Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 3: *Advanced Technology Development (ATD)*	R-1 ITEM NOMENCLATURE PE 0603648D8Z: *Joint Capability Technology Demonstration (JCTD)*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	196.076	168.577	206.917	0.000	206.917	211.229	214.065	217.537	221.388	Continuing	Continuing
P648: *Joint Capability Technology Demonstration (JCTD)*	196.076	168.577	206.917	0.000	206.917	211.229	214.065	217.537	221.388	Continuing	Continuing

Note

The appropriation, Program Element (PE) and Budget Activity (BA) structure for the new JCTD process includes the following:
JCTD PE 0603648D8Z (RDT&E/DW BA-3)
JCTD Transition Funding PE 0604648D8Z (RDT&E/DW BA-4)
Defense Acquisition Executive (DAE) (RDT&E/DW BA-5)
In FY 2011 funding is transferred from the JCTD BA4 PE and Defense Aquisition Executive (DAE) Pilot programs into this PE.

In FY 2008 all Advanced Concept Technical Demonstration (ACTD) funding (Program Element (PE) 0603750D8Z) transferred into the Joint Capability Technology Demonstration (JCTD) PE 0603648D8Z. This action completed the transition to the JCTD model that began in the FY 2006 President's Budget. The JCTD Program provides a "cradle to grave" path for transformational joint capabilities. The two JCTD PEs represent a more complex and capable JCTD model. The model contains a JCTD BA3 development arm as well as JCTD BA4 transition arm. Under the JCTD process, the pace of development will accelerate to two-to-three years. Only the JCTDs that demonstrate the highest military utility will be considered for the transition funding in the JCTD BA4 Transition PE (0604648D8Z). Not all JCTDs require transition funding, many projects have a very clear transition path, and however, some projects that demonstrate significant military utility require transition funds to "bridge" them to a program of record. Any remaining ACTD that is completing and shows military utility may receive transition funding. Beginning in FY 2007 and out all new starts are JCTDs only (no ACTDs). In FY 2011 funding is transferred from the JCTD BA4 PE and Defense Aquisition Executive (DAE) Pilot programs into this PE. Refer to the specific Budget Exhibit for more details on each funding line.

A. Mission Description and Budget Item Justification

The purpose of the Joint Capability Technology Demonstration (JCTD) Program is to:
- Demonstrate joint solutions to prioritized Combatant Commander (CoCom) capability gaps.
- Speed solutions to warfighters with spiraled technologies and complete demonstrations in 18 to 36 months.
- Enable strategic and operational CoCom challenges to become available inside traditional two-year programming/budgeting processes.

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The JCTD Program was redesigned in FY 2006 from the Advanced Concept Technology Demonstration (ACTD) Program. The Department initiated thirty-four (34) JCTDs from FY 2006 through FY 2008 and will initiate up to twelve immediate and rolling new start JCTDs in FY 2009.

- The JCTD model is designed based on DoD, Government Accountability Office (GAO), and Congressional recommendations.
- The tenants of the JCTD model provide increased funding in the first two years of the demonstration effort to accelerate completion with “transition” funding available for projects that prove significant military utility.
- Program goals include: Spiraling products and deliverables; Operational Utility Assessment (OUA) complete within 36 months; and 80 percent of the JCTDs transition products to fielded capability sustainment and/or a program of record (POR).
- The JCTD business model explicitly calls attention to the needs of the joint warfighter through the U.S. Combatant Commands, while garnering JROC validation through the Joint Staff Joint Capability Integration Development System (JCIDS) process.
- The JCTD program provides flexibility through immediate and rolling new starts to address the most urgent U.S. Combatant Commanders needs.
- FY 2009 supports 58 active projects: 13 continuing ACTDs; 33 prior year JCTDs; and seven new start JCTDs; includes an estimate of five potential rolling starts.
- Presidents Budget FY 2010 supports 49 active projects: two continuing ACTDs; 29 prior year JCTDs; includes eight (estimated) FY 2010 immediate and five (estimated) rolling start new start JCTDs to be selected in June 2009.

MEASURABLE OUTCOMES: The JCTD model is capability based, not threat based, serving U.S. Combatant Command priorities by focusing on near-term joint needs. Stated metrics include: 25 percent of JCTDs will provide an operationally relevant product demonstration within 24 months and 75 percent will complete final demonstration within three years of Implementation Directive signature. JCTDs spiral products and deliverables and 70 percent of JCTDs transition at least 50 percent of their products to sustainment. Since inception in 2006 the JCTD program is exceeding all metrics including faster completion times and increased transition rate to Programs of Record (PORs).

Transition Achievement: The JCTD program has been achieving it's Transition goals with actual transition rates in excess of 70 percent. The JCTD Program defines transition as a project’s product or products going to new or existing Programs of Record (PoR) and/or providing residual products in direct support of the Warfighter that satisfies a specific requirement. Of all completed AC/JCTDs, the transition rate is currently 73% (to **PoR: 45% (53 of 118); to **Residual: 28% (33 of 118)). In FY09 100% of the AC/JCTDs completing demonstrations are going to new or existing PoRs or are providing residual products in direct support of the warfighter. FY09 transitions for the 17 completed projects are 15 projects to Programs of Record and 2 projects to residual sustainment to the warfighter. Of 184 total AC/JCTDs, 64 have deployed in support of OEF/OIF covering the following Functional Areas: Battlespace Awareness: 26, Command & Control: 11, Force Application: 9, Logistics: 14, Protection: 13, Net-Centric: 2. CENTCOM-sponsored AC/JCTDs deployed in OEF/OIF: 13. This exceeds the objective of 30 percent for demonstration programs (Draft Strategic Objective 4-2, Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD (AT&L)).

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense	DATE: February 2010
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B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	207.096	198.352	0.000	0.000	0.000
Current President's Budget	196.076	168.577	206.917	0.000	206.917
Total Adjustments	-11.020	-29.775	206.917	0.000	206.917
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-30.000			
• Congressional Rescissions	0.000	-1.375			
• Congressional Adds		1.600			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-6.671	0.000			
• SBIR/STTR Transfer	-4.349	0.000			
• Other Program Adjustments	0.000	0.000	206.917	0.000	206.917

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: P648: *Joint Capability Technology Demonstration (JCTD)*		
Congressional Add: *Distributed Network Switching (DNS)*	2.000	1.600
Congressional Add: *Maritime UAS Demonstration for the SOUTHCOM Region*	3.000	0.000
Congressional Add: *Simultaneous Field Radiation Technology (SFRT)*	2.300	0.000
Congressional Add: *Spartan Advanced Composite Technology*	1.600	0.000
Congressional Add Subtotals for Project: P648	8.900	1.600
Congressional Add Totals for all Projects	8.900	1.600

Change Summary Explanation

This budget submission combines the three JCTD Program Elements (transfers BA4 and Defense Acquisition Executive Pilot programs back to JCTD BA3 0603648D8Z).

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P648: *Joint Capability Technology Demonstration (JCTD)*	196.076	168.577	206.917	0.000	206.917	211.229	214.065	217.537	221.388	Continuing	Continuing

Note

The appropriation, Program Element (PE) and Budget Activity (BA) structure for the new JCTD process includes the following:
JCTD PE 0603648D8Z (RDT&E/DW BA-3)
JCTD Transition Funding PE 0604648D8Z (RDT&E/DW BA-4)

In FY 2008 all Advanced Concept Technical Demonstration (ACTD) funding (Program Element (PE) 0603750D8Z) transferred into the Joint Capability Technology Demonstration (JCTD) PE 0603648D8Z. This action completed the transition to the JCTD model that began in the FY 2006 President's Budget. The JCTD Program provides a "cradle to grave" path for transformational joint capabilities. The two JCTD PEs represent a more complex and capable JCTD model. The model contains a JCTD BA3 development arm as well as JCTD BA4 transition arm. Under the JCTD process, the pace of development will accelerate to two-to-three years. Only the JCTDs that demonstrate the highest military utility will be considered for the transition funding in the JCTD BA4 Transition PE (0604648D8Z). Not all JCTDs require transition funding, many projects have a very clear transition path, and however, some projects that demonstrate significant military utility require transition funds to "bridge" them to a program of record. Any remaining ACTD that is completing and shows military utility may receive transition funding. Beginning in FY 2007 and out all new starts are JCTDs only (no ACTDs). In FY 2011 funding was transferred from the JCTD BA4 PE and the Defense Acquisition Executive (DAE) Pilot Programs into the PE. Refer to the specific Budget Exhibit for more details on each funding line.

A. Mission Description and Budget Item Justification

The purpose of the Joint Capability Technology Demonstration (JCTD) Program is to:
- Demonstrate joint solutions to prioritized Combatant Commander (CoCom) capability gaps.
- Speed solutions to warfighters with spiraled technologies and complete demonstrations in 18 to 36 months.
- Enable strategic and operational CoCom challenges to become available inside traditional two-year programming/budgeting processes.

The JCTD Program was redesigned in FY 2006 from the Advanced Concept Technology Demonstration (ACTD) Program. The Department initiated 45 JCTDs from FY 2006 through FY 2009 and will initiate ten to twelve new start JCTDs in FY 2010.
- The JCTD model is designed based on DoD, Government Accountability Office (GAO), and Congressional recommendations over the past three years.
- The tenants of the JCTD model provide increased funding in the first two years of the demonstration effort to accelerate completion with “transition” funding available for projects that prove significant military utility.

