

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)						DATE FEBRUARY 2000			
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7			R-1 ITEM NOMENCLATURE PE1160402BB Spec Operations Advanced Technology Development						
COST (Dollars in Millions)	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Cost to Complete	Total Cost
PE1160402BB	28.305	7.743	7.778	8.244	8.920	9.089	9.250	Cont.	Cont.
S200 SPECIAL OPERATIONS SPECIAL TECHNOLOGY	28.305	7.743	7.778	8.244	8.920	9.089	9.250	Cont.	Cont.
<p>A. Mission Description and Budget Item Justification</p> <p>This program element conducts rapid prototyping and advanced technology demonstrations. It provides a means for demonstrating and evaluating emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces users. Evaluation results are included in a transition package which assists in the initiation of or insertion into an acquisition program. The program element also addresses projects that are a result of unique joint, special mission, or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.</p> <p>Change Summary Explanation:</p> <p>Funding:</p> <p>FY 2000 decrease is project cost share of the Small Business Innovative Research program, Congressionally mandated rescission of \$23K, and revised Administration inflation assumptions.</p> <p>FY 2001 decrease is project cost share of revised Administration inflation assumptions.</p> <p>Schedule: None.</p> <p>Technical: None.</p>									

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B. Program Change Summary	FY 1999	FY 2000	FY 2001	
Previous President's Budget	28.409	7.990	8.126	
Appropriated Value	29.020	7.990		
Adjustments to Appropriated Value / President's Budget	(.715)	(.247)	(.348)	
Current Budget Submit	28.305	7.743	7.778	

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COST (Dollars in Millions)	FY99	FY00	FY01	FY02	FY03	FY04	FY05	Cost to Complete	Total Cost
S200, Special Operations Special Technology	28.305	7.743	7.778	8.244	8.920	9.089	9.250	Cont.	Cont.

A. Mission Description and Budget Item Justification

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

- Advanced Sensors. ATD to provide SOF with an integrated hand-held, multi-sensor reconnaissance capability to observe, locate, and report on targets.
- Advanced Sniper Weapon Fire Control. Full wind vector ballistic solution at extended range (1200 meters).
- Aircraft Off/On Load System. Demonstrate system to air drop platforms or SOF-unique pallets without the use of material handling equipment.
- Integrated Bridge System. A system that enhances maritime craft bridge-console and operator interface through human factor engineering and integration with console design and displays.
- Intrusion Sensor. A miniature, multi-sensor system to detect local threats.

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<ul style="list-style-type: none"> • Low Probability of Intercept/Detection Imagery Link. Demonstrate a short range, high data rate, networked communications link for SOF applications. • Maximum Efficiency Language Trainer. Demonstrate an advanced computer based virtual reality interactive language tutor for SOF applications. • Quick Erect Antenna. Improved antenna to reduce set-up time requirements in support of psychological operations. • Remote Miniature Weather Station. Man-portable, air-drop capable weather sensors with a transmission system for terrestrial based unattended weather collection operations. • SOF Autonomous Landing System. Demonstrate the capability to provide navigation guidance for SOF aircraft approaching a landing field in adverse weather. • SOF Enhanced Weapons. Weapons and munitions prototypes for increased range, improved accuracy, and improved performance against hardened targets. • SOF Robotics. Leverage air, ground, and maritime robotics technology for SOF evaluations to determine operational utility. • Tactical Personal Computer. Demonstrate advanced wearable computer technology for SOF special reconnaissance and combat control team applications. • Underwater Adhesives. Demonstrate advanced adhesive technologies for emplacing underwater demolitions. 	

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<p>FY 1999 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> • (2.910) SOF Command, Control, Communications, Computer and Intelligence Technologies. Continued demonstration of Tactical Personal Computer for SOF applications. Continued to exploit emerging technology to conduct Advanced Technology Demonstrations (ATDs) that provide improvements in weight/volume reduction, power consumption/management, low probability of intercept/detection, and transmission rates of SOF communication and intelligence systems. Continued to exploit emerging technology to conduct ATDs that provide SOF with improvements in their ability to detect, track, and maintain surveillance of threats. Continued to exploit technology to provide SOF with increased situation/information awareness and intelligence awareness during missions. (1QTR99-4QTR99) • (1.250) SOF Mobility Technologies. Completed development and user evaluation, and began transition of Integrated Bridge System and Aircraft off/on Load System. Completed development and evaluation of SOF Autonomous Landing System. Exploited emerging robotics technology to assess for SOF operational utility. (1QTR99-4QTR99) • (1.946) SOF Weapons Technologies. Completed development of and evaluated Advanced Sniper Weapon Fire Control and SOF Enhanced Weapons. Continued to exploit emerging technologies to conduct ATDs that provide increased lethality, enhanced flexibility, reduced weight and volume, increased accuracy, controllability, and safety of explosive charges and weapons. Continued to exploit emerging technology to conduct ATDs that provide SOF weapons with improvements in the responsiveness, stand-off, accuracy, reliability, and target effects. Obtained weapon classification and prepared for low rate initial production of the Advanced Lightweight Grenade Launcher. Evaluated Underwater Adhesives for attaching SOF munitions. (1QTR99-4QTR99) • (1.442) SOF Sustainment Technologies. Completed evaluation and transition of Maximum Efficiency Language Trainer. Continued development and evaluation of Intrusion Sensor System. Continued to exploit emerging technologies to conduct ATDs that will provide enhanced performance and sustainment of power devices for the individual SOF operator. Exploited emerging technology to conduct ATDs that provide SOF combat swimmers with improved mission readiness. (1QTR99-4QTR99) 	

