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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Office of Secretary Of Defense **Date:** March 2014

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603826D8Z / Quick Reactions Special Projects (QRSP)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	63.029	69.946	68.524	69.319	-	69.319	91.825	99.714	109.800	109.848	Continuing	Continuing
P826: Quick Reaction Fund	15.044	18.024	22.449	21.875	-	21.875	28.603	31.356	34.178	34.194	Continuing	Continuing
P828: Rapid Reaction Fund	30.111	44.135	42.718	43.750	-	43.750	59.240	64.291	70.386	70.414	Continuing	Continuing
P830: RDT&E Architecture and Integration	16.164	4.009	-	-	-	-	-	-	-	-	Continuing	Continuing
P831: Joint Rapid Acquisition Cell Support	1.710	1.608	1.587	1.644	-	1.644	1.878	1.918	2.464	2.466	Continuing	Continuing
P833: Strategic Multi-Layered Assessment (SMA) Support	0.000	2.170	1.770	2.050	-	2.050	2.104	2.149	2.772	2.774	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

The Quick Reaction Special Projects (QRSP) Program Element is being recast with a focus on producing risk-reducing prototypes designed to address Combatant Command (COCOM) threats. QRSP efforts will support the Department goal to provide a Hedge Against Technical Uncertainty by leveraging insights gained through mission-focused efforts and by fostering collaboration among government laboratories, academia, and commercial research. The QRSP portfolio will develop technology that anticipates adversaries' capabilities through short-term, innovative science and engineering initiatives.

A. Mission Description and Budget Item Justification

The Quick Reactions Special Projects (QRSP) Program supports five separate projects that provide rapid funding to expedite development and transition of new technologies to the warfighter. These projects are: 1) Quick Reaction Fund (QRF); 2) Rapid Reaction Fund (RRF); 3) Research, Development, Test & Evaluation (RDT&E) Architecture and Integration (RAI) 4) Joint Rapid Acquisition Cell (JRAC) support; and 5) Strategic Multi-Layered Assessment (SMA) support. QRSP provides the flexibility to respond to emergent DoD issues and address technology surprises and needs within the years of execution outside the two year budget cycle. These efforts field new capabilities at low cost in short time-frames, inform the traditional acquisition cycle, and inject innovative technology into programs of record.

The QRF Program objectives are to develop prototypes in response to emergent conventional warfare needs during the execution years that take advantage of breakthroughs in rapidly evolving technologies. The QRF is executed by the Rapid Reaction Technology Office. Examples of the types of projects that are envisioned include: force protection projects to enhance anti-access and area denial capabilities, undersea offensive capabilities and broad electronic warfare capabilities. The QRF focuses on maturing technologies critically needed for the COCOMs. QRF projects are typically 12 months in duration and produce prototypes with new capabilities for demonstration and evaluation.

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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603826D8Z / Quick Reactions Special Projects (QRSP)	
The Rapid Reaction Fund (RRF) objectives are to leverage the DoD science and technology (S&T) base and those of the other federal departments, as well as academia and the commercial sector to identify emerging capabilities and counter evolving threats. The RRF is executed by the Rapid Reaction Technology Office (RRTO). RRTO works to anticipate adversaries' exploitation of new technologies and advanced capabilities and develop cost saving prototype capabilities to counter emerging threats. Additionally, RRTO works to leverage technology developed outside of the DoD in the commercial sector, academia, international arenas, and small, non-traditional businesses to address specific DoD needs areas as identified by Combatant Commanders, Military Service organizations, other Defense agencies and interagency organizations. Typical RRF programs are 6-18 months in duration and aim to mature a capability to demonstration. The RRF consistently exceeds the transition objective of 40 percent for demonstration programs (DoD Strategic Objective 3.5.2D). The Architecture and Integration (RAI) program objectives are to enhance and expand rapid technology architecture and assessment capabilities in general; and, to enhance the Joint Experimentation Range Complex (JERC), Stiletto maritime test platform and the Thunderstorm Intelligence, Surveillance, and Reconnaissance (ISR) exercise series. The JERC provides a venue to evaluate a wide range of new technologies in a desert environment. RAI funding also supports Stiletto, a maritime test vessel that routinely hosts numerous new technologies for evaluation in a maritime environment. Thunderstorm, an ongoing ISR exercise series, is also supported by this budget line. Thunderstorm brings emerging ISR technologies together in a common architecture for exercise and operational demonstration. Due to the draw down in Afghanistan in FY 2014, projects in RAI are either being concluded or aligned to other QRSP programs The Joint Rapid Acquisition Cell (JRAC) Program objectives focus on responding to Joint Urgent Operational Needs (JUONS) that have been submitted by Combatant Commanders and validated by the Joint Staff. In addition, the JRAC's objectives are to manage the delivery of capabilities as requested by the Combatant Command (COCOM) in a time frame acceptable to the COCOM. Efforts, in most instances, are conducted outside of the processes described in the Defense Acquisition System in DoD Directive 5000.1 and utilize contingency and other rapid acquisition authorities. The Strategic Multi-Layered Assessment (SMA) cell program objective is to support all COCOMs, Joint Force Commanders, and other government agencies by assessing complex operational/technical challenges which require multi-agency and multi-disciplinary approaches. With input from across the United States Government, academia, and the private sector, the SMA cell develops solution options to COCOM generated challenging problems and informs the command's senior leadership. Each SMA cell effort is initiated at the request of COCOM senior leadership. Priorities for SMA Cell programs are set by the Joint Staff Deputy for Operations. Products are typically produced within six months and directly contribute to the decision-making process of the COCOM's senior leaders.		

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I</i> BA 3: <i>Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603826D8Z <i>I Quick Reactions Special Projects (QRSP)</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	107.002	78.532	80.583	-	80.583
Current President's Budget	69.946	68.524	69.319	-	69.319
Total Adjustments	-37.056	-10.008	-11.264	-	-11.264
• Congressional General Reductions	-25.000	-			
• Congressional Directed Reductions	-10.109	-10.000			
• Congressional Rescissions	-0.107	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.767	-			
• Efficiency Savings	-	-	-11.264	-	-11.264
• Other Program Adjustments	-0.073	-	-	-	-
• FFRDC Adjustments	-	-0.008	-	-	-

Change Summary Explanation

FY 2015: Program decreases are a result of promoting efficient spending to support agency operations.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense										Date: March 2014		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603826D8Z / Quick Reactions Special Projects (QRSP)				Project (Number/Name) P826 / Quick Reaction Fund			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P826: Quick Reaction Fund	15.044	18.024	22.449	21.875	-	21.875	28.603	31.356	34.178	34.194	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Quick Reaction Special Projects (QSRP) Program supports five separate projects that provide rapid funding to expedite development and transition of new technologies to the warfighter. The QSRP Program provides the flexibility to respond to emergent DoD issues and addresses technology surprises and needs that may arise outside the two year budget cycle.

The Quick Reaction Fund (QRF) Program provides the Services, Components, Combatant Commands (COCOMs), and force providers opportunities to capitalize on technologies that are at a relatively high Technology Readiness Level (TRL) and to rapidly field-test promising new developmental and operational prototypes that can have immediate impact on military operations. QRF initiatives are limited to those that will deliver a prototype application within twelve months of being funded.

The QRF Program also focuses on projects that have the potential to address conventional, disruptive, catastrophic and irregular threats. More specifically, initiatives that serve to maintain a technical advantage over potential adversaries and reduce technical risk barriers in the following interest areas: Anti-Access and Area Denial; Base Protection; Electromagnetic Bandwidth and Spectrum Enhancement; Persistent Intelligence, Surveillance, and Reconnaissance; Newly Emerging National Threats; Directed Energy Capabilities; Low-Cost Precision Engagement Capabilities; Operational Field Demonstrations; Unmanned and Robotics Systems; Over the Horizon-Radar Technologies; and Counter-Electronic Warfare Technologies.