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• Program goals include: Spiraling products and deliverables; Operational Utility Assessment (OUA) complete within 36 months; and 70 percent of the JCTDs transition products to fielded capability sustainment and/or a program of record (POR).
• The JCTD business model explicitly calls attention to the needs of the joint warfighter through the U.S. Combatant Commands, while garnering JROC validation through the Joint Staff Joint Capability Integration Development System (JCIDS) process.
• The JCTD program provides flexibility through immediate and rolling new starts to address the most urgent U.S. Combatant Commanders needs.
• FY 2009 supports 58 active projects: 13 continuing ACTDs; 33 prior year JCTDs; and seven new start JCTDs; includes an estimate of five potential rolling starts.
• Presidents Budget FY 2010 supports 43 active projects: thee continuing ACTDs; 28 prior year JCTDs; additionally eleven FY 2010 new JCTD candidate projects were selected in August 2009 as FY 2010 new starts pending Congressional Notification.

MEASURABLE OUTCOMES: The JCTD model is capability based, not threat based, serving U.S. Combatant Command priorities by focusing on near-term joint needs. Stated metrics include: 25 percent of JCTDs will provide an operationally relevant product demonstration within 24 months and 75 percent will complete final demonstration within three years of Implementation Directive signature. JCTDs spiral products and deliverables and 70 percent of JCTDs transition at least 50 percent of their products to sustainment. Since inception in 2006 the JCTD program is exceeding all metrics including faster completion times and increased transition rate to Programs of Record (PORs).

Transition Achievement: The JCTD Program defines transition as a project's product or products going to new or existing Programs of Record (PoR) and/or providing residual products in direct support of the Warfighter that satisfies a specific requirement. Of all completed AC/JCTDs, the transition rate is currently 73% (to **PoR: 45% (53 of 118); to **Residual: 28% (33 of 118)). In FY09 100% of the AC/JCTDs completing demonstrations are going to new or existing PoRs or are providing residual products in direct support of the warfighter. FY09 transitions for the 17 completed projects are 15 projects to Programs of Record and 2 projects to residual sustainment to the warfighter. Of 184 total AC/JCTDs, 64 have deployed in support of OEF/OIF covering the following Functional Areas: Battlespace Awareness: 26, Command & Control: 11, Force Application: 9, Logistics: 14, Protection: 13, Net-Centric: 2. CENTCOM-sponsored AC/JCTDs deployed in OEF/OIF: 13. This exceeds the objective of 30 percent for demonstration programs (Draft Strategic Objective 4-3, Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD (AT&L)).

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Adaptive Planning Pilot (APP)	2.800	2.420	2.600	0.000	2.600
The Adaptive Planning Pilot JCTD is a rolling start from FY 2008 that did not start until FY 2009. The outcome of the APP JCTD is to provide Combatant Commanders with urgently needed dynamic					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and agile force planning capabilities as outlined in the Adaptive Planning Road Map II. The APP JCTD will provide vitally needed global force management tools for Adaptive Planning and Execution (APEX) users. The APP JCTD is a three-year project under the sponsorship of Joint Forces Command (JFCOM) and will be used to provide early capability to planners and force providers by providing additional services that are not present in the GCCS Family of Systems. The JCTD is also used as a risk mitigation tool for the APEX program by providing valuable lessons learned from the Services Oriented Architecture (SOA) development approach. Completion of development and demonstration is planned for 2012. The Transition Manager is the Adaptive Planning (AP) Program Office in the Defense Information Systems Agency (DISA). The primary output will be the ability of COCOM and Joint Staff planners, as well as the military Services to conduct streamlined operations with the Global Force Provider (JFCOM) and with members of the Joint Planning and Execution Community (JPEC).The primary metric is more accurate and timely global force management during planning and execution. Completion date is April 2012. *FY 2009 Accomplishments:* Developed Spiral 1 technical demonstration strategic guidance services. *FY 2010 Plans:* Spiral 1 technical demonstration and limited operational assessment. Develop Spiral 2. *FY 2011 Base Plans:* Spiral 2 technical demonstration 1Q FY 2011 and Operational User Assessment Planned for 3Q FY 2011. Transition functionality to configuration management and sustainment by the DISA Adaptive Planning Program Office. JCTD completes in April 2012.					
Advanced Distributed Aperture System (ADAS) The Joint Requirements Oversight Council (JROC) validated the capability need for ADAS as an FY 2008 new start. The outcome of ADAS is to demonstrate and assess the military utility of a multi-	5.000	5.291	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
spectral suite of sensors on an H-60 aircraft to provide full spherical imagery to aircrew members via head-tracked helmet mounted displays with day/night pilotage, heads-up display with navigational/ flight symbology data, multi-band threat laser warning, weapons symbology, partial brownout solution, and some hostile fire indications and friendly/enemy aircraft tracking information enhance aircraft survivability and aircrew situational awareness. During the developmental phases, ADAS Concept of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTPs) will be developed and refined. ADAS is a three-year project under the Combatant Command (CoCom) sponsorship of U.S. Special Operations Command (USSOCOM) with completion of development and demonstration by end of FY 2010, based on release of funds. If the ADAS JCTD shows sufficient military maturity and utility, it will transition to a Program of Record (POR) under the USSOCOM Program Executive Officer for Rotary Wing by FY 2011. The U.S. Army is the lead service. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are: 1) Increased survivability of Special Operations Aviation (SOA) forces; 2) Increased capability for SOA forces during Direct Action (DA) missions; 3) Enhanced capabilities for SOA forces to move and identify targets in low/no-light environments; 4) Enhanced capabilities for SOA forces to move and identify targets in urban/restrictive terrain. *FY 2009 Accomplishments:* Completed baseline development and system hardening. Draft integration plan onto aircraft. Complete transition plan, and assessment plan for the final Military Utility Assessment. *FY 2010 Plans:* Complete Military Utility Assessment, begin transition to Program Executive Office (PEO) Rotary Wing. Complete transition to PEO Rotary Wing. ADAS JCTD scheduled completion date is December 2010.					
Airborne Weapons Surveillance System (AWSS) The Joint Requirements Oversight Council (JROC) validated the capability need for AWSS as an FY 2007 new start. Funding was secured and planning finalized for FY 2008 start. The output of	2.100	1.861	1.998	0.000	1.998

