Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense	Date: February 2015
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603648D8Z / *Joint Capability Technology Demonstration (JCTD)*

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	330.671	153.770	119.790	141.540	-	141.540	125.003	130.761	131.672	133.555	Continuing	Continuing
P648: *Joint Capability Technology Demonstration (JCTD)*	330.671	141.170	119.790	141.540	-	141.540	125.003	130.761	131.672	133.555	Continuing	Continuing
P264: *Disruptive Demonstrations*	0.000	12.600	-	-	-	-	-	-	-	-	Continuing	Continuing

Note

Historically, the Joint Capability Technology Demonstration (JCTD) Program has worked primarily with Combatant Commands (COCOMs) and Services to identify Department of Defense (DoD) priorities and accelerate development and demonstration of technical solutions to meet warfighter needs not being adequately addressed by the Services. However, with the end of current conflicts there has been a strategic shift to enable introduction of new capability more affordably through employment of Pre-Engineering and Manufacturing Development (Pre-EMD) prototypes while addressing the strategic priorities of the Department, and the Chairman's Risk Assessment in the following areas: Electromagnetic Spectrum Agility; Space Capability Resilience; Autonomous Systems and Multi-Domain Technologies; Countering Weapons of Mass Destruction; and Force Application.

The shift in the JCTD Program will also result in a shift in Program metrics. JCTDs supporting the DoD's strategic priorities will tend to be longer and larger with increased emphasis on innovation, risk reduction, and affordability. Overall, we envision initiating fewer yet more strategically decisive JCTD projects. JCTDs will reinforce key partnerships across the Department, Services, other government agencies, select allies, and industry that allow for expedited development, deployment, and evaluation of capability solutions with potential to address some of the most pressing needs of the Department. These JCTD partnerships will enable interdepartmental cooperation and capability development with the Departments of Homeland Security, State, Transportation, Justice, and the National Aeronautics and Space Administration.

In FY 2015, Disruptive Demonstrations funding (P264) was transferred from the JCTD Program Element (PE) to a new PE 0603289D8Z (Advanced Innovative Analysis & Concepts).

A. Mission Description and Budget Item Justification

The value and impact of the JCTD program is to cost-effectively address the Department's strategic priorities to mitigate emergent threats, and address affordability and interoperability of Defense systems through Pre-EMD prototyping. In FY 2014, the JCTD Program successfully completed the demonstration and transition of several JCTDs that addressed operational warfighting needs of the Department, providing affordable and sustainable solutions. In addition, the program initiated several key prototyping efforts to address the strategic priorities of the Department.

Key values demonstrated by the JCTD program are:

- The JCTD Program has a long history of providing enduring capabilities. See "Section D. Acquisition Strategy" for more details on transition.
- Recent examples include:

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1. A robust “detect and track” capability of "dark", i.e., non-emitting, maritime targets. This is accomplished through automated data fusion of an existing suite of sensors supporting the Maritime Domain Awareness (MDA) function. This capability was successfully transitioned into the Sealink Advanced Analysis system at Office of Naval Intelligence and is now used by multiple agencies to provide a MDA capability.
2. Counter-electronics High powered-microwave Advanced Missile Project (CHAMP) that demonstrated the capability of a missile with an integrated High Powered Microwave source to degrade, disrupt, or damage electronic systems. The results are informing the acquisition system and will be used to address time sensitive capability shortfalls.
3. Jetpack fifth to fourth supports Combatant Commanders' airborne gateway needs to distribute fifth Generation data to fourth Generation fighters by translating 5th Generation tactical data link messages into Link-16 messages that can be viewed by fourth Generation aircraft. It is a critical force multiplier enabling 4th Generation aircraft to participate in a collaborative targeting environment that will be transitioning to our forces.

- The JCTD Program enables coalition cooperative development by leveraging partner nation expertise and resources; approximately one-fifth of JCTD projects involve some degree of coalition partner participation. As a result of successful past collaborations, the program now enjoys routine interactions with the United Kingdom, Canada, Australia, and the Republic of Korea.
- The JCTD Program also enables development and execution of interdepartmental cooperation projects with the Department of Homeland Security, State, Transportation, and the National Aeronautics and Space Administration.

MEASURABLE OUTCOMES:

- JCTDs will demonstrate capability objectives within 24 - 48 months.
- The JCTD program achieved transition rates of the following: 70 percent transitioned to a new or existing Program(s) of Record, 24 percent transitioned to fieldable-prototypes (residual capabilities) sustained by non-JCTD funds in direct support of operations in theater. In FY 2014, 17 of 18 completed JCTDs successfully transitioned.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	165.008	131.960	146.878	-	146.878
Current President's Budget	153.770	119.790	141.540	-	141.540
Total Adjustments	-11.238	-12.170	-5.338	-	-5.338
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-12.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-6.728	-			
• SBIR/STTR Transfer	-4.510	-			
• Realignment for Higher Priority Programs	-	-	-4.957	-	-4.957
• FFRDC Adjustments	-	-0.170	-	-	-
• Economic Assumptions	-	-	-0.381	-	-0.381

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense	Date: February 2015
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603648D8Z *I Joint Capability Technology Demonstration (JCTD)*