In FY 2014 and FY 2015, the QRF Program will continue to identify and fund new projects and prototypes that respond to critical operational needs and new technology development. Current and future efforts that show significant effectiveness can be leveraged by additional investments in order to accelerate transition to operational forces.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2013	FY 2014	FY 2015
Title: Home on Global Positioning System (GPS) Jammer	0.554	-	-
Description: This effort supported the design and development of GPS Jammer homing munitions. A previous effort investigated currently inventoried weapon systems to identify those most acceptable for modification into a Home on GPS Jammer capable system. This project identified the mechanical and electrical interface integration requirements for the selected platform and assessed two demonstration prototypes.			
FY 2013 Accomplishments:			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Successful integration and test of two 3-element demonstration units with deployable mechanical packaging and analysis of a 5-element sensor. The technology transition to the weapon program offices is being led by the Air Armament Center capabilities branch.				
Title: CAESAR, TREMOR, MARCY AND RAINGAUGE (CTMR) Description: The CTMR project detects and reports radio frequency (RF) signals from specific sensor types and demonstrates refined collection systems that detect a specific class of signals. Collection of these signals was lacking and this project provided a cost-effective, scalable solution. The data provided by the systems is structured to support DoD customers through system characterization and near real-time notification. Details are classified. FY 2013 Accomplishments: Successful development and demonstration of prototype systems using laboratory data and measured data in response to Concept of Operations (CONOPS) trade space studies. The data and technology will transfer to Combatant Command (COCOM) and Intelligence Community (IC) customers in FY 2014.		3.181	-	-
Title: Project 1319: Submarine Launched Autonomous Underwater Vehicle (AUV) Description: The most challenging aspect of submarine Autonomous Underwater Vehicle operations is the homing and docking recovery. Project 1319 provides the Navy with a capability to launch and recover Remote Environmental Monitoring Units (REMUS) AUVs from a submarine dry deck shelter (DDS). FY 2013 Accomplishments: Successful development and operational demonstration of capabilities on a guided missile nuclear submarine. The technology and techniques have fed into the submarine launched version of the Navy Large Diameter Unmanned Underwater Vehicle program. The system will deploy in 2014 to provide interim capability until the Navy Program of Record is implemented.		0.991	-	-
Title: Interruption of Wide Area Sensing (IWAS) Capability Description: The Interruption of Wide Area Sensing project developed a robust electronic attack approach to deny/interrupt the wide area sensing capability of adversary detection, tracking, and targeting sensors that jeopardize the free movement of US Naval forces. A self-contained small deployable prototype was used to verify system level capability. Details are classified. FY 2013 Accomplishments: Successful design, development and test of functional prototype system. The program will transition to the Navy in FY 2014 for operational insertion and Concept of Operations development.		2.601	-	-
Title: Project 422		4.212	-	-

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603826D8Z / <i>Quick Reactions Special Projects (QRSP)</i>	Project (Number/Name) P826 / <i>Quick Reaction Fund</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Description: Project 422 is an end-to-end collection system designed to address specific information gaps that are either not being addressed or have limited collection resources assigned due to target attributes such as complexity, location, operating characteristics or operating regime. The effort includes a self-contained Tasking, Collection, Processing, Exploitation and Dissemination capability that demonstrates a limited operational capability to support Combatant Commands (COCOMs) and Intelligence Community customers. Details are classified. FY 2013 Accomplishments: Hardware and software development was initiated. FY 2014 Plans: The program will demonstrate a new, multi-mission capability for use by deployed forces in a COCOM theater of operations to address unique signature sets not currently being addressed.			
Title: Advanced Counter Electronic Systems Capability Description: The program develops countermeasures to electronic systems to protect forces and infrastructure from attack. The target systems use electronic components, against which countermeasures were developed. Details are classified. FY 2013 Accomplishments: Developed and delivered two prototype systems. FY 2014 Plans: The program will assess the capability of the prototype systems against a threat emulator. The program will transition through the services and the Air Sea Battle office as the lead operational advocate in FY 2014.		3.333	1.000
Title: Steel Tiger Description: The Steel Tiger project developed algorithms that were incorporated into a commercial radar system. The resulting capability fills a Combatant Commands (COCOMs) need. Details are classified. FY 2013 Accomplishments: Developed a prototype system that was fielded for a utility assessment and operational evaluation that measured radar system performance relative to required performance conditions. FY 2014 Plans: Enhancement of the prototype system and deployment to a host site for further operational evaluation.		2.747	4.031
Title: Secret Internet Protocol Router (SIPR) Dark Fusion		0.405	0.983

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Description: Moving data between different secure networks is challenging and time consuming. The SIPR Dark Fusion effort creates a single integrated Maritime Domain Awareness (MDA) environment to provide operational users access to MDA SIPR information previously hosted only on the Secret Compartmented Information network. FY 2013 Accomplishments: Funding was provided in late FY 2013; system engineering was initiated and the project continued into FY 2014. FY 2014 Plans: Two sets of hardware and software to support the capability will be delivered to the Office of Naval Intelligence for operations.			
Title: Cyber Coalition Limited Experiments (CyCLE) Description: The CyCLE project will provide cyber defense information to cyber analysis tools under development so the tools' effectiveness can be measured and their capabilities advanced. FY 2014 Plans: Demonstrate approaches to achieve a level of seamless, automated cyber operations support and share Cyber Situational Awareness.		-	0.934
Title: Dark Storm Description: The program will deliver three prototype camera-based surveillance systems, with associated software, to provide enhanced space situational awareness. Details are classified. FY 2014 Plans: Develop a multi-camera system and demonstrate the ability to deliver improved timeliness information to the user community.		-	0.900
Title: Anti-Access/Area Denial Focus Area Description: In FY 2014 and FY 2015, this Quick Reaction Fund (QRF) focus area will support projects that concentrate on developing capabilities and countermeasures in anticipation of emerging needs to monitor and/or gain access to geographical areas that have been strategically denied by adversarial forces and technologies. The Rapid Reaction Technology Office (RRTO) will ensure the QRF efforts are not duplicative with other work within Department of Defense (DoD) or with outside agencies and will seek to leverage such efforts. FY 2014 Plans: Anti-Access/Area Denial investment decisions during the budget year will respond to Combatant Command (COCOM), Service and other government organization requirements and as new threats emerge or new opportunities are presented. Research		-	1.920
			4.271

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
and coordination with organizations throughout DoD, Federally Funded Research and Development Centers (FFRDCs), other government agencies, industry and academia will help identify areas critical to developing future anti-access/area denial technological enhancement efforts. Anticipate funding five prototypes. FY 2015 Plans: As emerging requirements and threats within the Anti-Access/Area Denial focal area surface, programmatic and investment decisions will be resourced to respond to COCOM, Services and other government organizations' requirements. Anticipate funding four prototypes.				
Title: Counter-Electronic Warfare Technologies Focus Area Description: This focus area for FY 2014 and FY 2015, in anticipation of emerging needs, will include the maturation of developmental and operational prototypes that advance countermeasures against electronic components and systems to protect forces and infrastructure. In addition, projects may include techniques and methodologies that reduce adversarial electronic attack capabilities and enhance our ability to operate in denied areas. The Rapid Reaction Technology Office (RRTO) will ensure the Quick Reaction Fund efforts are not duplicative with other Counter-Electronic Warfare (EW) efforts and will seek to leverage other such efforts. FY 2014 Plans: Investment decisions in Counter-Electronic Warfare Technologies during the budget years will respond to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD, FFRDCs, other government agencies, industry and academia will help identify areas critical to Counter-EW efforts. Anticipate the funding of three projects. FY 2015 Plans: As emerging requirements, threats and opportunities within the Counter-Electronic Warfare Technologies focal area surface, programmatic and investment decisions will be resourced to respond to COCOMs, Services and other government organizations. Anticipate the funding of three projects.		-	1.873	4.022
Title: Counter-Weapons of Mass Destruction (CWMD) Focus Area Description: This focus area for FY 2014 and FY 2015, in anticipation of emerging needs, will include the development and advancement of prototype technologies that focus on the detection and interdiction of chemical, biological, radiological, nuclear and high yield explosives (CBRNE) threats. Projects may include techniques and methodologies that improve detection sensitivities, persistent intelligence, surveillance and reconnaissance (ISR), data to decision tools and global situational awareness. The Rapid Reaction Technology Office (RRTO) will ensure the Quick Reaction Fund efforts are not duplicative with other CWMD efforts and will seek to leverage other such efforts.		-	1.602	3.527