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
AWSS will be demonstration of a capability to immediately detect enemy artillery, rocket, and mortar fires, classify those fires, and relay locations of enemy firing units to coalition counter-fire systems. The JCTD will use advanced staring non-imaging infra-red wide field-of-view detectors, together with electro-optic video, aboard unmanned air vehicles. The efficiencies of the AWSS system will be: (1) percent of detections of artillery fires at ranges of 20 km or greater, (2) location accuracy of hostile firing units, and (3) transmission time of hostile fires and hostile firing locations to coalition counterfire units, in efficient machine readable formats. The sponsor of AWSS is U.S. Pacific Command, and Republic of Korea is the coalition partner. Operational management is from Commander US Forces Korea and Republic of Korea Army. Technical lead is Army Aviation & Missile Research, Development and Engineering Center, and transition lead is Army Program Manager Unmanned Air Systems. Technical demonstrations will occur in the US using US Army manned and unmanned air vehicles, with operational assessment in forward areas using a Republic of Korea unmanned air vehicle. *FY 2009 Accomplishments:* Completed component testing. Integrate payload into unmanned air systems. Conducted laboratory and field trials. Conducted military utility assessment. *FY 2010 Plans:* Deliver residual capability to Combined Forces Korea. Integrate refinements identified in utility assessments. Refine concepts of operations. Support residual operations. *FY 2011 Base Plans:* Support residual operations by Combined Forces Korea. See JCTD Transition Budget Activity 4 (BA4) R2a exhibit for additional planned US transition activities.					
CORPORAL The Joint Requirements Oversight Council (JROC) validated the need for CORPORAL capabilities as a FY 2008 new start. The output of CORPORAL will be to provide ground-based, deployed Marines and	5.500	2.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Soldiers with the capability to take full advantage of tactically relevant sensor data, Command & Control (C2), and Electronic Attack (EA) in near real time. Specifically, Non-Traditional ISR (NTISR) 'on-demand" to the ground unit; beyond Line of Sight connectivity maximizing opportunity for collaboration or synchronization; distributed operations demand faster responses and necessitate providing greater capability to existing aircraft rather than introducing new aircraft; greater joint service capacity from existing and planned EA assets and platforms. The efficiencies of the CORPORAL JCTD will be to decentralize the data to share openly across systems allowing airborne and ground-based tactical systems to be connected. The result is a greatly improved/ expanded communications range and availability so that critical data/information can be shared with other warfighters allowing collaboration and visibility to higher authorities. This will provide the ground forces with a beyond-line-of-sight (BLOS) connectivity to ISR resources (traditional and non-traditional) that they do not have today. This JCTD will provide a collaborative distributed data and information exchange framework based on existing and planned warfighters' communication waveforms. CORPORAL is a three-year project sponsored by US Central Command with a planned transition by the Marine Corps in 2011. *FY 2009 Accomplishments:* Limited Utility Assessment (LUA) is being conducted in September 2009 at a Weapons and Tactics Instruction exercise at Marine Corps Air Station, Yuma, AZ. At the LUA CORPORAL will demonstrate the networking capability provided by CINAPS on board an EA-6B, FA-18; and an AV-8B. The LUA is also demonstrating the commander workstation capability as well utilize an unmanned aerial vehicle to provide imagery data on the CORPORAL network. Additionally the LUA is incorporating the Intrepid Tiger program as a node on the CORPORAL network and thus an accessible asset to the warfighter. The LUA marks the end of Spiral 1. *FY 2010 Plans:* Technical Demonstration # 2 will be conducted demonstrating the Electronic Attack capability of CORPORAL. technical Demonstration # 3 will be conducted in December 2010 as a dress rehearsal for the Military Utility Assessment (MUA) that will be conducted in April 2011 at a Weapons and					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Tactics Instruction exercise at Marine Corps Air Station, Yuma, AZ. At TD # 3 and the MUA we will demonstrate the entire CORPORAL capability. This includes the networking, electronic attack, electronic warfare systems architecture, and electronic attack services capabilities. The MUA will mark the end of Spiral 2. Begin transition of CORPORAL to PMA-234. Complete transition to PMA-234. The CORPORAL JCTD scheduled completion date is June 2011.					
CoCom Direct Support, Pre-Transition and Classified Programs	19.275	19.000	23.000	0.000	23.000
The JCTD Direct Program Support is comprised of four programs broken-out separately from the specific JCTDs projects. The direct funding line is used to provide support for the entire JCTD program (versus individual JCTDs). These three programs include (1) Unified Combatant Commander (CoComs); (2) JCTD Pre-Transition Support; (3) Interagency Classified Projects, and 1) Unified Combatant Commander (UCC) Direct Support: The CoComs play an essential role in the selection, validation, demonstration, and transition of JCTDs. The focus of JCTDs is to directly fill joint CoCom/ coalition capability gaps. Many JCTDs have funding allocated for the CoComs from within their specific program funding lines. Additionally, in previous years the Rapid Fielding Directorate would attempt to provide direct ACTD support from OSD if resources became available. This direct support allows for a timely allocation of resources to the CoComs, based on the number of JCTD projects being sponsored and the intensity of effort required. The Department also envisions that the CoComs will play a greater role in the development, support and coordination of JCTDs that are coalition oriented (within their specific AOR). 2) JCTD Pre-Transition Support: The JCTD program has been highly successful in rapidly developing and demonstrating new technologies and complementary concepts of operations for the warfighter. In order to successfully transition more JCTDs to the warfighter, the SECDEF established the goal of increasing the number of JCTDs evolving into formal acquisition programs. In order to enhance this transition effort and to respond to GAO recommendations in earlier years, the JCTD program continues to support a pre-transition line in the JCTD budget submission.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
3) Special Capabilities Office (SCO)/Interagency Classified Support for JCTDs: JCTDs also support a limited number of classified efforts which are coordinated with other agencies and detailed in separate DoD budget exhibits. *FY 2009 Accomplishments:* Liasion and review with CoComs and Coalition high leverage, joint urgent requirements for possible candidate. Support SCO office in demonstration of classified technology capabilities. One example of SCO Office support of classified projects is the WB-57 aircraft that is used to demonstrate the military utility of advanced aerial sensors and systems against realistic and actual high value targets to enhance the information produced by each sensor, derive synergistic information from multiple concurrently operated sensors, and demonstrate advanced data dissemination and processing, thus enhancing the value and timeliness of the information to the warfighter and the COCOM. Another example is the SCO #4 project that during the Thunderstorm Spiral-2 technology demonstration in June 2009, the SC0#4 or "Project 7" JCTD demonstrated a novel computer algorithm that took advantage of residual national sensor systems to improve the accuracy with which several communications devices can be located. The improvement, which in one case reduced the location error by a factor of ten, can be used by JIATF-S forces to improve their probability of successfully interdicting narcotics smugglers and other illicit maritime traffic. *FY 2010 Plans:* Liasion and review with CoComs and Coalition high leverage, joint urgent requirements for possible candidate. Support SCO office in demonstration of classified technology capabilities. *FY 2011 Base Plans:* Liasion and review with CoComs and Coalition high leverage, joint urgent requirements for possible candidate. Support SCO office in demonstration of classified technology capabilities.					
Coalition Secure Management and Operations System (COSMOS)	0.346	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Joint Requirements Oversight Council (JROC) validated the multinational information sharing requirements and capabilities to be delivered by COSMOS. The COSMOS ACTD began in FY 2005. The COSMOS ACTD outcome was to be a pilot implementation of the Multilateral Interoperability Program (MIP) specifications for C2 data sharing (specifically the Command and Control Information Exchange Data Model (C2IEDM) and the associated Information Exchange Mechanism (IEM)) in the Combined Enterprise Regional Information Exchange System (CENTRIXS) coalition network environment. COSMOS conducted a final demonstration of foundational capability in CY 2008. The expected output was identification of necessary and sufficient conditions for implementing the MIP specifications with policy-based information sharing operational rules and security enforcement. COSMOS was expected to lead to rapid, secure protected sharing of critical C2 information to and among coalition partners' organic command and control (C2) systems on a single and secure integrated coalition network. The projected efficiencies included substantial reduction of textual message exchange needed for shared situational awareness among coalition commanders, improved collaborative decision making, reduced confusion, uncertainty and delay in combat and crisis operations, and effective bridging of coalition sourced information with US Global Information Grid (GIG) Network Centric Enterprise Services (NCES). Transition to programs of record was planned for FY 2009, targeting the emerging Multinational Information Sharing (MNIS) initiatives. Projected sustainment of the demonstrated capabilities by DISA beyond FY 2009 was not achieved because maturity of the operational concepts and technologies required did not evolve as rapidly as expected. COSMOS was to be a three year ACTD co-sponsored by U. S. Pacific Command (PACOM) and U. S. European Command (EUCOM). The Defense Information Systems Agency (DISA) was the lead agency. *FY 2009 Accomplishments:* The COSMOS ACTD demonstrated the concepts for selected, protected, policy-based information sharing among coalition partners (Canada, United Kingdom and Australia. Singapore observed). Completed the ACTD.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Combat Autonomous Mobility System (CAMS)	5.100	0.605	0.000	0.000	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for CAMS as a FY 2008 new start. Special Operations Forces (SOF) are operating for extended periods in wide ranging, austere, non-permissive areas against larger forces; all with resource constrained manpower. The CAMS JCTD output will provide robust organic capability to conduct: timely Intelligence, Surveillance, and Reconnaissance (ISR); Command and Control of multiple assets over extended distances; and automated mobility in support of SOF mission profiles. The system will employ mature sub-components integrated onto an existing ground mobility platform – the High Mobility Multipurpose Wheeled Vehicle (HMMWV). The CAMS technologies will provide a positive impact at multiple levels. At the strategic level, CAMS will increase the combat effectiveness of the available SOF soldiers, allowing the task force commander the ability to control more real estate with his assigned manpower. Operationally, the autonomous nature of CAMS will simplify the task of coordinating assets within the assigned Area of Responsibility. CAMS on-board processing allows automated reconnaissance, screening of imagery, system alerts, and apportionment of data throughout the local grid. At the tactical level, CAMS provides a means to limit exposure of SOF Soldiers to direct hostile fire and offload specific tactical tasks. This will allow the Warfighter to concentrate his effort on the most critical mission tasks as determined by the ground commander. In short, the CAMS JCTD efficiencies will integrate ground-based autonomous technology to force multiply the available SOF manpower. The user sponsor is U.S. Special Operation Command (USSOCOM). CAMS technology will transition to Program Executive Office - SOF Warrior and the Robotic Systems, Joint Program Office.

FY 2009 Accomplishments:
Delivered CAMS-modified Platforms; Completed Tactics, Techniques and Procedures (TTPs); completed Demonstration #1 of Operational Utility Assessment (OUA); Drafted Capability Development Document (CDD).

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Technical Limited Objective Experiment (TLOE) 2; and Demonstration #2, (Final OUA); Revisions to TTPs and CDD.					
Communications Air-Borne Layer Expansion (CABLE) The Joint Requirements Oversight Council (JROC) validated the need for CABLE as an FY-08 start. The outcome of CABLE is to demonstrate airborne networking for tactical Joint, Interagency, Intergovernmental and Multi-National (JIIM) users who lack mobile and dynamic connectivity throughout the full range of operations. CABLE will enable interoperability between air, land, and maritime domain communication systems; enable robust information sharing; and provide strategic communications reach back in an austere or over-subscribed SATCOM environment. Transition to the Service Programs of Record (POR) in FY 2011. Outputs and efficiencies to be demonstrated in include (1) seamless interconnection of multiple air, maritime and land network coverage areas supporting voice and data, (2) cross-band and multi-domain connectivity within and between coverage areas through IP routing, (3) the extension of command and control connectivity throughout the full range of operations, and (4) enhanced network services for voice, video and data communications over a common IP network. U.S. Strategic Command (USSTRATCOM) and US. Joint Forces Command (USJFCOM) are the sponsors. US Navy and US Air Force are lead Services. *FY 2009 Accomplishments:* Participated in Bold Quest 2009 to test and evaluate CABLE interface specifications and protocol standards focusing on the tactical edge access layers and forward tactical services applications. Integrated and flight tested CABLE protocols-enabled prototypes. Commenced planning for operational demonstrations and Operational Utility Assessment. Transition strategy shifted to Navy when Air Force Objective Gateway program was canceled. CABLE activities provided input to the emergent Joint Aerial Layer Networking (JALN) Initial Capabilities Document development, capturing tactical interface lessons learned to date	5.200	4.300	5.460	0.000	5.460

