Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603121D8Z: *SO/LIC Advanced Development*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	43.008	44.423	45.028	-	45.028	45.869	46.327	46.833	48.166	Continuing	Continuing
206: *Explosive Ordnance Disposal/ Low-Intensity Conflict*	7.287	7.487	7.661	-	7.661	7.877	8.016	8.158	8.391	Continuing	Continuing
207: *Special Reconnaisance Capabilities*	19.916	20.644	20.858	-	20.858	21.454	21.832	22.213	22.845	Continuing	Continuing
208: *Information Dissemination Concepts*	2.277	3.161	3.235	-	3.235	3.326	3.384	3.444	3.542	Continuing	Continuing
209: *Irregular Warfare Support (IWS)*	13.528	13.131	13.274	-	13.274	13.212	13.095	13.018	13.388	Continuing	Continuing

A. Mission Description and Budget Item Justification

P206, Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC). The EOD/LIC Program develops and delivers advanced capabilities for military Explosive Ordnance Disposal (EOD) operators and Special Operations Forces (SOF) to meet the challenges of improvised explosive devices (IEDs), force protection, and the war on terrorism. EOD/LIC efforts focus in two areas: support to SOF to combat terrorism; and access, detection, identification, and neutralization of all types of conventional explosive ordnance and improvised explosive devices. Requirements submitted by the Joint Service EOD and Service Special Operations communities are prioritized and approved by OASD (SO/LIC &IC).

P207, Special Reconnaissance Capabilities (SRC). The SRC Program exploits, leverages, and integrates DoD's service and agency efforts to improve surveillance and reconnaissance tools (unattended sensors, tagging and tracking devices, data infiltration/exfiltration, remote delivery, and mobility/delivery of sensors), while providing risk reduction 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, including emerging requirements , and maintains DoD's on-line catalog of tools in order to minimize crisis response time for special reconnaissance and surveillance.

P208, Information Dissemination Concepts (IDC). The IDC Program addresses technology capabilities necessary to enable sustained information dissemination campaigns in denied areas. The IDC program, working as necessary with DoD and the interagency, develops, modifies, and demonstrates concepts, mechanisms, platforms and payloads to propagate themes and messages that convince target audiences to take action favorable to the United States and its allies.

P209, Irregular Warfare Support (IWS). The IWS Program (IWSP) develops adaptive and agile capabilities and methodologies to support irregular warfare in the current and evolving strategic environments. IWSP supports joint, interagency, and international partners who conduct or counter irregular warfare through indirect and asymmetric approaches, though they may employ a full range of military and other capabilities, in order to erode an adversary's power, influence, and will. Solutions include material and non-material operational analysis, concept development, field experimentation, and delivery of capabilities, to defeat the motivations, sanctuaries, and enterprises of targeted state and non-state actors.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Office of Secretary Of Defense	DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	PE 0603121D8Z: *SO/LIC Advanced Development*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	43.808	44.423	45.089	-	45.089
Current President's Budget	43.008	44.423	45.028	-	45.028
Total Adjustments	-0.800	-	-0.061	-	-0.061
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.364	-			
• Other Program Adjustments	-0.436	-	-	-	-
• Economic assumption	-	-	-0.061	-	-0.061

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603121D8Z: *SO/LIC Advanced Development*	PROJECT 206: *Explosive Ordnance Disposal/Low-Intensity Conflict*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
206: *Explosive Ordnance Disposal/ Low-Intensity Conflict*	7.287	7.487	7.661	-	7.661	7.877	8.016	8.158	8.391	Continuing	Continuing