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
FY 2014 Plans: Investment decisions in CWMD during the budget years will respond to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD, FFRDCs, other government agencies, industry and academia will help identify areas critical to Counter-WMD efforts. Anticipate the funding of two projects.				
FY 2015 Plans: As emerging requirements, threats and opportunities within the Counter-Weapons of Mass Destruction focal area surface, programmatic and investment decisions will be resourced to respond to COCOMs, Services and other government organizations. Anticipate the funding of two projects.				
Title: Operational Field Demonstrations Focus Area Description: In anticipation of emerging needs, this focus area for FY 2014 and FY 2015 will include developmental and operational prototyping, field demonstrations of technologies, and fully integrated systems in direct response to critical operational needs and emerging threats. Emphasis will be on near term demonstration of the feasibility and military utility of integrated capability solutions that support conventional forces with transition within a period of no more than 12 months. The Rapid Reaction Technology Office (RRTTO) will ensure the QRF efforts are not duplicative with other Operational Field Demonstration efforts and will seek to leverage other such efforts.		-	1.467	3.280
FY 2014 Plans: Operational Field Demonstrations investment decisions during the budget year will respond to Combatant Command (COCOM), Service and other government organization requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD, FFRDCs, other government agencies, industry and academia will help identify areas critical to Operational Field Demonstrations efforts. Anticipate the funding of three projects.				
FY 2015 Plans: As emerging requirements, threats and opportunities within the Operational Field Demonstrations focal area surface, programmatic and investment decisions will be resourced to respond to COCOM, Services and other government organizations. Anticipate the funding of four projects.				
Title: Persistent Intelligence, Surveillance, and Reconnaissance (ISR) Focus Area Description: In anticipation of emerging needs, this focus area for FY 2014 and FY 2015, will include capabilities that improve ground, air, sea and/or space situational awareness for decision makers. Technologies may explore new or improved methods for surveillance sensors to operate within denied areas and more effective ISR architectures for rapidly processing, exploiting, and		-	1.739	3.775

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
disseminating situational awareness intelligence. The Rapid Reaction Technology Office (RRTO) will ensure the Quick Reaction Fund (QRF) efforts are not duplicative with on-going persistent ISR work and will seek to leverage other such efforts.				
FY 2014 Plans: Persistent ISR investment decisions during the budget year will respond to COCOM, Service and other government organization requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD, Federally Funded Research and Development Centers (FFRDCs), other government agencies, industry and academia will help identify areas critical to developing future capabilities. Anticipate the funding of three projects.				
FY 2015 Plans: As threats and opportunities within the Persistent ISR focal areas emerge, programmatic and investment decisions will be resourced to respond to COCOM, Services, and other government organization requirements. Anticipate the funding of four projects.				
Title: Hardware/Software (HW/SW) Assurance and Integrity Analysis Description: The Department of Defense (DoD) has developed a Trusted Systems strategy that is based upon mission assurance, comprehensive protection planning, industry standards, and advancing the state of practice and DoD capability to identify and mitigate HW/SW vulnerabilities through techniques and tools, and creation of needed new HW/SW assurance technology. This project provides research and development focus to advance capabilities that can be made available to current and future programs in acquisition, operational systems, and legacy systems and infrastructure. This Quick Reaction Fund effort directly supports the 2014 National Defense Authorization Act (NDAA) Section 937 and adds to current Department work implementing requirements in NDAA 2013 Section 933. It provides funding for the Department's capabilities to augment and federate existing HW/SW assurance expertise, capabilities and facilities within the Services and Agencies to address existing gaps, as well as emerging threats and vulnerabilities. The resulting federation will assess and prioritize critical mission vulnerabilities to malicious software, supply chain exploit, and related cyber vulnerabilities, prioritize the use of best practice in Hardware/Software (HW/SW) vulnerability assessment, tested tools, proven processes, then promulgate findings and know-how.		-	6.000	3.000
FY 2014 Plans: This effort will leverage and augment resources in the Services and National Security Agency to develop and deploy HW/SW tools, evaluation techniques, and best practices to support HW/SW assurance throughout the lifecycle. Available tools, recommended implementation guidance, and support capabilities will be identified. Gaps will be identified and addressed with plans and development activities. This effort will define a federated approach to ensure HW/SW security and support to capability development, acquisition, and sustainment activities. Service and agency expertise and capabilities will be identified and an				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
overarching framework will be developed to enable cross DoD coordination, oversight and prioritization. The approach will include a coordinated risk-based process aimed at efficient development and deployment of assurance and mitigation facilities and capabilities. FY 2015 Plans: Continued development, assessment, recommendation, and promulgation of software test tools and techniques. Continued maturation of federated approach to ensuring Hardware/Software (HW/SW) tools, techniques, expertise and support to acquisition and sustainment programs.			
Accomplishments/Planned Programs Subtotals		18.024	22.449
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
In FY 2015, performance metrics applicable to the Quick Reaction Fund (QRF) includes attainment of DoD Strategic Objective 3.5.2D. The title of this objective is "Maintain a strong technical foundation within the Department's Science and Technology (S&T) program" and the metric for this objective is to transition 40 percent of completing demonstrations per year. Each project has a period of performance of approximately 12 months. All QRF projects are monitored for schedule deviation, transition outcome, reporting requirements and deliverables such as test reports, components, and equipment. For projects that were completed in FY 2013, the QRF achieved a transition rate of approximately 75 percent.			

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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P828: Rapid Reaction Fund	30.111	44.135	42.718	43.750	-	43.750	59.240	64.291	70.386	70.414	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Quick Reaction Special Projects (QSRP) Program supports five separate projects that provide rapid funding to expedite development and transition of new prototypical technologies to the warfighter. The QSRP Program provides the flexibility to mitigate emerging threats and address technology surprises and needs that may arise outside the two-year budget cycle.

The Rapid Reaction Fund (RRF) is fully executed through the Rapid Reaction Technology Office (RRTO). The RRTO was established to accelerate the transition of high-potential science and technology (S&T) projects into operationally useful prototypes in the execution years. The RRTO leverages the Department of Defense (DoD) S&T base and those of the other Federal Departments, academia, and industry; stimulates interagency coordination and cooperation; accelerates the fielding of prototypical capabilities and concepts to counter emerging threats; and, provides feedback to the S&T community to guide long term developmental strategies. With projects supporting each Combatant Command and with a global perspective, the RRTO anticipates adversaries' exploitation of technology, including available and advanced commercial capabilities. Prototypes delivered by RRTO provide cost effective capabilities to operational users faster than the typical acquisition cycle.

In prior years, RRTO has explored methods and approaches of persistent surveillance stimulation for counter-insurgency; developed alternate power sources for sensors and systems; provided low-cost capabilities for small-footprint operations; expanded human, social and cultural knowledge; increased small unit situational awareness; advanced the interface between law enforcement and military operations; developed biometrics and forensics capabilities; supported denied area operations; strategic multi-layer assessments; and, established an innovation outreach cell that is facilitating better interactions with small companies with emerging technologies that do not normally do business with the DoD.

In FY 2014 and FY 2015, RRTO will continue to explore new and emerging capabilities to support irregular warfare operations while working to support the Under Secretary of Defense (Acquisition Technology & Logistics), the Assistant Secretary of Defense (Research and Engineering) and the Deputy Assistant Secretary of Defense for Rapid Fielding goals. With project selection occurring during the execution year, the RRTO's potential focus areas for FY 2014 and FY 2015 projects include: capabilities to operate in denied areas, navigation in Global Positioning System denied environments, persistent Intelligence, Surveillance, and Reconnaissance (ISR) architecture; ISR sensors; global warming's impact on operations in the Arctic, novel power sources for unmanned vehicles, interface of law enforcement and military operations; commercial product vulnerabilities and applications; biometrics and forensics S&T; autonomous operations; data processing, exploitation and dissemination; cyber security; exploitation of new and emerging cell phone technologies; counter proliferation initiatives; strategic communications and multi-layer assessments; and, non-traditional approaches to leverage innovative businesses.

The typical length of a RRTO project falls within a 6 to 12 month range in order to more effectively respond to the Warfighter.

