| Exhibit R-2, RDT&E Budget Item Justification | | | | | | | February 2003 | |
|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>RDT&E.DW/BA3 | | | | R-1 Item Nomenclature:<br>SO/LIC Advanced Development<br>PE 0603121D8Z | | | | |
| Cost ($ in millions) | FY2002 | FY2003 | FY2004 | FY2005 | FY2006 | FY2007 | FY2008 | FY2009 |
| Total PE Cost | 14.509 | 18.608 | 31.300 | 32.723 | 33.802 | 34.333 | 34.158 | 35.734 |
| Special Operations/Low-Intensity Conflict Analytical Support/P205 | 1.313 | .710 | | | | | | |
| Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC)/P206 | 7.486 | 6.711 | 9.300 | 9.423 | 9.402 | 9.533 | 9.558 | 9.734 |
| Special Reconnaissance Capabilities (SRC)/P207 | 5.710 | 11.187 | 20.000 | 20.300 | 20.400 | 20.800 | 20.600 | 21.000 |
| Information Dissemination Concepts/P208 | | | 2.000 | 3.000 | 4.000 | 4.000 | 4.000 | 5.000 |

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

**BRIEF DESCRIPTION OF ELEMENT**

P205, Special Operations/Low-Intensity Conflict (SO/LIC) Analytical Support. The SO/LIC Analytical Support project provides specialized research and analytical support for the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict (ASD (SO/LIC). Projects address a broad spectrum of technical, acquisition, and policy issues relating to special operations, combating terrorism, peacekeeping, psychological operations, counterinsurgency, unconventional warfare, and contingency operations. The project supports and is integrated into overall DoD efforts to develop options for dealing effectively with a wide range of military responsibilities in military operations other that war. This project provides a vehicle to initiate analysis required to support acquisition documentation and conceptual policy issues regarding roles and missions of Special Operations Forces in the changing world environment. Analysis may also be used to improve OASD(SO/LIC)`s congressionally mandated oversight function of special operations and low-intensity conflict. In FY 2004 this analytic support program will become a component of P206, Explosive Ordnance Disposal/Low Intensity Conflict, providing efficiency of management and execution.

P206, Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC). The EOD/LIC program provides advanced technology and equipment solutions for military EOD operators and SOF to meet the challenges of homeland defense, force protection and the war on terrorism. EOD/LIC efforts focus primarily on the detection, access, identification, and neutralization of all types of conventional explosive ordnance and improvised explosive devices including weapons of mass destruction. Requirements submitted by the Joint Service EOD and Service Special Operations communities are prioritized and approved by OASD(SO/LIC).

P207, The Special Reconnaissance Capabilities (SRC) R&D Program addresses reconnaissance and surveillance inadequacies in the Department of Defense's ability to collect timely, actionable intelligence on difficult-to-access, high-value targets and on tagging, tracking and locating (TTL) vehicles, aircraft, vessels, containers, and individuals. Supporting technologies include the application of unattended ground sensors, tagging, tracking and locating (TTL), communications, power management, command, control and networking of sensors, mobility and delivery of sensors and situational awareness interfaces. The program also provides the new capability, as well as the technical expertise necessary to train operational users to enhance DoD special reconnaissance mission applications.

P208, The Information Dissemination Concepts project will address technology capabilities necessary to enable sustained information dissemination in denied areas. This project will leverage ongoing research efforts of USSOCOM, the Services and Defense and other agencies to develop, modify and demonstrate dissemination mechanisms, platforms and payloads. These development efforts will include research into high altitude, lighter-than-air vehicles, modifications to chipsets for receivers capable of receiving space based radio broadcasts, and transmit/receive payloads. These payloads have the potential to be deployed from numerous platforms to include unmanned lighter-than-air vehicles and unmanned aircraft.

