communications Equipment and Electronics Systems/S700
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COST (Dollars in Millions)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	Cost to Complete	Total Cost
PE1160474BB			.733						Cont.	Cont.
S700 SO Communications Equipment and Electronics Systems			.733						Cont.	Cont.

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:

	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>
Previous President's Budget			1.295	
Current President's Budget			0.733	
Total Adjustments			-0.562	
Congressional Program Reductions				
Congressional Increases				
Reprogrammings				
Other Program Adjustments			-0.562	

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<p>Funding:</p> <p>FY10: Decrease of (-\$0.562 million) is due to realignment to higher command priorities (-\$0.552 million) and economic assumptions (-\$0.010 million).</p> <p>Schedule: None.</p> <p>Technical: None.</p>	

Exhibit R-2a, RDT&E Project Justification		Date: MAY 2009
Appropriation/Budget Activity RDT&E BA # 7	SOF Communications Advanced Development S700	

Cost (\$ in million)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
SOF Communications Advance Development	13.699		.733					
RDT&E Articles Quantity								

A. Mission and Description and Budget 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.
- Covert Waveform III is an FY 2006 and FY 2008 Congressional add. Continued development of new covert communications capability.
- Semi-autonomous or Unattended Psychological Operations and Reconnaissance Tool Set is an FY 2008 Congressional add. This project researched the Psychological Operations (PSYOP) Automated Command and Control (C2) Module to operate on a non-proprietary open network by evaluating their effectiveness. The tests performed were a result of investigating commercial off-the-shelf technologies available

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to accomplish a “system of system” approach. Investigative technology gaps requiring further research and development include, but are not limited to: remote audio interrogation, unattended ground sensors, monitoring/tracking/surveillance, video messaging systems, and integration.

- SOCOM Computer Research is an FY 2008 Congressional add. Pursued acquiring technical support and production services for research, design, development, field test, delivery and implementation of a prototype functional, semi-rugged, modular computer for/on the Light Armored Vehicle (LAV) and the LAV Maintainer for the end user. Pursued support capabilities beyond the current operational infrastructure; support continued total life-cycle system management efforts by enabling access to Embedded Platform Logistics Systems, Global Combat Support System – Marine Corp and computer-based maintenance fielding. Specifically, this effort will be a progression of research and development performed to date with a goal of developing a solution that is field tested and potentially a viable, production ready application. The overall approach of this project increases vehicle readiness, decreasing costs and enables rapid embracement of ongoing logistics modernization initiatives. This project addressed the growing need for rugged maintenance tool systems for ground vehicle platforms currently deployed in operational environments with a specific focus on decreased deadline time.

- Tactical Local Area Network Suites. Provided developmental integration of multiple networks. This 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; and 10 intelligence laptops. A network contains commercial servers, routers, and hubs, which can operate at user selectable classification levels [e.g., unclassified, collateral, coalition or Sensitive Compartmented Information networks.] A kit consists of computers and ancillary equipment used by SOF teams for detailed mission planning. Field devices are small hand-held computing devices used by the most forward deployed SOF to automatically interface with the suite via tactical communications.

- Communications Enhancements to Fielded Tactical Network Systems is an FY 2008 Congressional add. This initiative is an enhancement to fielded tactical network systems. The network is a platform that provides netcentric operations and key information to the SOF soldier at the tactical level. The solution uses the commercial implementation of the Defense Advanced Research Projects Agency-developed Mesh Network to provide a scalable, multi-tiered network architecture that supports tactical peer-to-peer connectivity. The integration of the Mesh network enhances SOF battlespace awareness and command and control.

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ABOVE OPERATIONAL ELEMENT (GARRISON)

- 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 providing a common user interface and common source and view of the data. It will enable users to complete acquisition management; planning, programming, and budgeting collaborative decision processes; and retain information necessary to satisfy mission requirements, generate standard and ad hoc reports, graphically display performance metrics and data, and conduct in depth data analysis and reporting.