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
Title: Minor Resource Projects (Projects Less Than One Million Dollars Each)			20.881	-	-
Description: Transitioned multiple minor resource projects in the areas of Unmanned Autonomous Vehicles, Detection of Explosives and Weapons of Mass Destruction, Deterrence of Violent Extremism, Exploitation of Off-the-Shelf Technology, Exploitation of Communications Technologies, Small Footprint Operations, and other emerging technology areas. These projects delivered developmental and operational prototypes for evaluation or assessment to warfighters and interagency users.					
FY 2013 Accomplishments: FY 2013 minor resource projects include: Full Motion Video On Target, a capability that delivers rapid, precise, and accurate geolocation measurement and geo-registration from almost any orbiting UAV using the processing power of a Commercial Off The Shelf Software laptop without the need for reference imagery; Extended XCapture, an after action report capture and knowledge management tool; a capability to exploit wireless communications technology; Operationalizing "Just Doesn't Look Right," documentation of expertise and first-hand experience in identification of suicide bombers; Remote Vapor Sensing Acoustic Spectroscopy, a novel approach to detect trace chemicals of interest; Shiva, exploitation of multispectral commercial satellite imagery; Maritime Event Information Sharing System, a globally accessible system enabler for operational validation, characterization, and assessment of maritime events and potential threats through analysis of relationships between maritime interest items and blue force, environmental, infrastructure, interagency and multinational considerations; High Data Rate Satellite Communications demonstration of significantly increased data throughput; Enriching Tracks with Open Source Intelligence, a prototype software that allows an analyst to enrich a track by combining it with geo-tagged information to discover identity, patterns of life, and social networks of the subject; a capability to exploit wireless communications technology; Aluminum Combustor propulsion system for Unmanned Underwater Vehicles; Three-dimensional Exploitation of Two-dimensional Video from hand-launched Unmanned Aerial Vehicles; Enhanced Tactical High Frequency Radio Exploitation of near vertical incident sky wave radios; an Aluminum-Water Fuel Cell for unmanned vehicles; an improved Infrared Search and Track capability; a crowd-sourcing effort to extract and analyze relevant information from Non-Governmental Organization resource collections; Contingency Communications, an effort to develop low-visibility mission communication capabilities to protect clandestine operations and information; a novel approach to recognizing text in Open Source imagery; an assessment of current science and technology aspects of Financial Warfare; Intelligent Power, a lightweight, ruck-packable, multi-fuel generator; and Long Wave Infrared Wide Area Surveillance for Maritime Domain Awareness.					
FY 2014 Plans: RRTO will execute multiple minor resource projects to develop prototype capabilities in the areas of Unmanned Autonomous Vehicles, Detection of Explosives and Weapons of Mass Destruction, Exploitation of Off-the-Shelf Technology, Exploitation of Communications Technologies, Small Footprint Operations, Deterrence of Violent Extremism, and other emerging technology areas. These projects will deliver developmental and operational prototypes for evaluation or assessment to warfighters and interagency users. FY 2014 minor resource projects include: Future Infra-Red Search and Track; demonstration of a human					

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
powered Special Operations Forces underwater delivery vehicle; Light Detection and Ranging data analysis tools; exploitation of vehicle's tire pressure monitoring systems; novel approaches to navigate in a Global Positioning System (GPS) denied environment; Syria Social Media Analytical Tools; Technologies to Enhance Social Science Modeling and Simulation for Special Operations Mission Training; and an Anti-Jam, Anti-Spoof GPS Antenna for Unmanned Vehicles.				
FY 2015 Plans: Rapid Reaction Technology Office will execute multiple minor resource projects in focus areas that will be selected during the execution year to align with Combatant Commands needs and priorities.				
Title: Tech Assessments Description: In FY 2014, RRTTO will sponsor six two-week evaluation periods for interested industry and government representatives to test emerging capabilities in a realistic desert environment. The results of these evaluations will enable improvements to the prototype system, inform the development/procurement process for future enhanced capabilities and inform operational users of capabilities in development. Among the technology assessments planned for FY 2014 is the Rapid Innovation Fund's (RIF) Project Rodeo in which six systems developed to detect explosives and other chemicals from a stand-off distance will be measured against established objectives in a field environment. Also planned is the assessment of a linear translating repeater deployed to extend the communication range for standard military radios.		0.750	1.750	1.750
FY 2013 Accomplishments: Conducted two-week evaluation periods for interested industry and government representatives to test prototypes of emerging capabilities in a realistic desert environment. Used the results of these evaluations to refine improvements to the prototype system, inform the development/procurement process for future enhanced capabilities and to apprise operational users of capabilities in development. Technologies assessed include, Pyros (small tactical munitions), Homemade Explosive Neutralization Without Detonation, Audio-Video Leave Behind Over-The-Horizon Exfiltration, Robotic Capabilities, Smart Imaging X-Ray; and Surewave (tunnel detection capability).				
FY 2014 Plans: In FY 2014, RRTTO will sponsor six two-week evaluation periods for interested industry and government representatives to test emerging capabilities in a realistic desert environment. The results of these evaluations will enable improvements to the prototype system, inform the development/procurement process for future enhanced capabilities and inform operational users of capabilities in development. Among the technology assessments planned for FY 2014 is the RIF Innovation Fund's Project Rodeo, in which six systems developed to detect explosives and other chemicals from a stand-off distance will be measured against established objectives in a field environment. Also planned is the assessment of STACSAT, a linear translating repeater deployed to extend the communication range for standard military radios.				
FY 2015 Plans:				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
In FY 2015, the Rapid Reaction Technology Office (RRTO) plans to conduct six more two-week evaluation periods for interested industry and government representatives to test emerging capabilities in a realistic desert environment. The Department of Defense (DoD) will use the results of these evaluations to inform the development/procurement process for future enhanced capabilities and to inform operational users of capabilities in development.				
Title: Light Ranging and Detection (LiDAR) Broad Area Announcement (BAA) Description: LiDAR sensors flying on diverse aircraft in multiple theaters and datasets are increasing in format, number, size, area coverage, and resolution. Demand for LiDAR products with rapid exploitation towards near real-time products is increasing while the time available for Processing, Exploitation, and Dissemination (PED) teams to exploit the data is decreasing. Fully or partially automated LiDAR data exploitation tools are required to remedy the current bottleneck in operational LiDAR exploitation cells. The Rapid Reaction Technology Office (RRTO) sponsored a BAA through the Combatting Terrorism Technology Support Office to identify and mature emerging automated feature extraction capabilities. FY 2013 Accomplishments: In late FY 2013, the LiDAR BAA closed with 16 proposals submitted. Eight of these proposals came from small businesses. Subject matter experts evaluated submissions, and in early FY 2014 will select the most promising emerging capabilities for development of prototype tools. FY 2014 Plans: New LiDAR data exploitation tools will be demonstrated to operational user groups. FY 2015 Plans: LiDAR exploitation tools will transition to the broad user community.		1.500	-	-
Title: Bluegrass II Description: The RRTO conducted the Bluegrass data collect in FY 2007 to assemble multi-sensor data for the evaluation of persistent, wide-area surveillance concepts in a complex background. This collection provided a fundamental database for evaluating approaches for detecting and unraveling nefarious activity hidden in realistic civilian clutter. Bluegrass data has been provided to more than 150 organizations to facilitate development of new Intelligence, Surveillance, and Reconnaissance (ISR) capabilities. In FY 2013, RRTO collaborated with the intelligence community and subject matter experts to make final plans to execute the Bluegrass II data collect which will explore the applications of low cost, low-access sensing such as urban video networks and social media to augment or replace traditional ISR sensors. These efforts inform and enable development of ISR capabilities needed for future military operations in denied or austere areas. Specific Bluegrass II objectives include developing an algorithm to track an individual across a dense urban video network, developing a technique to discover threat communications in social media, and developing a methodology to discover and characterize all Red Team nodes.		1.550	-	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
<i>FY 2013 Accomplishments:</i> RRTO, the United States intelligence community, and international partners defined exercise objectives, selected a venue, and planned execution of the Bluegrass II data collect, which will occur in FY 2014. The demonstration will result in a data set that can be used to develop and evaluate tools to process and exploit data from low-cost, low-access sensors. <i>FY 2014 Plans:</i> After execution of the Bluegrass II project, data from multiple sensors will be archived and made available to the larger government and commercial ISR capability development communities. Access to the data will facilitate development of new capabilities applicable to future operations in denied or austere locations. <i>FY 2015 Plans:</i> Archived Bluegrass II data will be available to the Intelligence, Surveillance, and Reconnaissance (ISR) capability community to facilitate development of new ISR capabilities.				
<i>Title:</i> Strategic Multi-Layered Assessment (SMA) Drivers of Conflict and Convergence in the Asia-Pacific Region in the Next 5-25 Years <i>Description:</i> In FY 2013, the SMA group conducted an assessment on South Asia (SA) Geo-Political Stability. This effort was an assessment of regional stability in SA and included identifying both direct drivers of interstate conflict, as well as, sources of internal instability that allow safe haven for violent extremist organizations and exacerbate interstate tensions. This assessment directly assisted in Combatant Commander decision making, as well as, Joint Staff crisis planning involving India and Pakistan, or both. <i>FY 2013 Accomplishments:</i> United States Central Command (USCENTCOM) requested a follow-on effort to an FY 2012 South Asia Assessment. This follow-on project explored issues pertaining to long-term and short-term regional and sub-regional stability. Project members utilized a synchronized series of study efforts and use case scenarios which enabled the assessment of regional stability over an extended time horizon, as well as, allowing an assessment of physical and Political, Military, Economic, Social, Infrastructure and Information based outcomes of a major regional conflict. Results of these interrelated studies enabled the proposal of a multi-generational regional engagement strategy designed to avoid major regional conflicts and maintain stability. The payoff to the warfighter was the delivery of a detailed, classified, multi-method assessment of regional conditions, risks, and vulnerabilities combined with unclassified (government, academic, Subject Matter Expert, etc.) regional assessments that are not generally found in US government work. <i>FY 2014 Plans:</i>		3.000	2.430	2.100