**B. Program Change Summary:** (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

| | FY2002 | FY2003 | FY2004 | FY2005 |
|---|---|---|---|---|
| Previous President's Budget | 14.509 | 13.800 | 9.484 | 10.013 |
| Current BES/President's Budget | | 18.608 | 31.300 | 32.723 |
| Total Adjustments | | | | |
| Congressional program reductions | | .492 | | |
| Congressional rescissions | | | | |
| Congressional increases | | 5.300 | | |
| Reprogrammings | | | | |
| SBIR/STTR Transfer | | | | |

| Exhibit R-2a, RDT&E Project Justification | | | | | | | February 2003 | |
|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>RDT&E.DW / BA3 | | | | Project Name and Number<br>SO/LIC Advanced Development PE 0603121D8Z | | | | |
| Cost ($ in millions) | FY2002 | FY2003 | FY2004 | FY2005 | FY2006 | FY2007 | FY2008 | FY2009 |
| P205 Special Operations/Low Intensity Conflict | 1.313 | .710 | | | | | | |

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

**BRIEF DESCRIPTION OF ELEMENT**

P205, Special Operations/ Low-Intensity Conflict (SO/LIC) Analytical Support. The SO/LIC Analytical Support project provides specialized research and analytical support for the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict (ASD (SO/ LIC). Projects address a broad spectrum of technical, acquisition, and policy issues relating to special operations, counter-and anti- terrorism, peacekeeping, psychological operations, counterinsurgency, unconventional warfare, and contingency operations. The project supports and is integrated into overall DoD efforts to develop options for dealing effectively with a wide range of military responsibilities in military operations other that war. The project provides a vehicle to initiate analysis required to support acquisition documentation and conceptual policy issues regarding roles and missions of SOF in the changing world environment. Analysis may also be used to improve OASD(SO/LIC)'s congressionally mandated oversight function of special operations and low-intensity conflict. In FY 2004 this analytic support program will become a component of P206, Explosive Ordnance Disposal/Low Intensity Conflict, providing efficiency of management and execution.

**B. Accomplishments/Planned Program**

| | FY2002 | FY2003 | FY2004 | FY2005 |
|---|---|---|---|---|
| Accomplishment/ Effort/Subtotal Cost | 1.313 | .710 | | |

FY 2002 Accomplishments:
New start: Counter Exploitation Analysis Capability for Technology Proliferation. Develop a prototype system that demonstrates the capability to analyze and assess technology transfer, export control, and multilateral controls. A successful prototype demonstration will provide an integrated, cross-functional, interagency analysis and support capability for counter-exploitation of foreign attempts to obtain and compromise Special Operations critical technologies, capabilities and procedures.
New start: Special Operations Optical Munitions. Assess technical feasibility and employment concepts for optical munitions providing a force protection capability. Assessment will determine utility and practicality of Special Operations Optical Munitions for Special Operation Forces, and will identify resource requirements and investment decision information.
New start: Advanced Distributed Learning (ADL) Front End Analysis. An examination of current ADL training programs within USSOCOM and Combating Terrorism Technology Support Office to develop a baseline for future application of ADL initiatives.
Continued Effort: Psychological Operations (PSYOP) Agent-Based Analysis Environment Study. Develop an agent based prototype software environment that provides PSYOP analysts automated information support during PSYOP planning and execution. A successful prototype demonstration will provide USASOC/USSOCOM the necessary information to create a roadmap for fielding a system with like demonstrated capabilities.
Continued Effort: Language Translation, Data Extraction Assessment. An examination of advanced technologies and techniques of foreign language translation and data extraction from various forms of media to provide Special Operators with machine based translation assistance.