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Conduct operational demonstration and Operational Utility Assessment. Finalize planning for operational demonstrations and Operational Utility Assessment. Technical management and lead service shifted to Navy when Air Force Objective Gateway program was canceled. Begin transition to Navy aerial layer networking programs, through Space and Naval Warfare Systems Command, and to Air Force Global Cyberspace Integration Center. Transition Managers are Space and Naval Warfare Systems Command and Air Force Global Cyberspace Integration Center. *FY 2011 Base Plans:* Complete transition to the Services. Complete the JCTD.					
Counter Intelligence - Human Intelligence Architecture Modernization Program, Intelligence Operations Now (CHAMPION) The Joint Requirements Oversight Council (JROC) validated the capability need for CHAMPION as a FY 2006 new start Joint Capability Technology Demonstration (JCTD). The outcome will provide improved capabilities for the counter-intelligence, human-intelligence and special forces communities of interest. These improvements will provide an accessible and actionable information system for management of the CI/HUMINT collection, mission planning and asset management information. The capabilities include technologies for integration of structured and un-structured reports, entity extraction and tagged geospatial information. The primary outputs demonstrated to the users and evaluated in the Military Utility Assessment are: 1) joint data standard for human domain; 2) CHAMPION information collection tool and associated concept of operations (CONOPS), tactics, techniques and procedures (TTPs); 3) CI-HUMINTmission management tools with federated search capability and data replication/ access across multiple networks; and 4) integrated geo-tagged photo extraction, CIHUMINT data access tools for multi-intelligence discipline fusion. The efficiencies to be gained are; 1) improved effectiveness of HUMINT operations; 2) elimination of Human domain data stovepipes; 3) joint human domain data standard; 4) improved web enabled data access across multiple networks and security	2.500	0.484	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
levels; 5) Joint CONOPs/ TTPs; 6) geo-spatially enabled mission and asset management tools, 7) prototype voice biometrics standards, architecture and operational concepts. The transition strategy is to incorporate CHAMPION capabilities into the Distributed Common Ground Station Army program of record (POR) and PdM CHARCS. The sponsoring Combatant Command (CoCom) is the U. S. Central Command (CENTCOM). Other organizations involved as participants, users of capabilities, and/or observers include USSOCOM, USJFCOM, Defense Intelligence Agency, and the National Security Agency. The lead service is the Army. *FY 2009 Accomplishments:* Finalized CONOPs and TTPs. COCOM sponsor issue final assessment report. Continued to field interim capabilities into CENTCOM Area of Responsibility (AOR). The JCTD completes in 2009. In FY 2009 the project is transitioning to Programs of Record. Corvett Annex development and integration. CORVET is completing technical demonstration #2 (TD) and the Military Utility Assessment (MUA). The MUA is being conducted at Camp Bullis in August 2009. *FY 2010 Plans:* Corvet Annex enhancement to CI-HUMIT will complete and transition to PM Biometrics.					
Critical Runway Assessment and Repair (CRATR) The Joint Requirements Oversight Council validated the capability need for CRATR as an FY 2008 new start. The outcome of CRATR is to develop the capability to conduct rapid airfield damage assessment, determine the minimum airfield operating surface required, identify unexploded ordnance, and repair runway damage to enable critical airfields to rapidly return to operation. The CRATR JCTD will evaluate existing, new and commercial technologies and procedures, and integrate the most successful of these technologies and procedures to develop both material and equipment solutions. The primary outputs and efficiencies to be demonstrated in the JCTD are: 1) Successful solutions from early demonstrations will be used to create an interim modular repair kit which will form the Spiral One capability for theater; 2) After a successful final demonstration, products from the CRATR QRF/JCTD will be packaged	4.100	0.605	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
into a final modular repair kit that will transition to the USAF Airfield Damage Repair (ADR) program. CRATR is a three year project sponsored by US Pacific Command. Lead service is the US Air Force. Air Combat Command is the Transition Manager. *FY 2009 Accomplishments:* FY2009 Accomplishments: Down selected demonstrated technologies and integrated them into an operational capability demonstrated at Tyndall AFB and Yuma Proving Ground in April 2009. Completed the Rapid Airfield Damage Assessment System (RADAS) Limited Operational Utility Assessment and the Pavement Repair final Operational Utility Assessment in August 2009. Developed CONOPS documentation. *FY 2010 Plans:* Completed live aircraft test in CONUS following final operational utility assessment. Completed final pavement repair assessment report and sent residuals with operational utility to forward based airfields. Conducted SDD and transitioned pavement repair to ADR program. Finalized CONOPS documentation. Executed the Rapid Airfield Damage Assessment System (RADAS) Limited Operational Utility Assessment in May 2010 and final Operational Utility Assessment in August 2010. CRATR JCTD scheduled completion date is September 2011. Complete the Rapid Airfield Damage Assessment System (RADAS) final assessment report and send residuals with operational utility to forward based airfields. Finalize CONOPS documentation. Conduct SDD and transition RADAS to ADR program in FY 2012. Complete JCTD in September 2011.					
Cross Domain Collaborative Information Environnent (CDCIE) The Joint Requirements Oversight Council (JROC) validated the capability need for CDCIE as an FY08 new start. The outcome of CDCIE is to demonstrate, in operationally relevant environments, the ability to share information across security domains. CDCIE provides a standards based, secure, scalable, collaborative information environment (CIE) to enable cost-effective coalition and interagency information sharing in both single and cross security domain environments. The JCTD is a two-year	2.000	0.363	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
project under sponsorship of JFCOM with STRATCOM as a cosponsor. CDCIE will transition to DISA's Global Information Grid (GIG) Enterprise Services and Information Assurance Networking program offices. DISA is the lead agency. The primary outputs and efficiencies to be demonstrated in the JCTD Operational Utility Assessment are (1) ability of the Joint Force Commander to collaborate with all mission partners, including coalition, multinational and interagency partners, using internationally recognized format and protocol standards, and (2) ability to share information with mission partners between different networks, classification levels and releasabilty boundaries. *FY 2009 Accomplishments:* Completed security testing of spiral 2 and operational utility analyses on the system. Spiral 2 demonstrated the addition of shared white board collaboration with cross security domain Web Services capabilities in operationally representative exercise environments. Systems were installed CENTCOM and PACOM for real-world use. FY 2010 Planned Output: Transfer government interface for configuration management of certified product configurations to the Defense Information System Agency. Complete the JCTD. *FY 2010 Plans:* Transfer government interface for configuration management of certified product configuration to the Defense Information System Agency. Install system in PACOM, EUCOM, Defense Intelligence Agency, Customs and Border Protection and Joint IED Defeat Organization worldwide .The system includes whiteboard and chat tool. The system is integrated with Web enabled Cross Domain Information Sharing applications. Transition manager is DISA. FY2011 Planned Output: Complete transition to DISA. Complete the JCTD					
Event Management Framework (EMF) The Joint Requirements Oversight Council (JROC) validated the capability need for the EMF ACTD as a new start in FY 2006. The goal of EMF is to demonstrate the ground breaking capability of vertical and horizontal sharing of heretofore stove-piped information among organizations within and outside	3.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
of DOD by emphasizing EMF policies; operational concepts; and tactics, techniques and procedures. In handling a terrorist event or incident, a horizontal information focus among Federal agencies is necessary during the interdiction phase of an incident. During response and recovery phases, a vertical information sharing focus among Federal, state, and local agencies is needed. A coherent interoperable information sharing mechanism is needed to: (1) Discover and share information resources throughout the incident based coalition domain; (2) Recognize the changing value of temporal information; and (3) Analyze and synchronize the large amounts of data relative to an event. All CoComs, as well as their non-DoD partners, have made large investments in command and control (C2) and collaboration coordination tools. But, to date, effective integration of those investments has been sub-optimal. The event management framework consists of policies, operational concepts and technologies to ensure decision makers can build a situational picture of an event with all relevant facts. The primary outputs and efficiencies to be demonstrated in the ACTD Military Utility Assessment (MUA) are: 1) Integrated EMF policies; operational concepts; and tactics, techniques and procedures; 2) Improved and more timely incident and information correlation to "connect the dots"; 3) Faster visualization of analytic results to aid decision makers in event assessment; 3) Addition of EMF databases and engine servers to cache data; 4) Capability to share information and analytical results across CoComs, Coalitions, Services, and its interagency partners; 5) Reduced time required for event based decision making. EMF is a three-year project under the sponsorship of the United States Northern Command (NORTHCOM). The lead agency is the Defense Information Systems Agency (DISA). *FY 2009 Accomplishments:* Delivered Spiral 2.0 and 3.0.Conducted Military Untility Assessment (MUA). Worked with Net-Centric Enterprise Services (NCES) Program Office to support Federated Search with EMF Correlation Service. Use DISA's Federated Development and Certification Environment (FDCE) to institutionalize select services in the Department's Enterprise C2 System/POR (currently envisioned to be GCCS-J). The EMF ACTD is scheduled to complete in September 2009. FY 2010 Planned Transition Strategy - Residual Support of pilots for user assessment, and transition to NCES. Transition of components to					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the National Senior Level Decision Support System JCTD. FY 2011 Planned Output - Transition to the Department's Enterprise C2 System/POR (currently envisioned to be GCCS-J).					
Focused Lethality Munition (FLM) Small Diameter Bomb (SDB)	1.000	0.000	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the capability need for FLM as a new start in FY 2006. The outcome of FLM is to provide the Combat Air Force the ability to prosecute high-value targets in collateral damage sensitive environments. FLM integrates a carbon fiber warhead case and the multi-phase blast explosive (MBX) onto the existing Small Diameter Bomb (SDB) I airframe. The FLM is not intended to replace SDB I but to complement it. FLM's sub-four meter accuracy will result in pin-point focused lethality with minimal collateral damage effects. FLM is a four-year project under sponsorship of United States Central Command (USCENTCOM) and with the U.S. Air Force as Lead Service/Agency. Completion of system development, demonstration, and fielding (approximately 50 residual FLM weapons) occurs by mid-CY 2008 with continued contractor provided system field support through mid-CY 2010.					
The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are (1) successful integration of the carbon fiber warhead and MBX onto the existing SDB I airframe with a fully functioning weapon and kill mechanism, (2) safe carriage and separation from F-15E, (3) to demonstrate FLM's sub-four meter accuracy, (4) the elimination of fragmentation as kill mechanisms in the FLM weapon integration design,(5) a full and complete characterization of FLM's capability against defined a target set for USCENTCOM.					
The planned transition strategy is: (1) Upon successful Military Utility demonstration, USCENTCOM will conduct Extended User Evaluation (EUE) of the residual FLM weapons; (2) Upon receipt of formal direction and funding, the SDB program office will transition FLM into the formal acquisition cycle at Milestone C acquiring Low Rate Initial Production (LRIP) quantities; (3) The SDB program office will conduct follow-on system development and demonstration, production, and fielding support.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continue FLM residual weapon fielding support. Complete FLM insensitive munition and hazard classification certification. Complete Milestone C transition activities which include final system maturation and assessment. The FLM JCTD scheduled completion is January 2010.					
Common Ground The Joint Requirements Oversight Council (JROC) validated the need for Common Ground functionality for a FY 2009 new start. The expected outcome is to have Joint or Coalition capability to interoperate on common ground geospatial data and C2 data and information and to have shared awareness to achieve unity of adaptive planning, execution and effects within C2 enclaves. Common Ground is built upon existing DoD net-centric data and Service Oriented Architecture (SOA) standards and guidance, as well as international standards adopted by the US to address information exchange (i.e., Joint Consultation, Command and Control Information Exchange Data Model - JC3IEDM). Common Ground will enable: 1) the sharing of digital orders and plans across C2 systems, a reduction of errors and misunderstanding among distributed systems. All Common Ground capabilities will be incorporated as commercial software under a DoD Enterprise License currently available to over 200 Joint and Service Programs of Record (POR) through FY 2014 (Commercial Joint Mapping Tool Kit (CJMTK). Common Ground is a three year JCTD sponsored by USJFCOM. The US Army Engineering Research Development Command (ERDC) is the technical lead agency, the National Geospatial Agency functions as transition agent. The NATO Consultation, Command and Control Agency (NC3A) serves as technical experts and liaison between NATO's systems and the US systems. *FY 2009 Accomplishments:* Verified unified doctrine for US and NATO ground operations C2, missions and tasks. Established a prototype of a geospatially extended JC3IEDM supporting US-NATO interoperability. Implementation of common US analytic services in US ground C2 Systems. Conducted functional technology demonstrations to ensure architectural and IT stability and interim user juries to facilitate a user centric	6.100	5.375	7.150	0.000	7.150