A. Mission Description and Budget Item Justification

P206, Explosive Ordnance Disposal/Low-Intensity Conflict (EOD/LIC). The EOD/LIC program develops and delivers advanced capabilities for military EOD operators and Special Operations Forces (SOF) to meet the challenges of improvised explosive devices (IEDs), force protection, and the war on terrorism. EOD/LIC efforts focus in two areas: support to SOF to combat terrorism; and access, detection, identification, and neutralization of all types of conventional explosive ordnance and improvised explosive devices. Requirements submitted by the Joint Service EOD and Service Special Operations communities are prioritized and approved by Office of the Assistant Secretary of Defense (OASD) (SO/LIC &IC).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Ordnance Disposal/Low-Intensity Conflict (EOD/LIC) *FY 2010 Accomplishments:* Evaluate integrated sensors to detect threats through foliage and obscurants onto SOF Riverine crafts. Transition to a program of record or commercialize a bladderless lift balloon for Special Operations and EOD underwater missions. Design tools to enhance arm dexterity and reconnaissance capability of robotic platforms. Develop a fast rope descender that will increase service member survivability and reduce injury while conducting fast rope insertions. Develop a replacement for existing EOD disruptors with one kit designed to reduce size and weight for equipment load-out. Investigate technologies to develop a more reliable underwater acoustic transmitter and receiver to remotely arm and fire EOD tools used for limpet mine neutralization. Validate a program of instruction to increase EOD capability to interdict and disable terrorist devices. *FY 2011 Plans:* Evaluate a fast rope descender that will increase service member survivability and reduce injury while conducting fast rope insertions. Test a modular EOD disruptor that duplicates the ballistic performance of existing disruptors. Evaluate an underwater acoustic transmitter and receiver to remotely arm and fire EOD tools used for limpet mine neutralization. Design tools to enhance arm dexterity and reconnaissance capability of robotic platforms. *FY 2012 Plans:* Develop tools and equipment to enhance situational awareness and operational capability during incident response or direct action operations. Transition to a Program of Record or commercialize the EOD Helmet Liner that allows an operator to optimize fit of an EOD helmet in a deployed setting with minimal support equipment. Deliver a non-lethal method to stop small boats using high power microwaves to disrupt electronically controlled outboard engines.	7.287	7.487	7.661
Accomplishments/Planned Programs Subtotals	7.287	7.487	7.661

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603121D8Z: *SO/LIC Advanced Development*	PROJECT 206: *Explosive Ordnance Disposal/Low-Intensity Conflict*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not applicable for this item.

E. Performance Metrics

SO/LIC Advanced Development - PE 0603121D8Z; Explosive Ordnance Disposal & Low-Intensity Conflict/P206; Special Reconnaissance Capabilities/P207; Information Dissemination Concepts/P208; Irregular Warfare Support/P209

Long Term Strategies: Obtain adequate funding to support critical shortfalls; prioritize proposals that are deemed acceptable and allocate funding accordingly; and establish outreach to leverage institutional knowledge and expertise.

Performance Indicator and Rating:

FY 2010 Target:
70% of currently funded research projects are completed on time and within budget
Increase the number of project's transition to operational use
Transition scheduled projects to user communities

FY 2011 Target:
70% of currently funded research projects are completed on time and within budget
Increase the number of project's transition to operational use and reduce timelines to transition.

Basis of FY 2009 to Date Performance Rating:
Currently the number of funded research projects are on track to be completed per the target.

Verification: The SO/LIC &IC Advanced Development Program projects each track the status of their efforts. Reviews are conducted to assess project status. Oversight of the entire effort is undertaken by ASD SO/LIC &IC.

Validation: Completed research products increase the capabilities of the DoD to effectively detect, deter and defend against terrorist attacks; defeat improvised explosive devices and unexploded ordinance; enable sustained information operations in denied areas; and contribute to resolution of hostile, unconventional conflicts.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603121D8Z: *SO/LIC Advanced Development*	PROJECT 207: *Special Reconnaisance Capabilities*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
207: *Special Reconnaisance Capabilities*	19.916	20.644	20.858	-	20.858	21.454	21.832	22.213	22.845	Continuing	Continuing

A. Mission Description and Budget Item Justification

P207, Special Reconnaissance Capabilities (SRC). The primary objective of the SRC program is to seek out and identify technical tools for the collection of actionable data and information which will assist DoD in its execution of Overseas Contingency Operations (OCO) tasks. To accomplish this objective, the program leverages emerging and existing developmental technologies from government and commercial ventures and operationalizes them to meet near term reconnaissance and surveillance operational requirements. The operational tools transition unattended sensors, tagging devices, data transfer, remote delivery, and mobility/delivery of sensors into established Programs of Record throughout the DoD. The program evaluates new and existing technical surveillance technologies and incorporates results into a reference database for future access.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: SPECIAL RECONNAISANCE CAPABILITIES	19.916	20.644	20.858

FY 2010 Accomplishments:
SRC assessed, evaluated, and initiated the integration of 15 sensor, tag, and optical capabilities in response to warfighter requirements. User-required devices transitioned into Programs of Record and deployed world-wide were: Keymaker; Cardinal System; Portable Airborne Interrogator Transponder System (PAITS); Optical Taggants; Multiple Access Tracker (MAT); and Ironstar. SRC supported global operations by providing training and technology assistance for unattended ground sensor and tag prototypes for persistent intelligence, surveillance, and reconnaissance (ISR) tasks. The program evaluated over 800 new and existing technical surveillance technologies and incorporated results into a reference database for future access. SRC continued exploitation of enabling technologies (including nanotechnology, biotechnology, and chemistry) to develop state-of-the-art tags, taggants, sensors, communications and power devices to address user-defined capability gaps.