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
South Asia stability effort will assess stability in the broader region to include China and other key players in East Asia. Using a variety of methodologies and disciplinary approaches, the research teams for this project will build a qualitative and quantitative framework for understanding the drivers of conflict and convergence in the Asia-Pacific. Project teams will use content analysis, historical comparison, expert elicitation, and quantitative modeling to identify key variables that influence conflict and cooperation, with particular attention to the United States-China relationship in context with other key actors. Analyses will also inform the development of a systems dynamic model and decision support tool. The overall objective of the suite of projects contained in this effort is to inform United States Pacific Command (USPACOM) and United States Central Command (USCENTCOM) decision makers in the development of intermediate and long-term strategies to manage risk and engage opportunities in the Asia-Pacific. In addition to the insights provided by each project stream, the projects will also inform a systems dynamic model and decision support tool for Combatant Command (COCOMs). These assessments will be combined with unclassified (e.g., academic, Subject Matter Expert, etc.) input not generally found in US government work. FY 2015 Plans: The Strategic Multi-Layered Assessment cell will continue to actively work with the COCOMs and the Joint Staff to identify challenging problems that are not within the traditional areas of DoD expertise. These problems will be in direct support of the COCOMs and may include areas such as: counter terrorism; transnational criminal organizations, counter weapons of mass destruction (state and non-state); counter global or regional social and cultural assessments; and, individual state or national level deterrence studies.				
Title: Biometrics and Forensics Science and Technology Focus Area Description: Focal area for FY 2014 and FY 2015 Biometrics and Forensics Science and Technology projects will field prototypes that address the technology gaps that limit our ability to quickly and accurately identify anonymous individuals who threaten our physical and virtual assets, either overseas or in the Homeland. Additionally, the biometrics and forensics projects will collaborate with interagency partners to attribute enemy activity to a specific individual; and, will operationally evaluate and test biometrics and forensics systems and technologies. The biometrics and forensics projects will develop emerging technologies that support evolving identity operations and forensic capabilities required by commanders and warfighters in ongoing and future military activities. Projects for both portfolios are selected after coordination throughout the DoD and across other US Government Departments and Agencies to maximize collaborative investment and prevent redundant research. Deliverables are shared throughout the biometrics and forensics communities. FY 2013 Accomplishments: The biometric portfolio conducted research into matching fingerprints captured through contactless methods with those of legacy technologies; integrated a prototype fingerprint capture platen into a handheld biometric device; and, conducted an analysis and demonstration of the ability of commercial technologies to meet biometric collection and store/match/share requirements more affordably. The forensic portfolio developed a prototype to enable sensitive site exploitation; conducted research into sequencing		6.000	5.500	5.500

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
deoxyribonucleic acid (DNA) for kinship and familial relationships; and, developed a real-time synthetic cannabinoid detection platform.				
FY 2014 Plans: The Biometrics and Forensics Science and Technology Focus Area will engage with warfighters and commanders from across the Combatant Commands and Services to identify common technology gaps within the respective enterprises. In accordance with these requirements, the biometric portfolio will develop improved matching algorithms between two-dimensional, three-dimensional, and latent fingerprints; deliver a prototype facial recognition system for vehicle check points; and, conduct an evaluation of emerging contactless fingerprint collection systems. In addition, the forensic portfolio will develop a digital forensics prototype to allow warfighters to remotely exploit digital platforms; further explore the human genome to improve identification; and, conduct a statistical analysis of identifying firearms and toolmarks using forensic techniques.				
FY 2015 Plans: The biometric portfolio will support gaps identified by commanders and operational users in the areas of increasing standoff distance for collection, exploration of the use of emerging biometric modalities, collection of biometric data from non-cooperative subjects and improving the matching accuracy of non-ideal data. The forensic portfolio will support gaps identified by commanders in the areas of reducing time to collect forensic data, improving accuracy of analysis of data, increasing the types of forensics data collected and increasing the amount of analysis that can be done in a field environment vice a laboratory environment. Projects for both portfolios will be selected after coordination throughout DoD and across other U.S. Government Departments and Agencies to maximize collaborative investment and prevent redundant research.				
Title: Innovation Outreach Program		1.500	1.600	2.500
Description: The Innovation Outreach Program supports the Department of Defense Better Buying Power objectives by leveraging technology and emerging products developed by small, innovative businesses in the commercial sector. Solutions will be sought to meet needs identified by Combatant Commanders, Military Service organizations, other Defense agencies and interagency organizations. The Innovation Outreach Focus Area will support the Department's objectives of promoting effective competition and fielding affordable capabilities by developing new sources of innovation from commercial research and development investments. The Innovation Outreach Focus Area will include support of emerging capabilities in Communications, Data and Data Analysis, Alternative Energy, Imagery, Sensors, Social Networking and other areas identified during the execution year.				
FY 2013 Accomplishments: Innovation Outreach conducted technology engagements to support the Naval Explosive Ordnance Disposal Technical Division, United States Census Bureau, the 724th Special Tactics Group and the United States Marine Corps Systems Command. In				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
support of these organizations 362 new capabilities were reviewed with 62 selected for presentation to operational users. Products identified in Innovation Outreach events have transitioned to operational demonstrations. FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Innovation outreach will plan five engagements with DoD users to areas discussed above. Supported organizations may include the Defense Prisoner of War/Missing Personnel Office, United States Marine Corps Systems Command, the Rapid Reaction Technology Office, Department of Homeland Security, the National Reconnaissance Office, and the Defense Intelligence Agency. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Innovation outreach will plan five engagements with DoD users to areas discussed above.				
Title: Open Source Data Analysis and Applications Focus Area Description: Open Source Data Analysis and Applications projects include the development of capabilities, software, and tools to analyze open source information. The data can be structured or unstructured and will include inputs from a broad spectrum of sources. Technologies developed within this focus area will reduce cost and manpower requirements to provide meaningful intelligence in support of Counter-Weapons-of-Mass-Destruction and Counter-Improvised-Explosive-Device missions. FY 2014 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. The RRF will support development of open source data analysis tools and applications. Anticipate supporting four to five projects. Deliverables will include capabilities and tools to exploit open source information and to reduce manpower required to analyze open source documents. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. RRF will support development of open source data analysis tools and applications. Anticipate supporting three to four projects. Deliverables will include capabilities and tools to exploit open source information and to reduce manpower required to analyze open source documents.		-	5.296	5.146
Title: Autonomous Systems and Behaviors Focus Area		-	3.656	4.236