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
design for the components and information products within mission thread / use case assessment scenarios. *FY 2010 Plans:* Demonstrate commercial geospatially-extended NATO standard Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) supporting Joint and multinational interoperability. Demonstrate common NATO and US analytic services in Joint C2 Systems. Draft JC3IEDM specification extension to US and international JC3IEDM standards body (i.e., Multilateral Interoperability Programme). Produce test reports on architectural stability and documented interim user juries to facilitate a user centric design for the components and information products. Perform initial operational user assessment between US and NATO to validate assumptions on C2 efficiencies, model architectures and baseline interoperability, network and architecture metrics. Conduct assessments. *FY 2011 Base Plans:* Conduct final operational assessment. Award DoD Enterprise contract for analytic and interoperability software. Initiate Doctrine, Operations, Training, Materials, Logistics, Personnel, Facilities (DOTMLPF) activities. Complete documentation for enterprise licensing of functionality in NGA Commercial Joint Mapping Toolkit (CJMTK). Complete the JCTD.					
Riverine & Intercoastal Operations (RIO) The Joint Requirements Oversight Council validated the capability need for RIO JCTD as an FY 2009 new start. The outcome of RIO is demonstration and transition of technologies and operational concepts for persistent situational awareness in the Intercoastal and Riverine areas. RIO will demonstrate the value of remotely monitoring maritime areas of interest with interagency (DHS) and international (Colombia) partners as well as the U.S. Navy. RIO will enable situational and Maritime Domain Awareness through real time surveillance and advance reconnaissance of the riverine environment from a Mobile Operating Base (MOB), supporting the Battlespace Awareness	2.800	2.420	2.600	0.000	2.600

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and Force Protection capability areas. Persistent detection and monitoring of riverine activities will be accomplished through the use of networked Unattended Ground Sensors (UGS) and sensor data displayed in both the local and high-level Common Operational Pictures such as Global Command and Control – Maritime (GCCS-M). Local COP's display all remote detections as well as individual UGS control through wireless communications. RIO is a 2.5 year program with U.S. Southern Command as the operational manager, Naval Surface Warfare Center Dahlgren Division as the Technical Manager and Program Executive Office Littoral Mine Warfare – Antiterrorism/Force Protection (PMS-420480) as the Transition Manager. The Naval Expeditionary Combat Command (NECC) and Naval Special Warfare community offer U.S. Navy support for RIO. Initial capabilities will be technically demonstrated in late FY 2009. The first operationally demonstrated capability will occur within the Continental US (CONUS) in FY 2010 and will focus on the Intercoastal element of RIO which is of interest to both the U.S. Navy and DHS. The Intercoastal spiral will conclude with a Limited Operational Utility Assessment. The second RIO spiral will focus on the riverine environment and will be held outside CONUS (OCONUS) with Colombia in FY 2011. It will feature both a technical and operational demonstration and Limited Operational Utility Assessment OCONUS culminating with an Operational Utility AssessmentLetter of Observation from the Operational Test Agency.					
FY 2009 Accomplishments: Defined requirements and conceptual operations for both the US Navy and Colombia. Selected and technically demonstrated baseline technology solution set (sensors, communications and COP). Drafted and signed Master Information Exchange Agreement (MIEA) and other supporting agreements between U.S. and Colombia. Began technical and system integration discussions with Colombia.					
FY 2010 Plans: Defined requirements and conceptual operations for both the US Navy and Colombia. Selected and technically demonstrated baseline technology solution set (sensors, communications and COP). Drafted and signed Master Information Exchange Agreement (MIEA) and other supporting agreements between U.S. and Colombia. Began technical and system integration discussions with Colombia.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Transition technical solution set from U.S. to Colombia. Integrate RIO aboard Colombian Riverine Support Vessel. Technically and operationally test and demonstrate RIO in the Intercoastal environment through formal Limited Operational Utility Assessment. Spiral capability to both the U.S. (Navy and DHS) and Colombia. Complete the RIO JCTD.					
Future Immersive Training Environment (FITE) The Joint Requirements Oversight Council (JROC) validated the requirements for the capabilities needed from FITE JCTD as an FY 2008 rolling start. The user sponsor and Operational Manager is USJFCOM. FITE JCTD will demonstrate advanced virtual training technologies for the small unit. It will provide a common software training environment for a variety of different training hardware configurations including laptop-based, Virtual Reality, Mixed Reality, and Augmented Reality. This two-year effort has been divided into two spiral demonstrations. The first spiral will demonstrate an individual worn Virtual Reality system based on the hardware platform selected by the U.S. Army's Dismounted Soldier programin support of the US Army CCTT DS program. The second spiral will deliver advanced Mixed Reality technologies for fixed location training facilities such as the Marine Corps' Infantry Immersion Trainer (IIT) and the Army's Combined Arms Collective Training Facility (CACTF). In addition it will deliver an individual worn Augmented Reality demonstration that will allow individuals to train small unit infantry skills at any location with special Augmented Reality equipment. This equipment will include a see-through Helmet Mounted Display that will project realistic looking virtual characters into the training environment. *FY 2009 Accomplishments:* Integrated FITE JCTD components into an individual worn squad- level Immersive Virtual Environment. Operational Demonstration scheduled at Fort Benning, GA and Camp Lejeune, NC. Began development of Spiral 2 demonstrations.	0.250	4.500	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Complete integration of Spiral 2 components: Facility Based Mixed Reality and Augmented Reality demonstration systems. Conduct Operational Demonstration in July 2010 at USMC and Army facilities TBD. Begin Transition of FITE JCTD capability to applicable Programs of Record.					
National Senior Leadership Decision Support Service (NSLDSS) The Joint Requirements Oversight Council (JROC) validated the need forNSLDSS as an FY 2008 new start. NSLDSS provides senior decision-makers a method for developing rapid situation awareness to support response planning and execution to time-critical events of national significance. Current processes rely heavily on teleconferences, resulting in much time spent on discovery, not decision-making. Information used to support decision-making is spread across the enterprise, not readily available in dynamic forms to distributed participants. NSLDSS is a combined hardware and software system consisting of DoD and commercial databases, search engines, source repositories, network enterprise services, policy decision services, enterprise universal data descriptor item, visualization tools, and web 2.0 capabilities. The primary outputs and efficiencies to be demonstrated in the JCTD are: (1) improved global situational awareness for senior leadership, (2) improved course of action options, and (3) improved quality of information for senior leader decision-making in a collaborative environment. The user sponsor is the Joint Staff J3 National Military Command Center (NMCC) and the Lead Agency is DISA. *FY 2009 Accomplishments:* Spiral I Improve Global Situational Awareness. Leverage existing tools to enhance Situational Awareness; Joint IED Defeat Organization - Counter-IED Operations Integration Center (JIEDDO (COIC)); STRATCOM (NDMI); DIA (DIOCC); NORTHCOM (Event Mgt Framework); Net Centric Enterprise System (NCES) (Collaboration, M2M, Security, Discovery; Search, etc); Identified and exposed data sources supporting Mission Threads (C2BMC, ESSA, METOC, etc) . Mission Threads:	2.000	3.025	3.250	0.000	3.250