FY 2011 Plans:
SRC will continue to identify, develop, integrate, and field promising persistent intelligence, surveillance, and reconnaissance (ISR) advanced technologies and capabilities. High payoff technologies that will be researched and transitioned include: audio and optical technologies; improvement in flexibility and accuracy through integration of disparate technologies into single devices; ultra high speed data processing and transmission; next-generation nanotechnology/miniaturization; affordable Application Specific Integrated Circuit (ASIC) technology; low profile enhanced micro-optics; next-generation precision Hostile Forces Tagging, Tracking, and Locating capabilities; low profile, advanced material miniature antennas; placement and concealment of unattended ground sensors; and low power, high bandwidth data transmission sub-systems.

FY 2012 Plans:

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Office of Secretary Of Defense		**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603121D8Z: *SO/LIC Advanced Development*	**PROJECT** 207: *Special Reconnaisance Capabilities*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012**
Continue to identify, develop, integrate, and field promising persistent intelligence, surveillance, and reconnaissance (ISR) advanced technologies and capabilities. High payoff technologies that will be researched and transitioned include: audio and optical technologies; improvement in flexibility and accuracy through integration of disparate technologies into single devices; ultra high speed data processing and transmission; next-generation nanotechnology/miniaturization; affordable Application Specific Integrated Circuit (ASIC) technology; low profile enhanced micro-optics; next-generation precision Hostile Forces Tagging, Tracking, and Locating capabilities; low profile, advanced material miniature antennas; placement and concealment of unattended ground sensors; and low power, high bandwidth data transmission sub-systems.			
Accomplishments/Planned Programs Subtotals	19.916	20.644	20.858

C. Other Program Funding Summary ($ in Millions)

  N/A

D. Acquisition Strategy

  N/A

E. Performance Metrics

  N/A

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603121D8Z: *SO/LIC Advanced Development*	PROJECT 208: *Information Dissemination Concepts*

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
208: *Information Dissemination Concepts*	2.277	3.161	3.235	-	3.235	3.326	3.384	3.444	3.542	Continuing	Continuing

A. Mission Description and Budget Item Justification

Information Dissemination Concepts (IDC). The IDC Program addresses technology capabilities necessary to enable sustained information dissemination campaigns in denied areas. The IDC Program, working as necessary with DoD and the interagency, develops, modifies, and demonstrates concepts, mechanisms, platforms and payloads to propagate themes and messages that convince target audiences to take action favorable to the United States and its allies.

B. Accomplishments/Planned Programs ($ in Millions)

	FY 2010	FY 2011	FY 2012
Title: INFORMATION DISSEMINATION CONCEPTS	2.277	3.161	3.235

FY 2010 Accomplishments:
USPACOM's Multimedia Alert Processing System (PACOM MAPS): Coordinate additional foreign language collection tools deriving from various sources. Provide new filters for operators to quickly triage large volumes of data from different sources of media. Enhance language learning tools' capabilities for sustaining proficiency and for responding to operator mission needs. Improve the ability to search and manage information. Increase cultural and situational awareness and responsiveness using automated language tools. Conduct further field evaluations of selected technologies. Accelerate the transition of advanced foreign language technology to the operational community.

FY 2011 Plans:
Enhance language learning tools' capabilities. Adapt and integrate existing foreign language applications, practices, and tools into a tactical site exploitation capability. Improve the timely collection of intelligence and evidence to support follow-on targeting, effective detainee prosecution, and theater-wide exploitation of tactical intelligence. Deploy capabilities that will enrich language packet creation with a variety of media sources. Deliver a capability that supports the automated inbound and outbound integration of available video and audio sources. Develop novel approaches to query, track, and exploit multimedia from broadcast, radio, offline videos, and web sources.

FY 2012 Plans:
Develop tools that assist the military in foreign language training courses. Improve foreign language applications, practices, and tools that are deployed in theater. Expedite methods of collecting and analyzing media sources and evidence more efficiently and timely. Enhance triage capabilities to store, organize, and query multimedia acquired from various sources. Deploy automated technologies capable of ingesting and translating video and audio sources for analysts to effectively report intelligence findings.