Change Summary Explanation

The increase in funding from FY 2015 to FY 2016 was added for Pre-Engineering and Manufacturing Development (Pre-EMD) prototypes to support Combatant Commanders' needs. The baseline adjustment of -$5.338 million reflects adjustments for Economic Assumptions and realignment for higher priorities and requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense											Date: February 2015	
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603648D8Z / *Joint Capability Technology Demonstration (JCTD)*				Project (Number/Name) P648 / *Joint Capability Technology Demonstration (JCTD)*			
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: National Technical Nuclear Forensics (NTNF)	1.840	-	-
Description: NTNF will strengthen strategic nuclear deterrence by enhancing nuclear forensics capabilities supporting attribution after release of nuclear materials (details are classified). NTNF will integrate advanced air and ground debris sample collection technologies in both manned and unmanned platforms, and integrate DoD capabilities into the developing joint interagency Concept of Operations for advanced air and ground sample collection with global applicability. The project will also demonstrate enhanced integrated yield estimation methods for nuclear events. Techniques to be employed will increase capabilities to determine initial yields and collect nuclear debris, while enhancing safety for NTNF Task Force personnel.			
FY 2014 Accomplishments: Completed and produced operational assessments for two key NTNF components; Airborne Radiological Detection and Identification Measurement Systems (ARDIMS)/Mobile Mission and HARVESTER Particulate Airborne Collection System (PACS). The ARDIMS/Mobile Mission and video reconnaissance equipment was integrated on a UH-60 helicopter and then conducted airborne radiological surveys and video/visual reconnaissance missions replicating fallout for an area exposed to a low-yield			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
improvised device. Completed a successful operational military evaluation for integration and utilization of the Harvest PACS particulate sampling pod integrated on the Special Airborne Mission Installation and Response (SABIR) stores arm with a C-130H aircraft. Technology elements of the NTNF JCTD include: 1) Integrated Yield Determination Tool (IYDT) Software, 2) ARDIMS/ Mobile Mission, 3) AGSCP ground collection missions, and 4) the HARVESTER PACS transitioned to their respective Services. Completed the JCTD.			
Title: Smart Power Infrastructure Demonstration for Energy Reliability and Security (SPIDERS) ***Description:*** SPIDERS is demonstrating cyber-secure "smart" micro-grids with demand side management and integration of renewable energy and storage on military installations, in partnership with Department of Homeland Security (DHS) and Department of Energy (DOE). The expected output and efficiency to be demonstrated is a reduction in the "unacceptably high risk" of extended electric grid outages by developing the capability to "island" installations while maintaining operational surety and security. ***FY 2014 Accomplishments:*** Completed second operational demonstration at Fort Carson, Colorado. Transitioned micro-grid to Fort Carson tenants. Conducted second SPIDERS industry day and shared results with stakeholders. Completed micro-grid design for third phase evaluation at Camp Smith, Hawaii. ***FY 2015 Plans:*** Perform third and final technical and operational demonstration on the entire installation at Camp Smith, Hawaii to include an economic opportunity to reduce electrical costs at the base. Transition micro-grid to Camp Smith stakeholders. Complete the JCTD.	0.529	0.708	-
Title: Arctic Collaborative Environment (ACE) ***Description:*** ACE will transition an open-access, web-based, Arctic regional and national decision-support system that integrates geo-referenced data from existing remote sensing assets to provide a monitoring, analysis, and visualization decision-support system based on earth observation data and modeling analysis. The primary outputs and efficiencies are: (1) increased Arctic maritime domain awareness to protect maritime commerce, critical infrastructure, and key resources; (2) obtain, analyze, and disseminate accurate data from the entire Arctic region, including both paleo-climatic data and observational data to enable accurate prediction of future environmental conditions and climate; and (3) serve as the foundation for an effective Arctic circumpolar observing network with broad partnership from other relevant nation. ***FY 2014 Accomplishments:***	1.145	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Integrated the capability with existing Joint Operations Centers to include: U.S. Pacific Command, U.S. Northern Command (in particular Alaska Command (ALCOM)), Joint Task Force Alaska (JTF-AK), U.S. Coast Guard District 17, and the Federal Emergency Management Agency. Completed the JCTD.			
Title: Three Dimensional Landing Zone (3D-LZ) ***Description:*** 3D-LZ will deliver an integrated sensor suite capable of providing rotorcraft pilots with situational awareness during degraded visual environments encountered on takeoff and landings, cable warning and obstacle avoidance cues, and general terrain awareness for safety of flight. The program will deliver an integrated turret to the Global Reach Program Office. ***FY 2014 Accomplishments:*** Completed Operational Utility Assessment. Transitioned to Air Force Global Reach Program Office. Completed the JCTD.	2.622	-	-
Title: Anti-Jam Precision Guided Munitions (AJPGM) ***Description:*** AJPGM will enable precision navigation capability in severely degraded Global Positioning System (GPS) environments. AJPGM will also deliver home-on-jam capability. Specifics related to technologies, current capability, and threats are classified. ***FY 2014 Accomplishments:*** Integrated sensor assemblies. Conducted technical demonstrations on surrogate unmanned vehicles. Formed factor sensor assemblies to allow integration with inventory weapon platforms. ***FY 2015 Plans:*** Integrate sensor assemblies with weapon platforms. Conduct flight test technical demonstrations using inert weapons. Conduct flight test operational demonstrations using live weapons. Conduct final utility assessment. Complete JCTD.	7.900	5.900	-
Title: Autonomous Mobility Appliqué System (AMAS) ***Description:*** AMAS will equip existing military ground vehicles with scalable modes of robotic technology through the integration of modular kits, common interfaces, and a common architecture. AMAS will be comprised of a fly-by-wire kit that will provide active safety functionality and a standard control approach to allow for current and future robotics to be implemented relatively seamlessly onto military tactical vehicles, and an Autonomy kit that will contain the primary sensing and intelligence for scalable modes of Autonomy and leader/follower behaviors for convoy operations. ***FY 2014 Accomplishments:*** Completed final development of the Autonomy system. Conducted second Technical Demonstration and final Operational Demonstration with Military Utility Assessment. Residuals transitioned to Army and Marine Corps users. AMAS JCTD	2.128	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
technologies spiraled into existing Army Husky Mounted Detection System Program of Record and Route Clearance and Integration System Program of Record. AMAS also transitioned to a new Army Semi-Autonomous Convoy Operations (SACO) Program of Record. Completed the JCTD.			
Title: CELESTIAL REACH ***Description:*** CELESTIAL REACH addresses the limitations placed on high-priority and senior leader communications existing as a result of current Communications Satellite (COMSAT) capability and data throughput. Presently limited to a maximum data rate of 256 kilo bites per second (kbps) to/from the aircraft, capacity to maintain global communications is further impacted by peak-period COMSAT user saturation. This JCTD provides U.S. Special Operations Command the capability and capacity to communicate effectively using a robust C-17 portable Hatch Mounted Satellite Antenna (HMSA) during crisis in response to the Chairman, Joint Chiefs of Staff Concept of Operations Plan, and other contingency requirements. ***FY 2014 Accomplishments:*** Completed the antenna-to-hatch integration; electromagnetic interference; and vibro-acoustic testing. Conducted the in-flight Operational Demonstration and Joint Utility Assessment; and delivered the HMSA prototypes to U.S. Special Operations Command. Completed the JCTD.	1.996	-	-
Title: Deep Seaweb (DSW) ***Description:*** DSW provides a capability to persistently detect and monitor high traffic maritime areas of interest to find/fix/track illicit traffickers in source and transit zones. DSW will deliver an undersea-network of fixed bottom sensor nodes, mobile unmanned communication gateways, and an operations center server that will provide autonomous 24/7 tripwire surveillance to cue coalition forces of trafficking threats including fully submersible vessels. This information will be available to the tactical decision makers for near real-time action by U.S. or partner nation detection and monitoring assets. ***FY 2014 Accomplishments:*** Conducted the technical demonstration in operationally representative environment and evaluated integration with operations center workflow. Conducted the operational demonstration.	3.220	-	-
Title: Defense Installation Access Control (DIAC) ***Description:*** DIAC will develop an identity management enterprise service's architecture that will provide timely, accurate, and actionable information to support installation access control decision-making process based on authoritative data sources such as the National Crime Information Center and Terrorist Screening Database in order to initially and continuously vet all personnel prior to entry to DoD installations worldwide. ***FY 2014 Accomplishments:***	2.184	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Conducted two operational demonstrations of the architecture, including sharing access control information between the Services and vetting individuals against a subset of the Federal Bureau of Investigation's National Crime Information Center Wanted Persons file. Completed independent assessor report. U.S. Northern Command sponsor issued final positive operational utility determination. Transitioned DIAC capabilities to the Defense Manpower Data Center. Completed the JCTD.			
Title: Foliage Penetrating Airborne Light Detection and Ranging (LIDAR) for Reconnaissance Imaging (FALCON-I) ***Description:*** FALCON-I will provide a unified foliage penetrating (FOPEN) sensing system that collects, processes, and fuses LIDAR and Ultra High Frequency (UHF) Synthetic Aperture Radar (SAR) to produce a comprehensive three dimensional (3D) view of human activity, terrain, and lines of communication obscured by foliage. The ultimate goal of the FALCON-I is to provide analysts and Warfighters a simple to understand 3D image of foliage obscured target areas of interest. ***FY 2014 Accomplishments:*** Completed Technical and Operational Demonstrations and a Joint Military Utility Assessment. Transitioned the FALCON-I platform, tools, and algorithms needed for fusing/layering LIDAR and SAR data to U.S. Southern Command. Completed the JCTD.	2.893	-	-