B. ACCOMPLISHMENTS/PLANNED PROGRAM

Cost (\$ in million)		FY08	FY09	FY10	FY11
SOF Deployable Node				.733	
RDT&E Articles Quantity					
FY10 Develops next generation antennas for all systems: heavy, medium, and light.					
Cost (\$ in million)		FY08	FY09	FY10	FY11
Covert Waveform III		1.937			
RDT&E Articles Quantity					
FY08 This initiative was a Congressional add. Continued development of new covert communication capability. Developed Low Probability of Intercept/Low Probability of Detection waveforms for SOCOM tactical radio application.					
Cost (\$ in million)		FY08	FY09	FY10	FY11
Semi-autonomous or Unattended Psychological Operations and Tool Set		1.548			
RDT&E Articles Quantity					
FY08 This initiative was a Congressional add. Developed technology to integrate various PSYOP dissemination systems. Developed a prototype hand-held wireless device to send and receive audio, video, and text messages.					
Cost (\$ in million)		FY08	FY09	FY10	FY11
SOCOM Computer Research		.968			
RDT&E Articles Quantity					

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FY08 This initiative was a Congressional add. Pursued acquiring technical support and production services for research, design, development, field test, delivery and implementation of a prototype functional semi-rugged, modular computer for/on the LAV and the LAV Maintainer for the end user.

Cost (\$ in million)	FY08	FY09	FY10	FY11
Special Operations Resource Business Information System	6.456			
RDT&E Articles Quantity				

FY08 Provided exploration of integrating resource and acquisition legacy systems and databases to provide an enterprise-wide solution for resource and acquisition management. Provided a common user interface and source for viewing real time data for decision processes retaining information necessary to satisfy mission requirements.

Cost (\$ in million)	FY08	FY09	FY10	FY11
Tactical Local Area Network	2.016			
RDT&E Articles Quantity				

FY08 Began development and integration of field computing devices to expand the functionality of its information technology, while improving reliability and supportability. Provided centralized program oversight to guide system-wide technology insertions and improvements.

Cost (\$ in million)	FY08	FY09	FY10	FY11
Comm Enhancements to Fielded TACTI-NET Systems	.774			
RDT&E Articles Quantity				

FY08 This initiative was a Congressional add. Developed enhancements for Mesh Network to provide a scalable, multi-tiered network architecture that supports tactical peer-to-peer connectivity.

C. Other Program Funding Summary:

	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	To <u>Complete</u>	Total <u>Cost</u>
PROC, Comm/Equip and Electronics	173.537	73.004	55.080						Cont.	Cont.

D. Acquisition Strategy:

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

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- Special Operations Resource Business Information System acquisition strategy seeks to optimize a cost, schedule, and performance mix, by 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.

- 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.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: MAY 2009					
APPROPRIATION / BUDGET ACTIVITY				SOF Communications Equipment and Electronics Systems/PE1160474BB							
RDT&E DEFENSE-WIDE / 7				SOF Communications Advanced Development/S700							
Actual or Budget Value (\$ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY09	Award Date FY09	Budget Cost FY10	Award Date FY10	Budget Cost FY11	Award Date FY11	To Complete	Total Program
Primary Hardware Development SOF Deployable Node Antenna	TBD	TBD				0.733	Jan-10			Cont.	Cont.
Subtotal Product Development			0.000	0.000		0.733	0.000			Cont.	Cont.
Remarks:											
Development Support											
Subtotal Development Support			0.000	0.000		0.000					0.000
Remarks:											
Developmental Test & Evaluation											
Subtotal Developmental Test & Evaluation			0.000	0.000		0.000					0.000
Remarks:											
Contractor Engineering Support											
Subtotal Engineering Support											
Remarks:											
Prior Years	Various	Multiple	79.432								
Total Cost			79.432	0.000		0.733				Cont.	Cont.
Remarks:											