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Description: Autonomous Systems and Behaviors projects include power systems to facilitate increased performance of unmanned systems, enhanced capabilities for multiple autonomous systems to cooperatively interact, development of sensors for integration aboard unmanned platforms, improvements to data ex-filtration from unmanned sensors, operation in denied areas and “red teaming” to counter emerging unmanned threats from potential adversaries. These projects will also examine the establishment of common software platforms to reduce development cost, increase collaboration among disparate unmanned vehicles and support rapid customization of autonomous systems’ architectures. FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations’ requirements and as new threats emerge or new opportunities are presented. RRF will support development of unmanned autonomous aerial, surface and subsurface systems. Anticipate supporting five to six projects. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations’ requirements and as new threats emerge or new opportunities are presented. RRF will support development of unmanned autonomous aerial, surface and subsurface systems. Anticipate supporting four to five projects.				
Title: Urban Characterization Focus Areas Description: Future military operations will likely occur in a broad range of urban environments in areas where we are denied free access. Focal area for FY 2014 and FY 2015 Urban Characterization projects will identify, analyze, and describe typical urban areas for modeling, simulation and planning purposes. These efforts will inform and enable development of intelligence, surveillance and reconnaissance, electronic warfare, kinetic/non-kinetic and other capabilities needed for future military operations in a wide range of urban areas. FY 2014 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations’ requirements and as new threats emerge or new opportunities are presented. RRF will support development of analysis tools and applications. Anticipate supporting five to six projects. Deliverables will include modeling and simulations of systems to support development of capabilities for future operations. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations’ requirements and as new threats emerge or new opportunities are presented. RRF will support development of		-	3.926	3.818

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
open source data analysis tools and applications. Anticipate supporting three to four projects. Deliverables will include modeling and simulations systems to support planning efforts.				
Title: Intelligence, Surveillance, and Reconnaissance (ISR) Focus Area Description: ISR sensors span a wide range of sensing modalities and generally produce very large data sets that are difficult to analyze in a cluttered environment. Efforts in this area will develop better sensors and tools to more effectively analyze or visualize ISR data. New start projects include improved surveillance sensors, tools to facilitate analysis of large data sets, methods to harvest meaningful intelligence from open and classified sources and establishment of more effective processing, exploitation, and dissemination capabilities to facilitate integration of new and existing systems. Projects in this area generally involve high risk and have high potential reward; and, are not being addressed by other organizations. Projects will also explore technologies to improve ISR in denied areas. ISR projects will also evaluate methods of increasing the effectiveness of ISR architectures to maximize the capability delivered to the user and to reduce the amount of human analyst manpower required to produce actionable intelligence. FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify areas critical to developing future ISR capabilities. Anticipate supporting four to five projects. Deliverables will include prototype systems and software for a variety of platforms, as well as analytical capabilities developed to reduce the manpower burden needed to process large sets of ISR data. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify areas critical to developing future ISR capabilities. Anticipate supporting three to four projects. Deliverables will include prototype systems and software for a variety of platforms, as well as analytical capabilities developed to reduce the manpower burden needed to process large sets of ISR data.		-	3.960	4.734
Title: Commercial Product Vulnerabilities and Applications Focus Area Description: Commercial Product Vulnerabilities and Applications projects explore the use of commercial-off-the-shelf products to address immediate operational needs. This focus area identifies and exploits technological advances made by industry which may have immediate military utility. These projects also explore the vulnerabilities of readily available technology used by adversaries. This focus area leverages investments made by the commercial sector to reduce cost for military equipment.		-	5.616	5.433

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies help identify areas critical to developing future capabilities to identify commercial product vulnerabilities and applications. RRF anticipates supporting six to eight projects exploring commercial product's vulnerabilities in FY 2014. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify areas critical to developing future capabilities to identify commercial product vulnerabilities and applications. Anticipate supporting five to six projects.			
Title: Interface of Military Operations with Law Enforcement and Border Patrol Focus Area Description: Interface of Military Operations with Law Enforcement and Border Patrol new start projects include collaboration and exercises with law enforcement organizations to identify overlap and synergies between military and law enforcement operations, exploitation of law enforcement data for use in an irregular warfare environment, development of improved border protection capabilities that can be used in military base protection and expanding the capabilities of biometrics and forensics tools. FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout Department of Defense (DoD) and other government agencies will help identify areas critical to developing future capabilities of interest to multiple federal organizations. Anticipate supporting six to seven projects. Deliverables will include prototype sensors and knowledge management systems, as well as a demonstration of DoD developed technologies that may fulfill Law Enforcement and Border Patrol requirements. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify areas critical to developing future capabilities of interest to multiple federal organizations. Anticipate supporting five to six projects.		-	4.017
Title: Red Teaming in Support of Rapid Fielding Focus Area		-	4.221

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014	FY 2015
Description: Red Teaming projects assess the susceptibility of rapidly fielded capabilities to be defeated by parties not intimately familiar with the technology. The Rapid Reaction Technology Office will leverage the innovative capabilities of Federally Funded Research and Development Centers, government laboratories, academia and industry to develop a construct that current or future systems can be gamed against in a distributed table top environment against traditional and non-traditional players. Deliverables will inform enhancement decisions and Concept of Operations development. FY 2014 Plans: The Rapid Reaction Fund (RRF) investment decisions are made during the execution years in response to Combatant Commands (COCOMs), Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify key technologies and systems to be assessed by red teams. Deliverables will include recommendations on system operational employment, potential vulnerabilities, likely countermeasures taken by the threat, and potential counter-countermeasures to increase functionality or operational effectiveness of the system. Projects will include Red Team efforts employing undergraduate students of Science, Technology, Engineering and Math disciplines to explore unconventional approaches to counter DoD technologies, such as the Perseus unmanned underwater vehicle demonstration and Systems Engineering Research Center projects. Anticipate supporting five to six red teaming projects in FY 2014. FY 2015 Plans: RRF investment decisions are made during the execution years in response to COCOMs, Service and other government organizations' requirements and as new threats emerge or new opportunities are presented. Research and coordination with organizations throughout DoD and other government agencies will help identify key technologies and systems to be assessed by red teams. Deliverables will include recommendations on system operational employment, potential vulnerabilities, likely countermeasures taken by the threat and potential counter-countermeasures to increase functionality or operational effectiveness of the system. Anticipate supporting four to five projects.				
Title: Disruptive Demonstrations Description: The Disruptive Technology Demonstrations project is a technology initiative to address pre-conflict-centric capability needs and anticipatory concerns while maintaining low cost, small footprint operations. FY 2013 Accomplishments: Completed project analysis, design, application investigations which incorporate development, testing, and evaluation of innovative technologies and techniques to enhance Cyber Situational Awareness. Provided technology integration,		8.954	-	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
demonstration, and Concept of Operations/Techniques, Tactics and Procedures development for a maritime domain test bed, and study investigations.			
Accomplishments/Planned Programs Subtotals		44.135	43.750
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics In FY 2015, performance metrics applicable to the Rapid Reaction Fund (RRF) includes attainment of DoD Strategic Objective 3.5.2D. The title of this objective is "Maintain a strong technical foundation within the Department's Science and Technology program" and the metric for this objective is to transition 40 percent of completing project demonstrations per year. In addition, project performance metrics are specific to each effort and include measures identified in the specific project plans. Project completions and success are monitored against schedules and deliverables stated in the proposals and statements of work. The metrics include items such as target milestone dates, specific performance measures, fielding dates, and demonstration goals and dates. For projects completed in FY 2013, the RRF achieved a transition rate of greater than 75 percent.			