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Ballistic Missile Defense; Hurricane Threat; Mall of America; Hijacking of Airline; National Convention; Space Event. Technical Demonstration fourth quarter of FY 2009. *FY 2010 Plans:* Spiral 2 - Improve course of action options and decision making by integrating web services that support identification and visualization of available assets and resources. Conduct technical product integration, testing, and demonstrations including a Limited Operational Utility Assessment (LOUA). *FY 2011 Base Plans:* Conduct Operational Demonstrations and complete the Operational Utility Assessment (OUA). Complete the transition to DISA Program of Record. The transition manager is DISA. Complete JCTD.					
Global Observer (GO) The Joint Requirements Oversight Council (JROC) validated the capability need for Global Observer as an FY 2007 new start. The Global Observer JCTD is a transformational technology program that proposes to demonstrate a liquid hydrogen powered unmanned aerial vehicle, using a modified, off-the-shelf internal combustion engine, capable of flying extremely long endurance (objective of 7 days on station) with a moderately sized payload capacity (380 lbs) at an altitude of 55-65,000 ft. mean sea level. The output of Global Observer will be to provide low-cost persistent surveillance (ISR). The efficiencies of Global Observer will be a long endurance capability that would support placing system into theater from garrisoned locations, reducing the number of forward bases required for world-wide operations and relieving the optempo from other overstressed assets. *FY 2009 Accomplishments:* Supported the manufacture, integration, and test of Aircraft #1 and Aircraft #2; Aircraft #1 ready for integrated system testing; the manufacture, integration, and test of LRE #1 & LRE #2, 1-3Q FY 2009; System flight test events at the flight test range; Flight test venue preparation, range safety reviews, test planning 2&3Q FY 2009; LRE #1 complete and ready for integrated system testing, 4Q FY 2009;	8.100	2.800	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
System deployed to flight test venue, 4Q FY 2009; Flight test range operations and T&E support and Operational Test Agency, 1-4Q FY 2010. *FY 2010 Plans:* Aircraft #2 complete & ready for integrated system testing, 2Q FY 2010; Flight Readiness Review, 1Q FY 2010; LRE #2 complete and ready for integrated system testing, 2Q FY 2010. Transition Strategy: The residual package will be transitioned to Air Force Special Operations Command for extended use to support its core mission of intelligence, surveillance, and reconnaissance with the persistent operations using the Eectro-Optics/Infrared and communications relay payloads. Pending Joint Requirements Oversight Council validation of the capability requirement, the Air Force Air Combat Command will transition Global Observer to the Combined Air Force.					
Hard Target Void Sensing (HTVS) Fuse The Joint Requirements Oversight Council (JROC) validated the capability need for HTVS Fuze as a FY 2008 new start. The objective of the HTVS Fuze JCTD is to provide the Bomb Live Unit-109 (BLU) and BLU-113 legacy warheads the ability to count voids and detonate at the optimal point, and survivability and function in today's harder target environments. The JCTD will provide warfighting commands a proven capability with a number of residual mission ready fuzes no later than 12 months after the JCTD. The acquisition strategy allows a smooth transition from the JCTD to Engineering Manufacturing and Development (EMD) in FY 2010 followed by production. The U.S. Navy also has a requirement for this capability and provided FY09/10 funds to support the JCTD. The lead Combatant Command is USTRATCOM and the Lead Service is USAF. To date, the HTVS Fuze JCTD has accomplished the following: Sufficiency review for FY09 initiative to fund JCTD complete; Sufficiency review for SDD, Production and Sustainment completed; Acquisition	6.100	6.200	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Strategy for entire HTVSF Program Approved; Systems Requirements Review and Systems Functional Review for both contractors; Management and Transition Plan Approved. *FY 2009 Accomplishments:* Management and Transition Plan is being approved. Preliminary Design Review (PDR) and Interim Design Review (IDR) will be completed. Initial sub-scale testing (cannon testing) and sled testing will be conducted in an effort to refine M&S models. Initial Flight Testing will also begin. *FY 2010 Plans:* Complete all sled and flight testing. Conduct final operational demonstrations. Complete Operational Utility Assessment (OUA) and Military Utility Assessment (MUA). Begin fabrication of residuals to be transitioned to USAF for future use. FY11 Planned Output: Begin transition of residuals to USAF. Deliver residuals to Whiteman AFB, MO for limited operational use. The Transition Manager is 679 ARSS.					
Internet Protocol Router in Space (IRIS) The Joint Requirements Oversight Council (JROC) validated the need for capability from IRIS. The IRIS JCTD began in FY 2007. IRIS takes advantage of a planned launch of a commercial communications satellite to introduce Internet Protocol (IP) routing and cross-banding between C-band and Ku-band transponders. USSTRATCOM is assigned responsibility for global network operations, and as the operational user sponsor seeks to improve network reliability and availability through dynamic topology updates (multiple transport paths) and improved collaboration and interoperability among info sources and users (e.g., sensors, soldiers, command centers at Joint, Allied and Coalition levels). The IRIS outputs and efficiencies include (1) demonstrate the capability to collaborate with industry in leveraging the commercial acquisition processes to provide near-term, space-based, IP routing network capability, (2) demonstrate the capability via a commercial payload to conduct on-board IP packet routing communications from a geostationary orbit, (3) explore and incorporate a decision process to determine military user assignment to commercially provided IRIS SATCOM capability.	5.200	0.968	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Defense Information System Agency (DISA) is the DOD lead Agency for obtaining commercial satellite communications support for operations, will develop a provisioning model for future assignment of military users to the demonstrated commercial capability as appropriate, and define contracting language for future services subscription in support of operations, including integration of IRIS services into existing network architectures beyond the IRIS JCTD. *FY 2009 Accomplishments:* Integrated industry-funded IRIS payload onto the IS-14 satellite. Industry launch of the IS-14 spacecraft (host for the integrated IRIS functionality) was delayed to November 2009 (1st Quarter FY 2010) because of higher priority military launches from the available launch facility. Conducted live scenario and capability based demonstrations in a laboratory environment using engineering-equivalent hardware to refine concepts for use and network procedures. *FY 2010 Plans:* Participate in the industry led end-to-end IRIS technical capabilities demonstration with representative hardware prior to Intelsat General IS-14 launch. Conduct operational and network services demonstrations with representative military and joint, inter-Agency users. Extend industry SATCOM-based IP-routed services for continued evolution of network services provisioning and management processes, potential billing procedures, and industry-government organizational and technical interfaces. Introduce the functionality to international partners through USAFRICOM sponsored capacity building demonstrations. Complete the JCTD. No additional JCTD investment projected, pending identification of fee-for-service DoD users.					
Joint Coordinated Real-time Engagement (JCRE) The Joint Requirements Oversight Council (JROC) validated the capability need for JCRE as an FY 2005 start. The outcome of JCRE will be to develop the CONOPS and the GIG-enabled software that enables Joint Real-Time Operations and Engagement across multi-Combatant Command (COCOM) Theaters and Echelons. JCRE will support Joint Operations by providing Net-Centric Command and	0.967	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Control Tools that greatly enhance Planning and Execution across multiple COCOMS. These tools will be provided as web services, so they can easily be extended to support Combined Operations as directed by the Operational Sponsor. The JCRE capability will be achieved by extending and integrating the following technologies: Joint Force Global Situational Awareness (SA) Tools; Joint Force Engagement Packages; and Joint Force Synchronization Tools. These JCRE technology components will be implemented using a Service Oriented Architecture (SOA) with distributed service orchestration. These JCRE technologies, tested on the Global Information Grid (GIG), will help validate whether the evolving GIG IP architecture and enterprise services can support the time sensitive performance requirements for global operations. Output and Efficiencies: percentage of relevant data that is properly synchronized; percentage of global operation centers that have Synchronization awareness; percentage of synchronization problems that go undetected for more than 10 minutes; Average time to detect a synchronization problem; Average time to determine impact of synchronization problems on effects; time to assemble and organize global effects; workload to assemble and organize global effects; time to synchronize global actions, capabilities, and resources; workload to synchronize global actions, capabilities, and resources; number of resynchronizations / number of original synchronizations (synchronization robustness); time to create a globally synchronized operational plan. The lead service is the Navy and the lead CoComs are U.S. Strategic Command and U.S. Special Operations Commands.					
FY 2009 Accomplishments: Prepared JCRE capability for primary transition to the Department's Enterprise C2 System/POR (currently envisioned to be GCCS-J). The Extended User Evaluation (EUE) Package consists of the JCRE System Prototype (all hardware and software required to host JCRE capabilities, in full or presentation server configuration), is being installed at USSTRATCOM, USSOCOM and DISA as necessary, and finalized Concepts of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTP) documents and training packages, to be delivered to US Joint Forces Command (USJFCOM). Secondary transition targets include USSTRATCOM and USSOCOM programs of record-Integrated Strategic Planning & Analysis Network (ISPAN) and Special Operations Mission					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Planning Environment (SOMPE), respectively. Navy PEO C4I and Space are transitioning relevant capabilities as web services into the Department's Enterprise C2 System/POR (currently envisioned to be GCCS-J). The ACTD completes in FY 2009.					
Joint Enable Theater Access Seaports of Debarkation (JETA-SPOD) The Joint Requirements Oversight Council (JROC) validated the need for JETA-SPOD capabilities as a FY 2006 new start. The outcome of JETA-SPOD is to develop and demonstrate: a Lightweight Modular Causeway System (LMCS) transportable by and employable from intra-theater sealift vessels such as the JHSV or other current Army/Navy watercraft; and an austere port Decision Support Tool for selection of optimal sites from multiple austere SPOD options. The capabilities proposed for development in this ACTD will optimize the use of the Joint High Speed Vessel (JHSV), current Army/ Naval watercraft, and Lines of Communication (LOC) bridging requirements by providing increased and more rapid flow of combat power and sustainment through multiple theater austere seaport locations. This provides to Joint/ Combined Force (J/CFC) commanders a means to mitigate threat anti-access activities and increases flexibility to conduct operational maneuver from strategic distances. JETA-SPOD ACTD is a three-year project under sponsorship of U.S. Pacific Command, with completion of development and demonstration by end of FY2008; and transition to U.S. logistics systems as early as FY2009. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the ACTD Military Utility Assessment (MUA) are: 1)the LMCS will reduce weight, volume, and deployment time compared to existing military causeway and bridging systems; 2) the operational parameters for evaluating the military utility of the LMCS are based on a quantitative and qualitative comparison to the capability provided by the existing Modular Causeway System (MCS); 3) LMCS will result in a reduction in weight and volume by 50 percent over the MCS; a reduction in deployment time by 50 percent over the MCS; and elimination of in-water connections; 4) the Decision Support Tool capability equates to an increase in availability of throughput prediction information for 50-80 percent of worldwide small ports; and 5) the combination of LMCS and the Decision Support Tool includes a five-fold increase in the number of JHSV-compatible ports and doubling of the port throughput rate. LMCS Output includes incorporation of state-of-the-art connector and tensioning technology; innovative emplacement and	0.600	0.605	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