Title: Kestrel Eye ***Description:*** Kestrel Eye is a very small, 25 kilogram class satellite that provides "good enough" 1.5 meter resolution and visible imagery. Imagery tasking and delivery is controlled directly by the Combatant Commander to ensure sufficient timelines for near real-time situational awareness and decision-making in the field. The cost of less than $1.500 million enables an affordable constellation for persistence, near continuous converge between 45 degrees North/South. The primary outputs and efficiencies are: (1) finish one Block one "proof of concept" design; launch Block one Kestrel Eye and conduct on-orbit evaluation; and upgrade Block two design with propulsion system and improved telescope pointing using a star tracker. The JCTD will build and launch three Block two design Kestrel Eye satellites. ***FY 2014 Accomplishments:*** Continued construction of two Block 2 design Kestrel Eye satellites. FY 2014 resources will continue to produce results in FY 2015 and include launch, operational demonstrations, and assessments. Launch tentatively scheduled for October 2015.	2.718	-	-
Title: Kinetic/Non-kinetic Integrated Force Effects (KNIFE) ***Description:*** KNIFE provides Combatant Commanders with four dimensional (4D) views of composite targeting effects that dynamically updates to inform strategic and operation decision-making in a compressed timeframe. KNIFE provides an integrated, enterprise capability that models multiple effects for planner targeting collaboration and Commander's decision. The	2.266	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
integrated targeting capabilities include: cyber, electronic warfare, kinetic and space effects. KNIFE provides more robust, accurate and timely targeting management during planning and execution. ***FY 2014 Accomplishments:*** Published sequenced tasks for in-line approval by senior decision makers. Addressed Diplomatic, Informational, Military and Economic effects analysis and incorporated targeting consideration into KNIFE. Completed the JCTD.			
Title: Rapid Open Geospatial User Environment (ROGUE) ***Description:*** ROGUE will deliver operational open geospatial analytic and Volunteered Geospatial Information (VGI) services; Concept of Operations; Tactics, Techniques, and Procedures (TTPs); and work flows/processes. ROGUE will provide Web-based geospatial capability linking Joint Task Force Headquarters components to the tactical edge of mixed U.S., partner nation, interagency components, and private sector non-government Organizations. ROGUE will facilitate accessibility from multiple user platforms (Web-portal, Desktops, Smart Phones, etc.) to enable partnering with agencies and countries conducting Humanitarian Assistance/Disaster Relief support missions in support of Theater Security Cooperation and Humanitarian Assistance. ***FY 2014 Accomplishments:*** Completed successful Technical and Operational Demonstrations, and a successful Operational Utility Assessment. Completed the JCTD.	2.087	-	-
Title: Soldier-Warfighter Operationally Responsive Deployer for Space (SWORDS) ***Description:*** SWORDS provides a dedicated, low cost, rapid, and predictable launch of small satellites to precise, optimum orbits. It provides the capability to satisfy Combatant Command's urgent needs for augmentation of persistent imagery or communications in their area of responsibility. When in production, SWORDS is targeted to cost $1.000 million per launch of 25 kilogram payloads up to a 750 kilometers circular orbit from a wide variety of ranges, including austere locations. ***FY 2014 Accomplishments:*** Constructed and test fired first stage engine in ground test stand. Developed Phase two plans.	3.897	-	-
Title: Unified Command and Control (UC2) ***Description:*** The UC2 JCTD provides the capability to support discretionary information sharing on a common network with compartmented network protection. UC2 provides network enclaves to allow operational commanders to manage cyber risk to their own mission without introducing risk to the Global Information Grid. UC2 provided key lessons learned for assured terrestrial transport to protect core Command and Control (C2) in anti-access/area denial (A2/AD) environments and allows greater access to assured C2 for Component Commanders, Joint Task Forces, and functional component headquarters.	3.306	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Installed and tested the Common Mission Network Transport (CMNT) and Agile Virtual Enclave (AVE) at three additional sites in U.S. Pacific Command. Conducted a successful Operational Demonstration and Joint Utility Assessment. Transitioned the CMNT to Defense Information Systems Agency and the AVE to U.S. Navy Space and Naval Warfare Systems Command (SPAWAR) for sustainment. Completed the JCTD.			
Title: Vector ***Description:*** Vector will demonstrate two cube satellites for an on-orbit Technical Demonstration (TD), Operational Demonstration (OD) and Operational Utility Assessment (OUA). The system will continue to be used for operations until reaching their respective end-of-life. Additional details are classified. ***FY 2014 Accomplishments:*** Launched two cube satellites, completed on-orbit checkout and conducted a successful TD, OD, and OUA. Completed the Final Report and transitioned residuals to U.S. Special Operations Command and Navy Program Executive Office-Space Systems. Completed the JCTD.	1.059	-	-
Title: Advanced Weapons Enhanced by Submarine Unmanned Aerial System against Mobile targets (AWESUM) ***Description:*** AWESUM will deliver an undersea launched Unmanned Aerial System (UAS), optimized for deployment through existing submarine three inch countermeasure launcher, to perform targeting, Intelligence, Surveillance, and Reconnaissance (ISR), and the potential for limited attack capabilities. This effort will specifically address requirements from an A2/AD perspective and the unique challenges to U.S. Forces. It will enhance the ability to find, fix, target, and track maritime targets to support standoff weapon engagements, provide targeting for long range torpedo engagements, enhance ISR and Battle Damage Assessment capabilities, and provide Special Operations support functions. ***FY 2014 Accomplishments:*** Continued shipboard integration activities, increased UAS endurance and communications, and successfully conducted an at-sea Technical Demonstration of the capability. FY 2014 resources will continue to produce results in FY 2015 and include shipboard integration activities and improvements to UAS endurance and communications, an Operational Demonstration during an at-sea U.S. Pacific Command Exercise (Talisman Saber 15), and transition of AWESUM capabilities into a Program of Record to complete the JCTD.	4.738	-	-
Title: Body Wearable Antenna (BWA) ***Description:*** BWA demonstrates a meta-material based antenna design to replace multiple conventional whip antennas worn by all Service radio operators. BWA offers greater performance and concealment than whip antennas, increasing Warfighter	1.610	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
capability and survivability. The prototype antenna is integrated onto a load-bearing belt with mission necessary enhanced features identified and addressed. BWA also predicts greater performance and signal strength at several different positions versus current whip antennas, including the limiting prone position. BWA replaces four current distinct whip antennas, totaling over five pounds, necessary to cover the same communication band. BWA weighs three pounds creating a lighter load and increasing operator maneuverability by dispersing weight around the waist. Radiation patterns for BWA will demonstrate lower radiation levels to the head compared to legacy antennas. ***FY 2014 Accomplishments:*** Refined system requirements and program goals. Conducted trade studies and analyses to optimize system design. Held formal requirement and design reviews for manufacturability-optimized materials and production processes. Completed system development. Fabricated prototypes and integrated with communications systems. Conducted internal preliminary verification testing and conducted formal JCTD/operational utility testing in cooperation with sponsoring user agency. Completed the JCTD.			
Title: Coalition Tactical Awareness and Response (CTAR) ***Description:*** CTAR provides a highly mobile capability adaptable to austere operating environments to receive commercial satellite Synthetic Aperture Radar (SAR). CTAR produces value-added maritime vessel detection position reporting via Over The Horizon Gold (OTG) Message Transmission Format. This enables detection of "dark" vessels because they are not emitting electromagnetic radiation from radar or other electro-magnetic communications. CTAR's wide area SAR field of view will be used to cue commercial Electro-Optical (EO) imaging satellites for higher resolution collection against vessels of interest. ***FY 2014 Accomplishments:*** Conducted two Technical Demonstrations of the end-to-end CTAR architecture by providing vessel detections using commercial SAR satellites and a mobile ground antenna/terminal. Conducted the first demonstration of the CTAR capability in the U.S. Africa Command area of responsibility. The second was conducted at the Department of Homeland Security (DHS) Air-Marine Operations Center. ***FY 2015 Plans:*** Conduct an in-theater Operational Demonstration and Operational Utility Assessment incorporating both commercial SAR and EO imaging into the CTAR architecture. Deliver the residual CTAR architecture including the mobile ground antenna/terminal for DoD and DHS use. Complete transition and close-out the JCTD.	3.968	2.943	-
Title: Dense Pack Access Retrieval and Transit (DPART) ***Description:*** DPART will demonstrate a suite of remotely controlled battery and hybrid powered material handling equipment (MHE) that can selectively access wheeled/tracked vehicles and containers and omni-directionally move them throughout confined spaces (including ships underway, hangars, and land based facilities).	4.945	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
FY 2014 Accomplishments: Completed the wheeled propulsion integration effort to the Container Lift and Maneuver System (C-LMS) and tested the capability of the system to transport loads up and down internal ship ramps. Conducted preliminary analysis and test of the battery system. Completed final in-house testing of the diesel C-LMS. FY 2014 resources will continue to produce results in FY 2015 and include: Technical Demonstration and Limited Operational Utility Assessment number one of the diesel C-LMS; fabrication of the universal remote control (URC) and the Autonomous Naval Transport, Large Wheeled Vehicle (ANT-LWV) system; a Technical Demonstration and Limited Operational Utility Assessment number two of the ANT-LWV and URC; completion of the final and full Operational Utility Assessment; transition residuals to the appropriate organizations; and transition to a General Service Administration (GSA) Schedule.			