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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P830: RDT&E Architecture and Integration	16.164	4.009	-	-	-	-	-	-	-	-	Continuing	Continuing
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
The RDT&E Architecture and Integration (RAI) program objectives are to enhance and expand rapid technology architecture and assessment capabilities in general; and, to enhance the Joint Experimentation Range Complex, Stiletto maritime test platform and the Thunderstorm Intelligence, Surveillance, and Reconnaissance (ISR) exercise series. The JERC provides a venue to evaluate a wide range of new technologies in a dessert environment. The funding will also support Stiletto, a maritime test vessel that routinely hosts numerous new technologies for evaluation in a maritime environment. Thunderstorm, an ongoing ISR exercise series, is also supported by this budget line. Thunderstorm brings emerging ISR technologies together in a common architecture for exercise and operational demonstration.												
With the drawdown of operations in Afghanistan in FY 2014, the requirements for many of the assessments supported by this budget line have been greatly reduced. The remaining assessment requirements will be addressed by other Program Elements.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015	
Title: Maritime Irregular Warfare/Stiletto									1.950	-	-	
Description: The Maritime Irregular Warfare portfolio investigates gaps and develops irregular warfare capabilities in the maritime domain, with a particular focus on prototype concepts and systems. Projects explore the development of counter evolved non-state capabilities such as semi- and fully-submersible vehicles, countering unmanned swarms, maritime non-lethal weapons systems, and low cost littoral fire support, among other capabilities. This expanded effort to address maritime capability gaps builds on and leverages the Stiletto dedicated maritime demonstration vessel. Stiletto is a maritime demonstration platform designed to assist in the assessment of prototypes and the rapid transition of emerging technologies across the range of military operations to higher Technology Readiness Levels. Stiletto, an 88-foot long boat, is an experimental, all carbon fiber craft that was purposefully designed to rapidly acquire, integrate, and employ new capabilities to explore the military utility of emerging technologies and concepts of operation for special and expeditionary forces. The Stiletto program, managed in partnership with the Naval Surface Warfare Center’s Combatant Craft Division and the Naval Air Warfare Center Aircraft Division’s Warfare Innovation Cell, streamlines the experimentation process and helps facilitate the rapid demonstration, exploration, and risk reduction of emerging technologies and capabilities. The demonstration process also encourages system developers to engage directly with the warfighter in the maritime environment to rapidly adapt technologies around warfighter needs. The Stiletto vessel is home-ported in Norfolk, Virginia.												
FY 2013 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense		Date: March 2014	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603826D8Z / <i>Quick Reactions Special Projects (QRSP)</i>	Project (Number/Name) P830 / <i>RDT&E Architecture and Integration</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
In FY 2013, Naval Underwater Threat Interrogation and Covert Assessment System prototype development continued with the Navy and Joint Improvised Explosive Device Defeat Organization, moving from the lab environment to a real world, controlled environment, and testing within the Continental United States (CONUS). The Inflatable Catamaran project continued its development to improve the existing design and construction processes for the Special Forces' inflatable hull component of the Combatant Craft Light inflatable catamaran with an initial operating capability in FY 2016. The improved hull form will increase durability, reliability and maintainability. The new design will provide significantly increased speed, range, payload, and improved riding, supporting missions such as Maritime Area Denial. The Common Maritime Technology Working Group (CMTWG) identified the lead organizations for Stiletto Capability Demonstrations and produced an analysis of common small craft technology needs in FY 2013. CMTWG worked within its membership to bring an advanced Multi-Fuel Engine into the Navy catalog. The Maritime Irregular Warfare focus area supported three Stiletto Capability Demonstrations of emerging Intelligence, Surveillance, and Reconnaissance (ISR), Command and Control, and maritime Unmanned Vehicle Aerial Vehicle (UAV) launch and recovery capabilities on the boat in FY 2013, supporting Navy Expeditionary Combat Command (NECC), Trident Spectre 2013, and the UK Ministry of Defence. Technology Demonstration periods also occurred throughout the year to support industry partners with emerging and innovative capabilities.			
Title: Intelligence, Surveillance, and Reconnaissance (ISR)/Thunderstorm/Space Description: This portfolio examines and explores emerging technologies and prototypes to complement the US Air Force (USAF), the National Reconnaissance Office (NRO), and other interagency initiatives in ISR. In addition, the portfolio addresses the National Space Strategy objectives to preserve and protect the space environment with a focus on developing applications for employment by the tactical user. The flagship project for this portfolio is Thunderstorm, an enduring multi-Intelligence technology demonstration for the Office of Secretary of Defense, interagency partners, Combatant Commands (COCOMs), Services, academia, government laboratories and commercial vendors. Thunderstorm demonstrations provide an opportunity to evaluate and assess the capabilities of new, prototype, emerging and transformational ISR technologies, and related information collection, processing, exploitation, and dissemination (PED) capabilities in mission-related, geographically, and operationally relevant environments prior to full-scale employment. Thunderstorm demonstration objectives, performance measures, lessons learned, post-demonstration assessments and data evaluation serve to inform future DoD ISR concepts of operations and remote PED capabilities. Thunderstorm aims to identify new capabilities and/or new ways to employ existing capabilities that enhance our ability to "Deter, Predict, and Interdict" threats while assessing how to bridge capability gaps that cross multiple Departments and Agencies. FY 2013 Accomplishments: Thunderstorm Spirals 13-1 and 13-2 characterized maritime threat behavior in open water in the Gulf of Mexico through the littorals and the transition into the Texas land space. Both spirals capitalized on the lessons learned from previous spirals. In partnership with Joint Interagency Task Force South, Customs and Border Protection, United States Coast Guard, United States		1.451	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Navy, National Geo-Spatial Intelligence Agency, National Reconnaissance Office, United States Southern Command, United States Northern Command and the Texas Department of Public Safety, Spiral 13-1 technologies were utilized to detect and discriminate suspicious behavior in the open water, littoral and maritime-to-land transition space. The highlight of this Spiral was the capability to share information in near real-time among eight data nodes. Spiral 13-2 built upon lessons learned from Spiral 13-1, placed emphasis on the maritime-to-land transition activity and the ability to prosecute suspicious actors as they quickly meld themselves into urban or rural populations. This information was gathered and then shared in near real time to the data nodes. In FY 2013, Thunderstorm spirals demonstrated 28 emerging capabilities in operationally realistic environments with a broad range of potential operational users providing support. In the space arena, a classified project in partnership with the NRO successfully demonstrated the ability to use commercial-off-the-shelf (COTS) Satellite Communications (SATCOM) equipment for transferring large data files from theater to the U.S. The project used a COTS SATCOM High Data Rate Modem to improve the bandwidth throughput by 100 percent. This was a prototype demonstration and this concept of operations will be adapted to other satellites.			
Title: Tech Assessments Description: The Joint Experimental Range Complex (JERC) is a remote test site located at the Yuma Proving Grounds that is designed to rapidly evaluate prototype technologies in an operationally relevant environment. These limited proof-of-concept evaluations allow for integration and development of Intelligence, Surveillance, and Reconnaissance (ISR) training and Concept of Operation development. Since its establishment in late FY 2003, the Rapid Reaction Technology Office has sponsored evaluation of more than 280 systems at the JERC. This funding is utilized to provide assessments of technology and contribute to emergent upgrades to capabilities to the site. FY 2013 Accomplishments: Conducted six two-week evaluation periods for interested industry and government representatives to test prototypes of emerging capabilities in a realistic desert environment. Used the results of these evaluations to refine improvements to the prototype system, inform the development/procurement process for future enhanced capabilities and to apprise operational users of capabilities in development. Technologies assessed include, Pyros (small tactical munitions), Homemade Explosive Neutralization Without Detonation, Audio-Video Leave Behind Over-The-Horizon Exfiltration, Robotic Capabilities, Smart Imaging X-Ray); and Surewave (tunnel detection capability).		0.608	-
Accomplishments/Planned Programs Subtotals		4.009	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			

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C. Other Program Funding Summary (\$ in Millions) Remarks D. Acquisition Strategy N/A E. Performance Metrics In FY 2015, performance metrics applicable to the RDT&E Architecture and Integration initiative included attainment of DoD Strategic Objective 3.5.2D. The title of this objective is "Maintain a strong technical foundation within the Department's Science and Technology (S&T) program" and the metric for this objective is to transition 40 percent of completing project demonstrations per year. Project performance metrics are specific to each effort and include schedules and deliverables stated in the proposals and statements of work, production measures, fielding dates, and demonstration goals and dates. Technology demonstrated at the Joint Experimental Range Complex, Thunderstorm and Stiletto are typically not mature enough for operational transition. Written assessments of each technology demonstrated are used to guide further development and inform operational users of emerging capabilities.		