FY 2003 Plans:
Continued effort: Counter Exploitation Analysis Capability for Technology Proliferation. Demonstrate and enhance integrated, cross-functional, interagency analysis and support capability in cooperation with USSOCOM, Defense Technology Security Administration and the intelligence community.
Continued effort: Psychological Operations Agent-Based Analysis Environment Assessment. Successfully demonstrate this agent based approach with US PSYOP forces, and assess its capability to improve: analytical thoroughness; incorporation of operational feedback and institutional expertise; and analyst training.
Continued effort: Language Translation, Data Extraction Assessment. Integrate two-way handheld translation and data extraction capability into a commercial Palm-based computer for US Army and SOF field evaluation and use.
Continued effort: The Strategic Utility of Special Operations Forces—Lessons from Afghanistan.
Continued effort: Advanced Distributed Learning (ADL) Front End Analysis.
New start: Munitions Assessment: Development, acquisition, and deployment of non-standard ammunition and explosive tools for explosive ordnance disposal (EOD) and Special Operations Forces (SOF). The study will provide munitions program experts a baseline to make informed decisions for providing new ordnance tools and equipment to EOD/SOF operators.

FY 2004 and FY2005 Plans:
In FY 2004 this analytic support program will become a component of P206, Explosive Ordnance Disposal/Low Intensity Conflict, providing efficiency of management and execution.

| Exhibit R-2a, RDT&E Project Justification | | | | | | | February 2003 | |
|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>RDT&E.DW / BA3 | | | | Project Name and Number<br>SO/LIC Advanced Development 0603121D8Z | | | | |
| Cost ($ in millions) | FY2002 | FY2003 | FY2004 | FY2005 | FY2006 | FY2007 | FY2008 | FY2009 |
| Explosive Ordnance Disposal/Low Intensity Conflict P206 | 7.486 | 6.711 | 9.300 | 9.423 | 9.402 | 9.533 | 9.558 | 9.734 |

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

**BRIEF DESCRIPTION OF ELEMENT**

P206, Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC). The EOD/LIC program provides advanced technology and equipment solutions for military EOD operators and SOF to meet the challenges of homeland defense, force protection and the war on terrorism. EOD/LIC efforts focus primarily on the detection, access, identification, and neutralization of all types of conventional explosive ordnance and improvised explosive devices including weapons of mass destruction. Requirements submitted by the Joint Service EOD and Service Special Operations communities are prioritized and approved by OASD(SO/LIC).

**B. Accomplishments/Planned Program**

**Explosive Ordnance Disposal/Low Intensity Conflict P206**

| | FY2002 | FY2003 | FY2004 | FY2005 |
|---|---|---|---|---|
| Accomplishment/ Effort/Subtotal Cost | 7.486 | 6.711 | 9.300 | 9.423 |

**FY 2002 Accomplishments:**

Completed the development of a Remote Field Disassembly system. Completed development of the EOD Ballistic Fragmentation Protection Shelter. Completed development of the Incident Site Reconnaissance System. Completed development of the RF-Controlled Digital X-Ray Imaging System (RFX-Ray). Completed the 90mm Water Cannon Recoil Suppression Aiming System.

**FY2003 Plans**:

Complete development of the Limpet Mine Detection System. Complete development of an Improved Underwater Demolition Charge. Complete development of the Limpet Mine Neutralization Tool. Complete development of a Handheld Thermal Imager. Complete development of the EOD Laser Ordnance Neutralization System (LONS). Complete development of a Chemical Leak Seal system to replace Plaster-of Paris. Complete development of the Miniature Diver Display System (MDDS) that will provide full high-resolution color imagery to the diver. Complete development of an Obscurant System for the Special Operations Craft - Riverine (SOC-R). Complete development of a SOF Incendiary Device to be used as a direct action target defeat device. Complete development of an EOD Large Package X-Ray Apparatus (LAPAXA). Complete development of a Remote Automated Munitions Clearance System using the commercially available Tele-present Rapid Aiming Platform (TRAP). Complete development of the EOD Improved Incendiary Tool. Complete development of