Title: Joint Biological Agent Decontamination System (JBADS) ***Description:*** JBADS will provide biological decontamination by employing an innovative closed-loop, hot/humid forced air technique to significantly decontaminate the exterior/interior of a fully encapsulated aircraft. The system provides a significant leap forward from the currently approved use of hot, soapy water without the corrosive properties inherent with commonly used biological disinfectants used for rolling stock but not permitted on aircraft. This fully air-transportable green technique is designed for aircraft, however, the building block approach of the Thermal Decontamination Containment System allows for infinite configurations to encapsulate contaminated equipment in the future. ***FY 2014 Accomplishments:*** Completed and integrated the second Biological Thermal Unit with the Thermal Decontamination Containment System and successfully demonstrated capability to provide the environment needed to decontaminate an aircraft (C-130). Conducted the operational assessment; published Joint/Interagency Concept of Operations, Tactics, Techniques and Procedures, and doctrine change recommendations. FY 2014 resources will continue to produce results in FY 2015 and will analyze, evaluate, and publish scientific test results, maintain a residual operational capability for biological decontamination that is easily adaptable for rolling stock and other aircraft sizes, continue training and collaborate with Department of Homeland Security (DHS) for potential DHS applications and complete the JCTD.	3.646	-	-
Title: Joint Operational Long Term Evolution Deployable Tactical Cellular System (JOLTED TACTICS) ***Description:*** JOLTED TACTICS will demonstrate a joint architecture for an interoperable, lightweight, portable, ground mobile, airborne, and/or maritime communications-on-demand packages to allow users to quickly establish secure (Sensitive But Unclassified (SBU) and Suite-B for classified) wireless Long Term Evolution (LTE) Line-of-Sight and Beyond-Line-Of-Sight networks anytime, anywhere with minimal training and equipment. ***FY 2014 Accomplishments:***	2.415	1.495	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Conducted a successful Operational Demonstration (OD) utilizing an integrated SBU and Suite-B capability. The National Assessment Group completed a limited assessment of the OD and provided recommendations in support of a FY 2015 follow on OD. ***FY 2015 Plans:*** Complete the Suite-B Information Assurance Certification; complete the OD and Operational Utility Assessment; transition residuals to Naval Air Systems Command and U.S. Special Operations Command; deliver the JCTD Final Report; and complete the JCTD.			
Title: Mobility ***Description:*** Mobility allows the use of Commercial of the Shelf (COTS) mobile devices to wirelessly access multiple security domains using security enhanced thin-client applications and thick-client solutions in sanctuary and expeditionary environments. Mobility will provide ability for classified and unclassified access on a single hand-held device with use of National Security Agency certified commercial cryptography. Access will be provided to mobile domains through various communications transports in enterprise and expeditionary environments. ***FY 2014 Accomplishments:*** Completed the Implementation Directive, Management Plan, and Technical Transition Agreement. Integrated key technologies in unclassified networks. Obtained security approval to operate on unclassified network. Conducted Technical Demonstrations number one and two. FY 2014 resources will continue to produce results during FY 2015 and include: integration of key technologies on classified networks, security approvals for classified networks, Technical Demonstration number three, operational demonstration, user and utility assessment, and determine military utility.	3.910	-	-
Title: Multi Domain Simultaneous Access Virtual Environment (MD-SAVE) ***Description:*** MD-SAVE reduces overall networking infrastructure and allows a single workstation to access multiple domains utilizing one wire, while maintaining security separation. This solution will reduce network total cost of ownership. MD-SAVE leverages technology to enable the collapse of multi-tower workstations into one box. This approach is hardware-based and a prototype exists. Current design will allow for the collapse of up to 16 domains, ensuring physical separation and no cross-domain information flow. The result is a reduced multi-domain workspace that is certified and accredited saving space, weight, and power at U.S. Central Command Headquarters. ***FY 2014 Accomplishments:***	3.968	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Conducted a Limited Utility Assessment (LUA) with multiple MD-SAVE Desktop Workstations to test at multiple levels. Completed certification and accreditation (Secret and Below Information and Top Secret and Below Information), and completed an operational demonstration to an enterprise network.			
Title: Signal Intelligence Derived Electromagnetic Spectrum (SDEST) ***Description:*** SDEST will leverage National Security Agency (NSA) modernization initiatives to deliver Electo-Magnetic Spectrum (EMS) Target Folders (TF) providing a comprehensive view of the environment. It will compile relevant EMS Object Models (OM) supporting Kinetic/Non-Kinetic targeting, utilizing data from across the Global Cryptologic Enterprise. SDEST uses Cloud, Public Key Infrastructure (PKI), Smart Data Tagging and Cyber-Pilot technologies to enable timely and legal extraction and dissemination. It will deliver OMs via Electromagnetic Space Analysis Center (E-Space) managed Secret Internet Protocol Router Network (SIPRNet) and Joint Worldwide Intelligence Communications System widget query capabilities, and develop subscription services tailored to user-specified criteria. ***FY 2014 Accomplishments:*** Defined information flow and data environment. Identified information needs for desired OM/TFs. Developed OM/TF delivery and display capabilities (details are classified). Developed query capability, defined the object model, and identified the appropriate data sources for populating Electronic Warfare (EW) objects. Began investigating cross domain solution for SIPRNet delivery of EW objects. Performed a limited utility assessment. FY 2014 resources will continue to produce FY 2015 results and include incorporation of OM/TFs utilizing Cloud-based data processing and correlation, Smart Data Tagging and PKI access, widget/app-based query/subscription mechanism and thin client display/analysis tools, implement a cross domain solution across SIPRNet, develop radio frequency spectrum view, E-SPACE increment three cloud capability delivery, provide initial delivery of EW objects to the Kinetic/Non-Kinetic Integrated Force Effects (KNIFE) JCTD, conduct a Operational Utility Assessment, transition SDEST capabilities to E-SPACE, and complete the JCTD.	8.114	-	-
Title: Tactical Infrastructure Enterprise Services (TIES) ***Description:*** TIES provides capabilities to perform web services in the Denied-Disconnected Intermittent Limited (D-DIL) environment and the capabilities to pass data to the Tactical Edge (TE). TIES enables information sharing by delivering implementations of federated services: Collaboration (chat) and Security Framework (Identity Management). TIES enables D-DIL information exchanges among U.S. Army (USA), U.S. Air Force (USAF), U.S. Navy (USN), U.S. Marine Corps (USMC) systems using compression, prioritization, synchronization, replication, and aggregation. TIES will transition these TE secured capabilities to the Services tactical C2 systems used in the D-DIL environment. ***FY 2014 Accomplishments:***	3.680	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Provided preliminary capabilities for TE implementations for USA, USAF, USN, and USMC C2 systems to exchange data in D-DIL environment. Conducted Operational Demonstration number one. FY 2014 resources will continue to produce results during FY 2015 and include Operational Demonstration number two and a user assessment to complete the JCTD.			
Title: Low Cost Innovative Projects ***Description:*** Provide resources for approved JCTD projects requiring less than $1.000 million. ***FY 2014 Accomplishments:*** Completed Command and Control Gap Filler (C2GF), a project that provides capabilities to share all-source air surveillance data between DoD and other government departments. Completed Computer Active Network Defense in Depth (CANDID), a project that delivers cyber surveillance and situational awareness through fusion of heterogeneous sensor data. Completed Countermeasure Expendable with Replaceable Block Elements for Reactive Unmanned Systems Multi-Mission Jammer (CERBERUS), which delivers a net-enabled modular expendable jamming system based on the Air Force Miniature Air-Launched Decoy (MALD) that employs replaceable nosecone payloads to counter emerging threats in the U.S. Pacific Command area of responsibility. Completed Regional Domain Awareness (RDA), which demonstrates a standards-based unclassified framework for information sharing between U.S. government agencies and international partners. Completed Joint Enterprise Terminal Pack (JETpack) fifth to fourth, a technology that supports the airborne gateway to distribute fifth Generation data to fourth Generation fighters by translating their tactical data link into Link-16 messages that can be viewed by the fourth Generation aircraft. Completed and transitioned Information Volume & Velocity (IV2), a data discovery and processing capability that enables users to identify and visualize patterns, trends and changes in publicly available information over time and space to enhance decision-making. Completed the build and testing of three nano-satellites and associated ground hardware as part of the Space & Missile Defense Command (SMDC) Nano-satellite Program (SNaP-3). Completed “SPICE,” a classified program.	4.063	-	-
Title: Combatant Commander (COCOM) Direct Participation, Transition Enabling, and Special Programs ***Description:*** This effort is comprised of three programs that support the entire JCTD Program, separate from the specific JCTD projects. The three programs are (1) Unified COCOM Direct Support; (2) JCTD Pre-Transition; and (3) Program Integration Office for execution of select, classified projects. (1) COCOM Direct Support: The COCOMs are essential in specifying capability needs, project development, demonstration, assessment, and transition of JCTDs. The JCTD Program provides direct support to COCOMs, enabling the COCOMs to provide an on-site JCTD manager, typically one to two full-time equivalents (FTEs). (2) JCTD Pre-Transition: In some cases, Service or Agency partner transition funding is not available for one to two years following the JCTD assessment phase due to Service or Agency commitments. In such cases, where there is a clear transition and the need to sustain the capability for a short time prior to availability of Service or Agency transition funds the JCTD Pre-Transition fund may be used to meet that need. (3) Program Integration Office: A limited number of classified projects such as electronic miniaturization, electronic countermeasures, advanced mobile ad hoc network communications, and space situational awareness,	25.300	25.300	25.650