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense										Date: March 2014		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603826D8Z / Quick Reactions Special Projects (QRSP)				Project (Number/Name) P831 / Joint Rapid Acquisition Cell Support			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P831: Joint Rapid Acquisition Cell Support	1.710	1.608	1.587	1.644	-	1.644	1.878	1.918	2.464	2.466	Continuing	Continuing
# The FY 2015 OCO Request will be submitted at a later date.												
A. Mission Description and Budget Item Justification												
This funding includes support for the Joint Rapid Acquisition Cell (JRAC) to enable management and tracking of Combatant Commander (COCOM) identified and Joint Staff validated immediate warfighter needs. FY 2012 was the first year for a dedicated funding line for this effort. The funding in this project is under the cognizance of the JRAC and is responsible to:												
(1) Coordinate review of validated Joint Urgent Operational Needs (JUON) and assign responsibility to appropriate DoD Components for timely funding and resolution.												
(2) Serve as the review and approval authority for the DoD Components' strategy to fund and mitigate the identified JUON capability gap.												
(3) Continually assess actions taken by the DoD Components to resolve JUONs and recommend to the Under Secretary of Defense for Acquisition, Technology, and Logistics any changes determined appropriate to improve their responsiveness to JUONs.												
(4) Provide periodic reports to the Secretary of Defense on new and outstanding JUONs.												
(5) In coordination with Under Secretary of Defense Comptroller (USD(C)), manage the Rapid Acquisition Fund (RAF) to allocate resources to priority unfunded JUONs.												
(6) In coordination with the Office of the Chairman of the Joint Chiefs of Staff and the USD(C), make programmatic, budget, and acquisition recommendations for JUONs and identify capability gaps to the Secretary of Defense.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2013	FY 2014	FY 2015	
Title: Joint Rapid Acquisition Cell (JRAC) Management Support									1.608	1.587	1.644	
Description: This funding is utilized to support the staff manning of the JRAC to enable management and tracking of COCOM identified and Joint Staff validated immediate warfighter needs. This baseline was initiated in FY 2012 to preclude ad hoc and unstable historical programmatic and financial support to the JRAC staff.												
FY 2013 Accomplishments: Initiated support for the JRAC to enable management and tracking of COCOM. Warfighter needs were validated by the Joint Staff.												
FY 2014 Plans: Continue support for the JRAC management and tracking of COCOM initiative. Continue validation of the warfighter needs by the Joint Staff.												
FY 2015 Plans: Continue support for the JRAC management and tracking of COCOM initiative.												

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603826D8Z / <i>Quick Reactions Special Projects (QRSP)</i>	Project (Number/Name) P831 / <i>Joint Rapid Acquisition Cell Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
Continue validation of the warfighter needs by the Joint Staff.			
Accomplishments/Planned Programs Subtotals		1.608	1.587
			1.644
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy NA – Capabilities acquired to fulfill Joint Urgent Operational Needs are provided by other DoD components.			
E. Performance Metrics Joint Rapid Acquisition Cell performance metrics are specific to each JUON and include measures identified in the management approach for each JUON. In addition, JUON completions and successes are monitored against schedules and deliverables stated in the JUON management approach. The metrics to which JRAC support correlates is to the number of full time personnel identified in the JRAC support contract with associated pay rates and shall not exceed the specified amounts or hourly rates and/or firm fixed price.			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Office of Secretary Of Defense										Date: March 2014		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603826D8Z / Quick Reactions Special Projects (QRSP)				Project (Number/Name) P833 / Strategic Multi-Layered Assessment (SMA) Support			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
P833: Strategic Multi-Layered Assessment (SMA) Support	-	2.170	1.770	2.050	-	2.050	2.104	2.149	2.772	2.774	Continuing	Continuing
# The FY 2015 OCO Request will be submitted at a later date.												
Note												
The Strategic Multi-Layered Assessment (SMA) project was added in FY 2013 as a result of a net zero functional transfer of resources and mission from United States Strategic Command (USSTRATCOM).												
A. Mission Description and Budget Item Justification												
The SMA Cell supports all Combatant Commands (COCOMs), Joint Force Commanders and other government agencies by assessing complex operational/technical challenges which require multi-agency and multi-disciplinary approaches. With input from across the US Government, academia and the private sector, the SMA cell develops solution options to COCOM generated challenging problems and informs the command’s senior leadership. Each SMA effort is initiated at the request of senior COCOM leadership. Priorities for SMA problems are set by the Joint Staff Deputy for Operations. Products are typically produced within six months and directly contribute to the decision making process of COCOM's senior leaders. SMA is also supported by the Rapid Reaction Fund (RRF).												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2013	FY 2014	FY 2015
Title: Strategic Multi-Layered Assessment (SMA)										2.170	1.770	2.050
Description: The SMA cell develops solution options, not generally found in U.S. Government work, to COCOM generated challenging problems and informs the command’s senior leadership. Each SMA effort is initiated at the request of senior COCOM leadership. Priorities for SMA problems are set by the Joint Staff Deputy for Operations. Products are typically produced within six months and directly contribute to the decision making process of COCOM's senior leaders. Funding for this project within the Quick Reaction Special Projectsprogram element was a result of a 2012 USSTRATCOM decision to reprogram approximately \$2.000 million per year from USSTRATCOM to support SMA activities.												
FY 2013 Accomplishments:												
At the request of United States Pacific Command (USPACOM) the SMA cell undertook a Megacities project. This project consisted of three components. The first component was a research study into methods of conducting socio-cultural analysis including remote sensing techniques for collecting indicator variables of resilience and vulnerability within interrelated megacity and rural systems. The second component was a case analysis of the drivers of buffers to political, social, economic and environmental instability in the Dhaka, Bangladesh population center. The third component of the study was an assessment and testing of novel ways to present and visualize megacity stability data. This benefited COCOM planners with forecasting socio-cultural trends affecting state, regional, or community level stability. Also, this effort answered the need for quantitative												

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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603826D8Z / <i>Quick Reactions Special Projects (QRSP)</i>	Project (Number/Name) P833 / <i>Strategic Multi-Layered Assessment (SMA) Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2013	FY 2014
stability assessment approaches to address key national security considerations including the potential for resurgence of violent extremism; humanitarian crisis; reinforcement of outlier state behavior and consideration of partner and ally relations. FY 2014 Plans: Continue Megacities effort by testing the proof of concept the countries of Lagos and Nigeria. There are three primary objectives of the project: 1) to provide actionable insight into the state-level stability and instability dynamics in Nigeria and provide an example of how similar analyses might be completed in other areas of the Area of Responsibility (AOR); 2) to develop an evaluative tool to aid in prioritization and metric development for United States Africa Command engagement activities; and 3) to prepare a deep dive assessment of the threat and likely growth of violent extremism in Nigeria. The framework will be capable of measuring progress/success and of assessing impact of investment, and it will have visualization features that assist planning process and development of Theater Campaign Plans, Country Campaign Plans, and operation plans. FY 2015 Plans: The Strategic Multi-Layered Assessment cell will continue to actively work with the Combatant Commands (COCOMs) and the Joint Staff to identify challenging problems that are not within the traditional areas of DoD expertise. These problems will be in direct support of the COCOMs and may include areas such as: counter terrorism; transnational criminal organizations, counter weapons of mass destruction (state and non-state); counter global or regional social and cultural assessments; and, individual state or national level deterrence studies.			
Accomplishments/Planned Programs Subtotals		2.170	1.770
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
SMA performance metrics are specific to each effort and include measures identified in the specific project plans. In addition, project completions and successes are monitored against schedules and deliverables stated in the execution documents. Each project's results are reviewed by a senior review group that is comprised with representatives from the Office of the Secretary of Defense, the Joint Staff, the COCOMs and outside subject matter experts. The ultimate measure of success is adaption and transition of SMA products by the COCOM and supporting entities.			