recovery system applicable to multiple military/ civilian platforms; innovative self-locking and strap tensioning technologies; high strength fabrics for robust, lightweight floatation technology that quickly inflates/deflates for rapid LMCS emplacement and recovery; puncture/abrasion resistant floatation components; lightweight decking materials; and common 8x20 rapid transport footprint design. The efficiency is that the transport (land/sea) cost of moving causeway capabilities into austere SPODs will be significantly reduced; and causeway capabilities will arrive in theater more rapidly with a smaller logistics footprint. Austere Port Decision Support Tool Output includes query-able austere world port data; a port characterization model; rapid port enhancement tool; austere port throughput simulation; a comprehensive set of environmental and physical factors affecting ingress/egress throughput rates; and parametric algorithms for throughput rates in small ports and rates for planning and execution of vessel offload operations; developed with an open source tool; user friendly Graphical User Interfaces (GUI); and runs on a laptop computer. The efficiency is that the warfighter will possess flexibility and a broader range of options to establish austere seaports as strategic or operational maneuver entry points with a greater assurance of success. The transition strategy for LMCS and the Decision Support Tool is to establish Programs of Record under the guidance of two Transition Managers: Product Director, Army Watercraft Systems (PD AWS) and USTRANSCOM, respectively. *FY 2009 Accomplishments:* Completed final Operational Utility Assessment and ACTD report; transitioned the Decision Support Tool to USTRANSCOM Program of Record and planned LMCS transition to Army Watercraft Systems Program of Record in FY12. Delivered the Decision Support Tool interim capability/residuals to the user (with Final Data Set). Demonstrated LMCS in both a “wet gap” crossing mode enabling the transit of a Disaster Relief force from bank to bank across the causeway and a crane launched emplacement simulating launch from a Joint High Speed Vessel (JHSV). Continued socialization for transition. *FY 2010 Plans:* Completed Lightweight Modular Causeway System (LMCS) sea state testing, demonstrated emplacement via rotary wing delivery and use during river crossing operations. Continued socialization					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and planned transition of LMCS to Program of Record. Finalized CONOPS documentation. Initiated transition of LMCS to Product Director, Army Watercraft Systems (PD AWS). Completed JETA-SPOD ACTD in September 2010.					
Joint Force Protection Advanced Security System (JFPASS) The Joint Requirements Oversight Council validated the capability need for JFPASS as an FY 2008 new start. JFPASS addresses the validated problem that current force protection technologies and concepts of operation do not provide a comprehensive, effective, and sustainable Joint force protection capability. Fielded systems do not provide comprehensive situation awareness, absorb too much manpower, and are too costly with many variants and redundancies. The outcome of JFPASS is to demonstrate and transition an integrated joint force protection Command and Control architecture, providing rapid situation awareness where needed, decision support, and more effective force protection with reduced workload through systems integration. The primary outputs and efficiencies to be demonstrated in the JCTD are: 1) numbers of currently distinct force protection systems that are integrated for common situation awareness; 2) decreased time required to provide situation awareness to all in chain of command with force protection response missions; 3) decrease in operations center manning and workload required to maintain force protection situation awareness and manage situation responses. JFPASS is a 3-year project sponsored by US European Command. The project will conduct an initial demonstration and limited assessment after one year, to be followed by in-theater installations and operational utility assessment in the second year. Army, Navy, and Air Force force protection experts are participating and contributing funding and expertise to the demonstration of this Joint force protection capability. The US Navy is providing the Technical Manager, US Air Force provides the deputy Technical Manager, and US Army provides the Transition Manager. This project is aligned with the Joint Staff Installation Unit Base Integrated Protection Capabilities Based Assessment process.	4.800	4.808	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Refined situation awareness and systems integration architecture. Completed Operational Demonstration 1 and limited utility assessment at CONUS facility. Install integrated capability at high priority EUCOM-selected base. Conducted Operational Demonstration 2. Continued transition planning. *FY 2010 Plans:* Complete utility assessment. Complete JCTD. See JCTD BA4 R2a for additional transition activity.					
Joint Multi-Mission Electro-Optic Sys. (JMMES) The Joint Requirements Oversight Council validated the capability need for JMMES as an FY 2007 new start. The outcome of JMMES is demonstration and transition of airborne sensors and automated processing for automatic detection of items of interest for Joint Service, Coalition, and Interagency partners. The JMMES project will demonstrate use of advanced multi-spectral sensors in an aircraft turret compatible with existing turret mounts in US Navy, US Army, Drug Enforcement Agency, and British and Canadian aircraft, as well as future planned unmanned air systems. The project will develop and demonstrate automatic processing and automated operator cueing for targets such as submarines, mines, targets under trees, illicit crops, and search-and-rescue targets at sea. The primary outputs and efficiencies to be demonstrated in JMMES Military Utility Assessments are (1) ability of JMMES to recognize targets of interest, in terms of (a) percent of auto detections and auto cues that are relevant, (b) distance error of auto detect and auto cue reports, (c) timeliness of reports (seconds) to decision makers; and (2) ability of JMMES to defeat denial and deception efforts, in terms of (a) percent of denial and deception efforts defeated, (b) where and when JMMES applies (operating environments, seasons, time of day, range, etc.), (c) percent of time operable during missions, and (d) reliability and logistic support requirements. JMMES is a 3-year project sponsored by U.S. Pacific Command and U.S. Southern Command. Initial capabilities will be demonstrated and operated in FY 2007, with demonstrations against additional targets with additional aircraft types in FY 2008 and FY 2009.	4.600	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Transition activities began in FY 2007, leading to firm transition to programs of record, with proposed BA4 funding bridge if the Navy transition Program of Record slips to FY 2012. The lead Service is U.S. Navy. *FY 2009 Accomplishments:* Completed flight testing and conducting military utility assessment (MUA). Supported ongoing transition and preparation for FY 2010 sustainment/integration activities (bridge to program of record). Completed Concept of Operations, Tactics/Techniques/Procedures, and System Architecture documentation. Completed military utility assessment. Completed the JCTD.					
Joint Surface Warfare (JSuW) The Joint Requirements Oversight Council (JROC) validated the capability need for JSuW as an FY 2007 new start. The output of the JSuW JCTD will be to allow multiple existing Intelligence, Surveillance, and Reconnaissance (ISR) assets, launch platforms, and standoff weapons to communicate via maturing weapons data link network technologies. The efficiency will be that Joint ISR platforms may provide initial targeting data and in-flight targeting updates to standoff weapons while the launch platform either remains beyond or decreases time inside the threat envelope. As a result of this interaction via the weapons data link network, the Combatant Commander will be provided multiple options for joint kill chains to increase operational agility, and have significantly extended space in which surface targets may be successfully prosecuted. *FY 2009 Accomplishments:* System testing and flight demonstration. *FY 2010 Plans:* Final demonstration and JCTD completion.	5.800	1.452	0.000	0.000	0.000
Large Data	9.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Joint Requirements Oversight Council (JROC) validated the capability need for Large Data as an FY 2006 new start JCTD. The outcome of Large Data demonstrated the military utility of a highly scalable, rapid, and secure integrated capability to retrieve, store and share massive amounts of information effectively between globally distributed users. It provides increased situational awareness by displaying large, fused sets of geospatially-referenced data in a Joint Warfighting context using intuitive user dataset navigation techniques. The primary outputs and efficiencies demonstrated in the JCTD Military Utility Assessment (JMUA) are: 1) Synchronization of databases across all major operational storage nodes, i.e. cache coherency; 2) Timely delivery and sharing of data - instant real time access and collaboration; 3) Intuitive ways for users to navigate large (petabytes to exabytes) data sets; 4) Ability to easily visualize huge amounts of data generated; 5) Capability to perform "trackback" or change analysis on an unprecedented scale. The sponsor was U. S. Strategic Command. The lead agencies were the National Geospatial Agency (NGA) and Defense Systems Agency (DISA). Transition in FY 2009 to National Geospatial Agency (NGA) and Defense Systems Agency (DISA). The Large Data JCTD completed in December 2008.					
FY 2009 Accomplishments: Finalized JMUA reporting. Continued use of functionality in preparation for integration and transition into program of record. Large Data is currently operational as is completing early acceptance and transition to the Army's Road Runner program. Completed the JCTD. Transition Strategy: U.S. Forces Korea leadership support has accelerated Army INSCOM plans to transition Large Data to the Distributed Common Ground System (DCGS-A) Fixed POR. Early acceptance testing with JIEDDO and Army stakeholders led to Army G2 funding the Large Data RoadRunner program to accelerate exploitation of wide area persistent surveillance (WAPS) data for OIF/OEF. In parallel, the Large Data team has successfully demonstrated Large Data global, cloud computing services to accomplish data virtualization with inherent failover and recovery. This critical transition milestone followed an early delivery of web service-based Large Data updates to the Integrated Strategic Planning Analysis Network (ISPAN) Global Situational Awareness Tool (GSAT), and secured USSTRATCOM leadership endorsement of the Large Data Transition Plan.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MASINT Tactical Intelligence Fusion (MASTIF)	2.000	2.420	0.000	0.000	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for MASCOT, renamed MASTIF, as an FY 2006 new start. The outcome of MASTIF is to provide the warfighter with a data fusion capability to enable a single operator to exploit the benefits of a suite of multi-disciplined sensors against concealed/obscured targets in near real-time while: (1) Enabling a single operator with minimum time over target to rapidly detect, identify, and geolocate potential targets using automated sensor fusion and reasoning; (2) Reducing sensor false alarm rates by combining multiple types of intelligence sensor outputs; (3) Increasing operator efficiency by improving situational awareness through automated sensor management and
pointing; (4) Eliminating the need for the operator to gain expertise on each individual sensor; and (5) Providing an open architecture design that can be adapted and tailored to different mission applications and operational environments. This five-year project is under the sponsorship of the United States Southern Command (USSOUTHCOM), which also serves as the Operational Manager. The lead DOD agency is the Defense Intelligence Agency (DIA) and the Transition Manager is the United States Special Operations Command (USSOCOM).