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
which require enhanced security measures due to need-to-know and/or mission partner sensitivities, are managed within the Program Integration Office. ***FY 2014 Accomplishments:*** Continued to provide COCOM direct participation to enable COCOM staff participation in developing and executing JCTD projects, ensuring direct warfighter input and proper focus of JCTD projects. Sustained selected completed JCTD efforts until POR funds are received. Developed and executed projects as proposed by COCOMs. ***FY 2015 Plans:*** Continue to provide COCOM direct participation to enable COCOM staff participation in developing and executing JCTD projects, ensuring direct warfighter input and proper focus of JCTD projects. Sustain selected completed JCTD efforts until POR funds are received. Develop and execute projects as proposed by COCOMs. ***FY 2016 Plans:*** Continue to provide COCOM direct participation to enable COCOM staff participation in developing and executing JCTD projects, ensuring direct warfighter input and proper focus of JCTD projects. Sustain selected completed JCTD efforts until POR funds are received. Develop and execute projects as proposed by COCOMs.			
Title: Enabling Technologies (ET) ***Description:*** The ET fund is used to assess or mature emerging capabilities that support the initiation of a Pre-Engineering and Manufacturing Development (Pre-EMD) prototype. Emerging Technology investments are small, short (less than one year) efforts that may lead to a prototype, depending on the final assessment and determination of technical maturity. ***FY 2014 Accomplishments:*** Projects included analysis of a capability for aerial delivery of Humanitarian Assistance/Disaster Relief (HA/DR) aid directly local survivors without risk of injury; an Integrated Building Partnership Capacity toolset for systemic planning, implementation, and assessment of DoD Security and HA/DR missions; Unmanned Aircraft System (UAS)-based flexible interdiction and defeat capability to counter Global Positioning System (GPS) and communications jamming threats; coalition port surveillance capability for cueing and tracking of Naval assets; affordable propulsion system to support growing demand for small launch vehicles; adaptive cyber defense systems for unclassified DoD logistics networks; rapidly deployable micro-scale unmanned air sensor platforms for night-time use; affordable early warning and characterization of maritime cruise missile attacks; enhanced access to Ultra High Frequency (UHF) Satellite Communications (SATCOM) for disadvantaged users; a global system for parsing and distribution of distress messages for collaborative exchanges between Personnel Recovery Centers; attack avoidance of tactical cloud systems by continuously restoring servers to an uncontaminated state within minutes; techniques for tracking and inference	6.000	7.000	4.500