	FY 2010	FY 2011	FY 2012
Accomplishments/Planned Programs Subtotals	2.277	3.161	3.235

Exhibit R-2A, **RDT&E Project Justification:** PB 2012 Office of Secretary Of Defense		**DATE:** February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603121D8Z: *SO/LIC Advanced Development*	**PROJECT** 208: *Information Dissemination Concepts*

C. Other Program Funding Summary ($ in Millions)

   N/A

D. Acquisition Strategy

   N/A

E. Performance Metrics

   N/A

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense									DATE: February 2011	

| APPROPRIATION/BUDGET ACTIVITY
0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 3: *Advanced Technology Development (ATD)* | | | | R-1 ITEM NOMENCLATURE
PE 0603121D8Z: *SO/LIC Advanced Development* | | | | PROJECT
209: *Irregular Warfare Support (IWS)* | | |

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
209: *Irregular Warfare Support (IWS)*	13.528	13.131	13.274	-	13.274	13.212	13.095	13.018	13.388	Continuing	Continuing

A. Mission Description and Budget Item Justification

P209, Irregular Warfare Support (IWS). The IWS Program (IWSP) develops adaptive and agile capabilities and methodologies to support irregular warfare in the current and evolving strategic environments. IWSP supports joint, interagency, and international partners who conduct or counter irregular warfare through indirect and asymmetric approaches, though they may employ a full range of military and other capabilities, in order to erode an adversary's power, influence, and will. Solutions include material and non-material operational analysis, concept development, field experimentation, and delivery of capabilities, to defeat the motivations, sanctuaries, and enterprises of targeted state and non-state actors.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: IRREGULAR WARFARE SUPPORT (IWS)	13.528	13.131	13.274

FY 2010 Accomplishments:
Research and develop capabilities that support the Department of Defense and Interagency Irregular Warfare mission in accordance with the Irregular Warfare Joint Operating Concept, DODD 3000.05, DODD 3000.07, and NSPD-44. Continue spiral development of capabilities based on lessons learned during field experimentation and the dynamic nature of adversaries. Identify adaptation and/or transition opportunities from analysis and assessment investments. Research and develop solutions for the International Security Assistance Force (ISAF) to solve critical capability gaps to re-orient a diverse, dispersed force, during major counterinsurgency operations. Analyze and support development of solutions for a holistic counterinsurgency campaign and approach to include rapid feedback on technical counterinsurgency issues to the ISAF commanders and leaders. Research, design and field-test solutions to enhance and improve client organization efforts to erode adversaries' power, influence, and will through non-kinetic operations. Support development of new capabilities for the rapidly evolving Traditional Military Information Operations by Geographical Combatant Commanders (GCC). Develop new command and control doctrine for military intelligence forces and operational staffs for rapid operational evaluation in-theater. Develop and field-test a pilot program to assist military commands in building host-nation intelligence capacity and capability to include the feasibility of migrating to other areas of operation the unique doctrine and lessons learned during support to Operation Iraqi Freedom.

FY 2011 Plans:
Research and develop promising capabilities and continue project development, delivery, and transition to support the Department of Defense and Interagency Irregular Warfare mission. Projects will identify and address requirements from the following major focus areas: Effects-Based Operations Integration; Indirect Communications Support; Knowledge Management; Mission Rehearsal and Exercise; and Pursuit and Denial. Deliver tailored counterinsurgency capabilities to ISAF in order to address capability gaps realized during development of prototype solutions. After pilot experimentation in new areas of operations, deliver

Exhibit R-2A, RDT&E Project Justification: PB 2012 Office of Secretary Of Defense		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	**R-1 ITEM NOMENCLATURE** PE 0603121D8Z: *SO/LIC Advanced Development*	**PROJECT** 209: *Irregular Warfare Support (IWS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
and transfer to specific operational customers the capability for improved host-nation police counterinsurgency capabilities. Support implementation of newly developed command and control structures, optimized for counterinsurgency and irregular warfare unit task organizations, at operational and tactical command levels. Develop capabilities; assess effectiveness of current strategies and capabilities; design solutions to integrate into current systems; and develop enhanced Irregular Warfare training and education programs across participating agencies. Continue spiral development of capabilities to enhance methodologies and operational solutions. Identify adaptation and/or transition opportunities from analysis and assessment investments to include other areas of potential threat and engagement with hostile organizations and supporting structures. *FY 2012 Plans:* Research and develop promising capabilities and continue project development, delivery, and transition to support the Department of Defense and Interagency Irregular Warfare mission. Continuing under IW Joint Operational Concept (JOC) and DODD 3000.07 on IW; the research and development path will conduct operational analysis and concept design efforts in supporting 2010 QDR and NSS lines of engagements. Pursue prevent and deter conflict that address supporting U.S. diplomatic and development efforts to foster a range of governance efforts and to counter radicalization, including working with civilian agencies on security assistance and police training programs. Research and develop non-material approaches to deterring/countering violent extremism and			
Accomplishments/Planned Programs Subtotals	13.528	13.131	13.274

C. Other Program Funding Summary ($ in Millions)
   N/A

D. Acquisition Strategy
   N/A

E. Performance Metrics
   N/A