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<ul style="list-style-type: none"> • (0.500) Technology Exploitation Initiative. Leveraged Air Force advanced non-lethal technology for SOF applications. (4QTR99) • (0.729) Classified Project. Provided under separate cover. (1QTR99-4QTR99) • (19.528) Special Reconnaissance Capabilities (SRC). Special Reconnaissance (SR) is a core USSOCOM mission. The SRC effort addresses technology shortfalls for SR and consists of multiple, interrelated projects focusing on the development of components for integration into intelligence, surveillance, and reconnaissance systems and architectures. (2QTR99-4QTR00) <p>FY 2000 PLAN:</p> <ul style="list-style-type: none"> • (2.150) SOF Command, Control, Communications, Computer and Intelligence (C4I) Advanced Technology Demonstrations (ATDs). Complete development of and evaluate Low Probability of Intercept/Detection Imagery Link. Continue to exploit emerging robotics technology for SOF applications. Exploit emerging technology to conduct ATDs that provide SOF with a robust C4I capability to ensure uninterrupted information exchange, influence situations to support mission accomplishment, and reduce an adversary's ability to use information. Exploit emerging technology to conduct ATDs that provide SOF with a restricted line-of-sight personnel locator system. (1QTR00-3QTR00) • (1.905) SOF Mobility ATDs. Complete evaluation and transition of SOF Autonomous Landing System. Continue to exploit emerging technology to conduct ATDs that provide SOF with survivable mobility operations in high threat areas and enhanced situational awareness. Exploit emerging technology to conduct ATDs that provide SOF mobility assets with enhanced situational awareness and beyond line-of-sight threat detection. (1QTR00-2QTR00) • (1.002) SOF Weapons ATDs. Complete evaluation and transition of Advanced Sniper Weapon Fire Control. Complete development of FY 1999 new sub-projects to completion and evaluation. Exploit emerging technology to conduct ATDs that provide SOF with a man-portable system to detect enemy indirect fire systems. (1QTR00-2QTR00) 	

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<ul style="list-style-type: none"> • (1.586) SOF Sustainment Advance Technology Demonstrations (ATDs). Complete development of and evaluate FY 1999 new sub-projects. Continue to exploit emerging technologies to conduct ATDs that provide SOF with increased survivability and performance. (2QTR00-3QTR00) • (0.500) Technology Exploitation Initiative. Exploit emerging technologies to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas. (3QTR00) • (0.600) Classified Project. Provided under separate cover. (1QTR00-2QTR00) <p>FY 2001 PLAN:</p> <ul style="list-style-type: none"> • (2.210) SOF Command, Control, Communications, Computer and Intelligence (C4I) ATDs. Complete development of and evaluate FY 2000 new sub-projects. Continue to exploit emerging technologies to conduct ATDs that provide SOF with a robust C4I capability to ensure uninterrupted information exchange, influence situations to support mission accomplishment, and reduce an adversary's ability to use information. Exploit emerging technology to conduct ATDs that provide SOF with increased sensory performance. Exploit emerging technologies to locate and track targets or items of interest. (1QTR01-3QTR01) • (2.140) SOF Mobility ATDs. Complete development of and evaluate FY 2000 new sub-projects. Continue to exploit emerging technologies to conduct ATDs that provide SOF with survivable mobility operations in high threat areas and with enhanced situational awareness. Exploit emerging technologies to conduct ATDs that provide SOF mobility assets with a reduction in logistic support requirements. Exploit emerging technologies to rapidly deploy and extract SOF personnel and craft. Exploit technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. (2QTR01-3QTR01) 	

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<ul style="list-style-type: none"> • (1.709) SOF Weapons Advanced Technology Demonstrations (ATDs). Complete development of and evaluate FY 2000 new sub-projects. Continue to exploit emerging technologies to conduct ATDs that provide SOF with multi-role/multi-purpose weapons and demolitions with a broader range of potential effects and increased accuracy. (1QTR01-3QTR01) • (1.219) SOF Sustainment ATDs. Continue development of and evaluate FY 2000 new sub-projects. Continue to exploit emerging technologies to conduct ATDs that provide SOF with increased survivability and performance. (1QTR01-3QTR01) • (0.500) Technology Exploitation Initiative. Exploit emerging technology to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas. (3QTR01) <p>B. <u>Other Program Funding Summary</u> None.</p> <p>C. <u>Acquisition Strategy</u>: None.</p> <p>D. <u>Schedule Profile</u> None.</p>	