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
of targets by extending the sheaf approach to the air domain; and behavior-based advanced tracking algorithm for land and maritime vehicles. ***FY 2015 Plans:*** Assessments will be based on maturity of emerging technologies capable of addressing Strategic Portfolio Review, Chairman Gaps, or eroding technological superiority shortfalls. Selected efforts will be small, focused, and executable in less than one year and require a concrete deliverable (prototype hardware and/or software, integrated subsystem, etc.). ***FY 2016 Plans:*** Assessments will continue to be based on maturity of emerging technologies capable of addressing Strategic Portfolio Review, Chairman Gaps, or eroding technological superiority shortfalls. Selected efforts will be small, focused, and executable in less than one year and require a concrete deliverable (prototype hardware and/or software, integrated subsystem, etc.).			
Title: FY 2014 Combatant Commands' (COCOM) Priorities ***Description:*** FY 2014 was a transition year for the JCTD program where Department/COCOM emerging priorities deemed significant and consistent with the rebalance were given greater emphasis. In addition, the Pre-EMD prototypes developed will focus in areas of concepts for space defense, solid state technologies for maritime defense, advancements in counter electronic systems and space capability without a space layer (precision navigation and timing, communications, battle-space awareness, international and interagency collaboration (Australian, Canadian, Department of Homeland security)). ***FY 2014 Accomplishments:*** Funded the first year of FY 2014 projects selected by Senior Department Leadership to satisfy COCOM Commanders' priority shortfalls. ***FY 2015 Plans:*** Fund the second year of the FY 2014 projects that are scheduled to proceed to a second year.	2.700	2.500	-
Title: Department's Strategic Priorities ***Description:*** The JCTD program will develop projects as Pre-EMD prototypes to address broader Defense strategic initiatives in areas such as Electromagnetic Spectrum Agility; Space Capability; Autonomy Systems and Multi-Domain Technologies; Countering Weapons of Mass Destruction; and Force Application. Selected projects will leverage networks within the global research and engineering enterprise to include government labs and integration facilities, depots, academia, as well as traditional and non-traditional providers. Prototypes will utilize best practices to satisfy joint and cross-cutting needs and the EC&P office will work with the Services to identify means to streamline prototype transition into the acquisition systems where appropriate. ***FY 2014 Accomplishments:***	5.573	33.794	29.490