the EOD Information System (EODIS)/Advanced EOD Procedures System (AEODPS). Complete development of the MRV Sub-System Integration of Nuclear and Chemical Detectors. Complete development of an EOD Protective Garment for Explosive Operations. Complete improvement to the Automated EOD Publication System (AEODPS) Identification Guide software to operate with PDA's. Complete market survey/development of Insensitive Explosives to provide EOD technicians a safer alternative to current military explosives. Complete development of sub-systems for the EOD Mission Support Center. Continue development of the Integrated Diver Display Mask (IDDM). Continue development of the low-cost and highly portable Remote EOD Miniature Reconnaissance Vehicle (MRV). Continue development of an EOD Underwater Remotely Operated Vehicle (ROV) for inspection of submerged objects. Continue development of Special Operations Forces (SOF) and EOD Tactical Decision Aid (TDA) software. Continue development of a Single-Sided X-Ray system that will permit EOD technicians to perform x-ray procedures when only one side of a suspect package is accessible. Continue development of X-Ray Interpreter software to enhance the Advanced Radiographic System (ARS). Continue development of an Unmanned Reconnaissance and Observation Craft (UROC). Continue development of a Rapid Area Submunition Clearance (RASCL) device to explosively clear submunitions from landing zones. Continue development of a CO2 Laser Ordnance Neutralization System (LONS) mounted on the All-purpose Remote Transport System (ARTS) for EOD range clearance applications. Continue evaluation of commercial EOD Dispersion Suppressive Systems. Continue development of a Joint EOD Digital Reporting and Tracking System (JEOD-DIGS) for creating, storing and retrieving Joint Service EOD incident reports. Continue the integration of the Tele-present Remote Aiming Platform (TRAP) and the ARTS for standoff munitions disruption operations. Continue development of a Shock Tube Initiator for the existing Remote Activation Munitions System (RAMS). Start development of Ballistic Protection for the Special Operations Craft – Riverine (SOC-R). Start development of a Real Time Radiography system for Large Improvised Explosive Devices (LIEDs). Start boat evaluation for Naval Special Clearance Unit One in an effort to locate suitable operational platform.

**FY2004 Plans**:

Complete development of the Integrated Diver Display Mask (IDDM). Complete development of the low-cost and highly portable Remote EOD Miniature Reconnaissance Vehicle (MRV). Complete development of an EOD Underwater Remotely Operated Vehicle (ROV) for inspection of submerged objects. Complete development of X-Ray Interpreter software to enhance the Advanced Radiographic System (ARS). Complete development of an Unmanned Reconnaissance and Observation Craft (UROC). Complete development of a Rapid Area Submunition Clearance (RASCL) device to explosively clear sub-munitions from landing zones. Complete development of a CO2 Laser Ordnance Neutralization System (LONS) mounted on the All-purpose Remote Transport System (ARTS) for EOD range clearance applications. Complete evaluation of commercial EOD Dispersion Suppressive Systems. Complete development of a Joint EOD Digital Reporting and Tracking System (JEOD-DIGS) for creating, storing and retrieving Joint Service EOD incident reports. Complete the integration of the Tele-present Remote Aiming Platform (TRAP) and the USAF All-purpose Remote Transport System (ARTS) for standoff munitions disruption operations. Complete development of a Shock Tube Initiator for the existing Remote Activation Munitions System (RAMS). Complete boat evaluation for Naval Special Clearance Unit One in an effort to locate suitable operational platform. Complete development of a Real Time Radiography system for Large Improvised Explosive Devices (LIEDs). Continue development of Special Operations Forces (SOF) and EOD Tactical Decision Aid (TDA) software. Continue development of a Single-Sided X-Ray system that will permit EOD technicians to perform x-ray procedures when only one side of a suspect package is accessible. Continue development of Ballistic Protection for the Special Operations Craft – Riverine (SOC-R). New starts for FY 2004 will be selected in the Spring of 2003 from prioritized lists of candidate tasks submitted by our military user communities.