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Selected projects that demonstrate military utility of integrated capability solutions; demonstrate robust fabrication processes; demonstrate performance in specific operational environment; define form, fit and function; and enable business case analyses. ***FY 2015 Plans:*** Explore prototypes in the areas of Electromagnetic Spectrum Agility; Space Capability Resilience; Autonomy Systems and Multi-Domain Technologies; Countering Weapons of Mass Destruction; and Force Application. ***FY 2016 Plans:*** Fund second year of the FY 2015 projects that are scheduled to proceed to a second year. Select projects that demonstrate military utility of integrated capability solutions; demonstrate robust fabrication processes; demonstrate performance in specific operational environment; define form, fit, function; and enable business case analyses.			
Title: Low Cost Missile Defeat (LCMD) Prototype ***Description:*** LCMD Prototype is a ballistic missile defense system designed to counter current and emerging Weapons of Mass Destruction (WMD) and Anti-Access/Area Denial (A2/AD) threats. LCMD is structured using a building block approach that first conducts a technology demonstration effort under the Deputy Assistant Secretary of Defense, Emerging Capability & Prototyping (DASD (EC&P)) to accelerate technology maturation. The Concept of Operations (CONOPS) for the system has been formulated to integrate LCMD into the existing National Ballistic Missile Defense (BMD) architecture and will prioritize the use of existing components and systems already fielded. LCMD is not designed as a replacement to existing BMD systems, but rather as a lower cost complementary/augmentative component to forward-deployed BMD assets. The LCMD capability will augment current BMD systems and mitigate threat vulnerabilities to U.S. personnel and strategic assets. Initial LCMD architecture, specifications, performance and critical technologies were defined, analyzed, and tested in FY 2014 under the Emerging Capabilities and Technology Development Program Element (PE) 0603699D8Z. ***FY 2015 Plans:*** During FY 2015, the LCMD program will continue to mature the architecture, initiate building the technology, complete a System Design Review (SDR), Preliminary Design Review (PDR), and prepare for the Critical Design Review (CDR)/Go-No-Go in FY 2016. ***FY 2016 Plans:*** In FY 2016, the project will conduct the CDR, Technical Readiness Review (TRR) and continue to develop and complete the technology and subsystems that will provide the foundation and core of an eventual prototype. Future phases of the LCMD project to include subsystems tests, prototype development and prototype testing will be determined in follow on years pending successful reviews and development.	-	20.000	50.000
Title: Advanced Counter Electronic System (ACES) Prototype	1.200	-	-

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Emerging Capability & Prototyping Directorate support for technical analyses and reviews and preliminary planning and documentation for a system development program of an advanced electronic countermeasure system(s). (Details are Classified) ***FY 2014 Accomplishments:*** Planned security, engineering, vulnerability, concepts of operation, and transition support for an engineering prototype demonstration. (Details are Classified)			
Title: Low Power Module (LPM) Prototype ***Description:*** Emerging Capability & Prototyping Directorate is combining efforts with Navy in developing a low-power modular counter-electro-optical-infra red (C/EO-IR) sensor capability to counter intelligence, reconnaissance, surveillance and targeting (ISRT) systems. (Details are Classified) ***FY 2014 Accomplishments:*** Began efforts to transition technologies developed in the successfully completed Pacific Sail (PACSAIL) JCTD and to eventually merge the capability with the Navy solid state laser technology maturation (SSL-TM) program. (Details are Classified) ***FY 2015 Plans:*** Develop concept of operations (CONOP) and associated tactics, techniques and procedures (TTPs). Conduct effects testing. (Details are Classified) ***FY 2016 Plans:*** Conduct additional effects testing and operational plan (OPLAN) analyses. (Details are Classified)	0.750	0.950	1.100
Title: Nano-Catalyst Desulfurization Prototype ***Description:*** Emerging Capability & Prototyping Directorate is supporting laboratory characterization and production of nano-catalysts for use in prototype development and demonstration of a system of systems to remove sulfur from JP-8 for use in auxiliary power unit fuel cells on heavy tactical vehicles. ***FY 2014 Accomplishments:*** Formed the industrial and academia test and development team to conduct laboratory engineering and characterization of the catalyst and to optimize binding of the catalyst to the substrate in a production mode. Demonstrated basic proof of principle of the ability to catalytically remove sulfur. Follow-on development is under review.	0.650	-	-
Title: Ravenscraig Prototype	5.500	9.000	15.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Ravenscraig will provide technical and operational characterization and countermeasures for a class of threat signals. (Details are Classified) ***FY 2014 Accomplishments:*** Developed and deployed first prototype. Conducted phase one trade study test. (Details are Classified) ***FY 2015 Plans:*** Continue development and demonstration. Conduct phase II testing with controlled platform. (Details are Classified) ***FY 2016 Plans:*** Funds prototype for non-operational fielding, experimentation/demonstration. (Details are Classified)			
Title: Salty Siren Prototype ***Description:*** Salty Siren will develop an indications and warning capability for countering Anti-Access/Area-Denial (A2/AD) missions. (Details are Classified) ***FY 2014 Accomplishments:*** Developed and tested a proof-of-concept design. (Details are Classified) ***FY 2015 Plans:*** Refine and test the engineering reference design to include a notional communication support package. (Details are Classified) ***FY 2016 Plans:*** Operationalize the field unit and conduct end-to-end acceptance testing. (Details are Classified)	1.000	1.000	1.000
Title: Wasabi Prototype ***Description:*** Wasabi will produce a real-time common operational picture of adversary missile and space activity. (Details are Classified) ***FY 2014 Accomplishments:*** Completed defining user requirements and delivered initial system prototype. (Details are Classified) ***FY 2015 Plans:*** Design data integration and processing infrastructure. (Details are Classified) ***FY 2016 Plans:***	2.800	4.200	4.800

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Implement rule sets to enable collaboration with coalition partners. (Details are Classified)			
Title: Advanced Tactical Data Fusion (ATDF) ***Description:*** ATDF is a prototype effort to improve situational awareness by fusing multi-source report and track data into a single composite track picture in real time. ATDF will develop, test, integrate, accredit, install, and demonstrate data fusion analytics that advance the state of the art in tactical data fusion of multiple tracks and multiple sensors in an operational environment in Talisman Sabre-15 (TS-15) force-on-force exercise. ***FY 2014 Accomplishments:*** Developed detailed Program Execution Plan. Conducted initial assessment of host ship's Command, Control, Communications, Computers, Collaboration, and Intelligence (C5I) infrastructure. Finalized initial system architecture. Began development of algorithms and integration into the Multi-Sensor Integrator (MSI). Started work on the Temporary Alteration (TEMPALT) design package and accreditation packages. Developed data collection plan. Participated in TS-15 planning conferences and working groups to coordinate exercise participation. Completed development and integration of algorithms into the MSI framework. Completed software integration testing. Completed TEMPALT design package. Accredited system. Installed in a ship during scheduled maintenance downtime. Tested installation and integration with shipboard systems underway. Trained crew. Completed Final Planning Conference and pre-sail preparations. Conducted operational demonstration during TS-15. Completed final report.	2.850	-	-
Title: India Science and Technology Focus Area ***Description:*** The India Science and Technology (S&T) Focus Area is designed to deepen and streamline defense cooperation between the U.S. and India. By sharing research resources, capabilities, and expertise, United States and India can jointly develop technological innovations needed to enable our defense industrial bases to support our militaries now and in the future. Developing vibrant S&T cooperation is one of the key steps in building an enduring partnership. ***FY 2015 Plans:*** Identified topic areas including autonomy, cognitive science, and directed energy science. Example projects include: Improving Cognitive & Artificial Cognition Models; Testing, Evaluation, Verification, and Validation for Autonomous Systems; High Altitude Fatigue Management and Performance Sustainment; Experimental and Computational Studies of Blast & Blunt Traumatic Brain Injury; Bio-Effects of Laser and High-Power Microwave Sources; and Joint Sealed Microwave Source Co-Development. ***FY 2016 Plans:*** Continue to develop projects initiated in FY 2015. Additional areas include: munitions development, materiel science advancements, and other identified project areas.	-	5.000	10.000
Accomplishments/Planned Programs Subtotals	141.170	119.790	141.540

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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Successful JCTDs can transition to acquisition via one of several methods:
- The JCTD addresses a documented capability gap in an existing Program of Record. The existing POR can acquire, further develop, sustain, and provide the capability under existing program documentation.
- The capabilities address capability gaps that naturally fit with an existing POR, but program documentation addressing the new capabilities does not exist. In these cases, existing POR documentation (such as the Capabilities Development Document or Capabilities Production Document) is revised to include the new capabilities from the JCTD, and the JCTD capabilities transition to the POR.
- The capabilities address a current operational need without requiring POR changes. In these cases, the JCTD capabilities may transition directly to operational use, with sustainment (operations and maintenance) funding arranged through the gaining command.
- The capabilities may be widely applicable commodity products, useful to many commands. In these cases, the commodity products listed on General Services Administration schedule, and made available for purchase by any commands needing the capability, using procurement funds.
- Results of JCTD are used to inform the research and engineering, acquisition, or requirements process.
- JCTD demonstrates the art-of-possible and results are put on the shelf to meet future threats and operational needs.

E. Performance Metrics

Strategic Goals Supported:
- Develop and demonstrate a prototype that fills a capability gap
- Demonstrate a capability to address a DoD key strategic gap
- Develop a prototype that informs the acquisition and requirements process
- Independent Assessment Capability
- Successful Military Utility Assessment (MUA)

The majority of funding from this program element is forwarded to the Services/Defense Agencies that execute the individual JCTD projects.

MEASURABLE OUTCOMES:
• JCTDs will demonstrate capability objectives within 24-48 months:
• The JCTD program achieved transition rates of the following: 70 percent transitioned to a new or existing Program(s) of Record, 24 percent transitioned to fieldable-prototypes (residual capabilities) sustained by non-JCTD funds in direct support of operations in theater. In FY 2014, 17 of 18 completed JCTDs successfully transitioned.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense			Date: February 2015
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603648D8Z / *Joint Capability Technology Demonstration (JCTD)*	Project (Number/Name) P264 / *Disruptive Demonstrations*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
P264: *Disruptive Demonstrations*	-	12.600	-	-	-	-	-	-	-	-	Continuing	Continuing

Note

The "Disruptive Demonstrations" Program code was inserted to support development/demonstration of time-sensitive capabilities that address Secretary/Department Strategic Vectors, and Chairman's Gap Assessment of capability shortfalls. As a result, we anticipate less partner funding for those strategic investment areas and will have to rely on greater partner funding for other JCTD projects. Overall we envision fewer JCTD projects that will be longer in duration.

In FY 2015, funds will be transferred from the JCTD Program Element to PE 0603289D8Z (Advanced Innovative Analysis & Concepts).

A. Mission Description and Budget Item Justification

The program will allocate a portion of the JCTD funding for Disruptive Demonstrations to solve priority shortfalls identified by Department Senior Leadership and the Chairman's Gap Assessment.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Disruptive Demonstrations	12.600	-	-
Description: In FY 2014, the Department allocated a portion of the Joint Capability Technology Demonstration funding line to technology demonstrations specifically aligned to the Department's strategic vectors (Asian-Pacific, low cost, small footprint operations) and the Chairman's Gap Assessment for capability shortfalls. As part of the Strategic Capabilities Office development efforts, analysis, and demonstration of diagnostics for Department of Defense networks; cognitive Intelligence, Surveillance, and Reconnaissance tools to enhance Theater Security Cooperation Plan activities; Command and Control tools for pre- and post-conflict periods; and enhanced Operations Security procedures to protect critical acquisition and operational data will be developed to meet Combatant Command (COCOM) urgent operational requirements. Due to nature of this project, specific descriptions and detailed plans are available at higher classification levels. In FY 2015, funds will be transferred from the JCTD Program Element to PE 0603289D8Z (Advanced Innovative Analysis & Concepts).			
FY 2014 Accomplishments: Completed delivery design, launch assembly, guidance assembly, sensor payloads, and UAV launch model and mission planner for four unique alternatives to support U.S. Pacific Command urgent and compelling operation needs. Conducted over 100 test launches demonstrating communication between mission planner and launch vehicles. Completed design concept and Preliminary Design Reviews for the four systems. Completed approximately 100 sub-system data collections to develop high			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
fidelity models. Successfully launched and recovered UAV with full weight payload with mission planner software. Due to nature of these efforts, specific descriptions and detailed plans are available at higher classification levels.			
Accomplishments/Planned Programs Subtotals	12.600	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The primary acquisition strategy for funding Disruptive Demonstrations will be through Military Inter-Departmental Purchase Requests (MIPRS). The specifics of each MIPR will be dependent upon the development center, laboratory, contractor or agency requirements and needs. If an Inter-Agency agreement is required, compliance and coordination of the agreement will be completed in coordination with the receiving activity and Federal Acquisition Regulation 17.5.

E. Performance Metrics

Performance metrics are specific to each Disruptive Demonstration effort and include measures identified in the management approach, Statement of Work (SOW), and Period of Performance (POP). In addition, completions and successes are monitored against schedules and deliverables stated in the initiative's management approach. Generic performance metrics applicable to the RDT&E initiatives 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 metrics for this objective is to transition 40 percent of completing demonstration programs per year.