**FY 2005 Plans:**

Complete development of SOF and EOD Tactical Decision Aid (TDA) software. Complete development of a Single-Sided X-Ray system that will permit EOD technicians to perform x-ray procedures when only one side of a suspect package is accessible. Complete development of Ballistic Protection for the Special Operations Craft – Riverine (SOC-R).

| Exhibit R-2a, RDT&E Project Justification | | | | | | | February 2003 | |
|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>RDT&E.DW / BA3 | | | | Project Name and Number<br>SO/LIC Advanced Development 0603121D8Z | | | | |
| Cost ($ in millions) | FY2002 | FY2003 | FY2004 | FY2005 | FY2006 | FY2007 | FY2008 | FY2009 |
| Special Reconnaissance Capabilities (SRC) P207 | 5.710 | 11.187 | 20.000 | 20.300 | 20.400 | 20.800 | 20.600 | 21.000 |

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

**BRIEF DESCRIPTION OF ELEMENT**

P207, The SRC program exploits, leverages, and integrates DOD's service and agency efforts to improve reconnaissance and surveillance (R&S) tools (unattended sensors, tagging devices, data infiltration/exfiltration, remote delivery, and mobility/delivery of sensors), while providing operational focus for DoD and other agency technology and development programs. The SRC Program identifies, integrates, and operationalizes the technical tools for the collection of actionable information against a variety of targets and mission requirements and maintains DoD's on-line catalog of tools in order to minimize special reconnaissance and surveillance crisis response time.

**B. Accomplishments/Planned Program**

**P207, Special Reconnaissance Capabilities (SRC)**

| | FY2002 | FY2003 | FY2004 | FY2005 |
|---|---|---|---|---|
| Accomplishment/ Effort/Subtotal Cost | 5.710 | 11.187 | 20.000 | 20.300 |

**FY 2002 Accomplishments:**

- Developed, acquired and fielded several remote sensing and TTL capabilities to include: Long Range Remote Observation Posts and Stand off Explosive Devices in response to SOF urgent combat mission needs.
- Completed development of an advanced Remote Sensor and Camera Controller that serves as a communications/sensor hub for sensor cueing of unattended optical sensors and data exfiltration.
- Initiated the integration of maturing COTS/GOTS developmental sensors with the Remote Sensor and Camera Controller (RSC2) in response to DoD and OGA requirements. Transitioned RSC2 baseline capability to two government agencies.
- Successfully integrated and demonstrated a national Communications Capabilities with existing RSC2 Architecture.
- Enhanced functionality and expanded access of on-line information to supporting commands, DOD activities and OGAs.
- Assessed more than 24 reconnaissance capabilities and conducted twelve technology evaluations to assess operational capabilities.
- Participated in user required operational prototype training exercises to include Millenium Challenge 02 where SOF successfully employed sensors and the RSC2 to detect time critical targets and rapidly relay images and sensor data to command and control centers.
- Researched and integrated enhanced tagging capabilities to include programmability, and improved accuracy and longer mission life.
- Improved Remote Sensor Controller mission life through the development of low power transceiver.

- Leveraged advanced sensing, tracking, communications and power technologies for insertion into SRC architecture.
- Initiated project to integrate RSC2 and sensors on robotic platform in support of Army SOF requirements.
- Developed, influenced, and leveraged DoD and National Community agency reconnaissance and surveillance technology developments for DOD and SOF utility. Leveraged over $30M of technology from Services, DOE and National Agency partners.
- Participated in multiple reconnaissance/technology community programs by co-chairing the MASINT Committee Unattended Ground Sensors Technology Forum and serving as principle member for several National TTL Working Groups.
- Initiated cooperative projects with the Central MASINT Office to accelerate the transition of advanced MASINT technology to operational community.

**FY 2003 Plans:**

- Enhance and integrate Micro Impulse Radar, acoustic, remote optics and other sensors with the Remote Sensor and Camera Controller (RSC2) and other system components.
- Integrate reconfigurable sensor communications link into sensor architecture to provide for remote C2 of sensor field, longer mission life and improved employment tactics.
- Continue to research, evaluate and integrate enhanced tagging and sensing capabilities to enable remote and stand-off emplacement.
- Continue to integrate improved SR data infiltration and exfiltration capabilities though the development and integration of advanced antenna technology and new communications links.
- Continue to insert operationally capable prototypes into operator training exercises to expose troops to help vet technologies and new develop tactics, techniques and procedures for employment.
- Continue to perform field evaluations of selected SR technologies and document results in on-line R&S knowledgebase.

**FY 2004 Plans:**

- Integrate new, miniature sensors into architecture.
- Develop mini sensor controller for hand emplacement and air droppable employment.
- Integrate Dynamically Reconfigurable Vision camera technology into operational architecture.
- Continue to investigate and operationalize emerging and maturing technologies for their potential to enhance or enable the technical performance of R&S missions.
- Continue to engage the research and development community for technical solutions and candidate technologies to improve DoD SR mission capabilities.
- Continue to catalog and warehouse operationalized prototypes and residuals for potential operational use.

**FY 2005 Plans:**

- Integrate new, micro sensors and tagging capabilities into R&S tool box.
- Develop and integrate air droppable optics sensor as part of micro sensor network.
- Continue to exploit and leverage emerging and maturing technologies for their potential to enhance or enable the technical performance of R&S missions.
- Test and integrate improved power sources for R&S systems.
- Develop, test and integrate improved radio frequency (RF) and chokepoint tagging systems.
- Continue to engage the research and development technology community for technical solutions and candidate technologies to integrate.
- Continue to catalog and warehouse operationally capable prototypes and residuals for future operational use.

| Exhibit R-2a, RDT&E Project Justification | | | | | | | February 2003 | |
|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>RDT&E.DW/BA3 | | | | Project Name and Number<br>SO/LIC Advanced Development<br>PE 0603121D8Z | | | | |
| Cost ($ in millions) | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY2006 | FY 2007 | FY 2008 | FY 2009 |
| Information Dissemination Concepts/P208 | | | 2.000 | 3.000 | 4.000 | 4.000 | 4.000 | 5.000 |

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

The Information Dissemination Concepts project will address technology capabilities necessary to enable sustained information dissemination in denied areas. This project will leverage ongoing research efforts of USSOCOM, the Services and Defense and other agencies to develop, modify and demonstrate dissemination mechanisms, platforms and payloads. These development efforts will include research into high altitude, lighter-than-air vehicles, modifications to chipsets for receivers capable of receiving space based radio broadcasts, and transmit/receive payloads. These payloads have the potential to be deployed from numerous platforms to include unmanned lighter-than-air vehicles and unmanned aircraft.

**B. Accomplishments/Planned Program**

| | FY 2002 | FY 2003 | FY 2004 | FY 2005 |
|---|---|---|---|---|
| Accomplishment/ Effort/Subtotal Cost | | | 2.000 | 3.000 |

**FY 2004 Plans:**

New start: Redesign WorldSpace Receiver chipset to reduce unit cost by up to an order of magnitude. Goal: develop low cost Direct Satellite Broadcast (DSB) receivers that are a viable alternative to AM/FM/SW radios for PSYOP information dissemination – eliminating need for access to terrestrial transmitters in or near denied territory.

New Start: Identify and prioritize community requirements for remote sensing, broadcasting and range instrumentation. Write future work plan.

Accelerate: Ongoing development efforts for long-duration, lighter-than-air vehicles to support information dissemination in denied territories.

**FY 2005 Plans:**

New start: Begin prototyping of payloads identified in FY 2004 remote sensing, broadcasting and range instrumentation survey.

Continued effort: Complete development and demonstrate modified DSB receiver chipset.

Continued effort: Develop long-duration, lighter-than-air vehicles to support information dissemination in denied territories.