FY 2009 Accomplishments:
Performed final stages of sensor integration and complete developmental
testing; carried out operational testing activities; and conducted final demonstration on airborne test platform for JMUA. Coordinated with transition partners for custom capabilities to field during transition and identified opportunities for integration of other on- or off-board sensor information. Supported modifications and provided documentation required for transition.

FY 2010 Plans:
Conduct OCONUS testing in relevant SOUTHCOM environment to examine military utility further, as well as partnering with additional programs and collection capabilities to examine synergies in data and CONOPs. Customize system for installation on user partner platform. Continue development of

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
CONOPs and TTPs, based on user feedback. FY2011 Plans: JCTD complete. Capabilities transition to user community.					
Mapping the Human Terrain (MAP-HT)	1.200	0.000	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the capability need for MAP-HT as a FY 2007 new start Joint Capability Technology Demonstration. The outcome will provide improved capabilities to effectively collect, consolidate, visualize and understand open source socio-cultural (green data) information to assist Commanders understanding of the human terrain in their Area of Responsibility (AOR). MAP-HT JCTD will develop and demonstrate an integrated, open-source, spatially/relationally/temporally referenced human terrain data collection and visualization toolkit to support Brigade Combat Teams (BCT)/Regimental Combat Teams (RCT) in understanding the human terrain in which they operate. The overall project context for MAP-HT is development and deployment by, through, and with deployed units in theaters of operations. The primary outputs to be demonstrated to the users and evaluated in the Military Utility Assessment are: (1) provide a web services application toolkit to collect, disseminate, analyze, and visualize socio-cultural information in geospatial and social network contexts at the non-classified and secret levels, (2) provide standard operating procedures (SOP) and concept of operations (CONOPS) , as well as tactics, techniques and procedures (TTP), (3) provide training on-line and manuals on the use of the system, (4) establishes direct cultural support to BCT/RCT commanders, civil affairs and interagency end-users, which will minimize loss in continuity between unit relief in place/transfer of authority. (U//FOUO) The MAP-HT Transition Sponsor is USA Distributed Common Ground Station Program of Record (DCGS-A POR). The sponsoring Combatant Command (CoCOM) is U.S. Central Command (CENTCOM). Other involved organizations include the U. S. Marine Corps, U. S. Special Operations Command (USSOCOM) and the U.S. Army Civil Affairs and Psychological Operations Command. The U.S. Army is the lead organization.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Revised Management & Transition Plan to incorporate changes determined by oversight group. Integrate, demonstrate and assess spiral 2 capability and provide interim capability for fielding. Developed spiral 3 capabilities and associated assessment plan and conops. Completed the JCTD. FY 2010 Transition Strategy to Distributed Common Ground System -Army (DCGS-A).					
Maritime Auto Super Track enhance Reporting (MASTER)	1.577	0.000	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the capability need for MASTER (Maritime Automated Super Track Enhanced) as an FY 2007 new start. The initial goal of MASTER is to demonstrate a set of technologies with associated Concepts of Operations (CONOPS), which provide automatic tracking of ship traffic using both unclassified and classified methods and which will provide a tangible improvement of United States maritime domain awareness on a global-basis. The MASTER JCTD also provides a common set of Tactics, Techniques and Procedures (TTPs) to the Intelligence Community (IC) that will allow adoption of this new capability across the IC. The primary outputs and efficiencies to be demonstrated in the Military Utility Assessment (MUA) are to develop and deploy a persistent maritime awareness capability for the analyst, warfighter and decision maker that enables: (1) significant increase in worldwide, multi-INT vessel tracks using information sources from SCI/ Secret/Unclassified-levels and dissemination of these "Super Tracks", to operational users at the JWICS and Secret security levels; (2) percent decrease in the time required for an intelligence analyst to assemble the maritime awareness picture of ships using track , cargo and people information ; (3) percent increase in the ability of an analyst to determine ship threat profile (friend or foe) based on ship track, cargo and people information at the JWICS level; (5) percent increase in number of maritime awareness entities (ship, people, cargo, infrastructure) and the ability to manually and automatically fuse the data. The JCTD Residuals include: 1) Multi-INT fusion for worldwide MDA tracks with associated metadata; 2) web portal at the JWICS level; 3) SOA at JWICS level; 4) Alarms/alerts notification methodology; 5) Operationally tested CONOP for a 24/7 worldwide capability. MASTER is a three-year JCTD under the sponsorship of US Northern Command (NORTHCOM) and U.S. Navy, with					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
completion of development and demonstration by the end of FY 2009 and transition to the IC through Office of Naval Intelligence beginning in FY 2009. The lead Service is Navy. *FY 2009 Accomplishments:* Conduct edTechnical Demonstration Two; Conducted Final Operational Demonstration of MASTER with enhanced techniques for analytical user, and transition and operational users; publish Joint Military Utility Assessment (JMUA). Complete the JCTD.					
Medusa The Joint Requirements Oversight Council (JROC) validated the capability need for Medusa as an FY 2008 rolling start. The Medusa JCTD will demonstrate the employment of the Low Cost Guided Imaging Rocket (LOGIR) aboard the US Navy MH-60S helicopter against a multi-axis simultaneous attack from Fast Attack Craft (FAC) and Fast Inshore Attack Craft (FIAC). In this manner, US and coalition surface ship formations may protect themselves against coordinated asymmetric threats in a maritime environment. This capability will provide a leap ahead of current ship self-protection options, and contribute to a multi-layered, scalable maritime defense strategy. Additionally, the technology is readily adaptable for use against land-based targets. *FY 2009 Accomplishments:* Design of the of the launcher and rockets aboard the MH-60 aircraft, with preliminary demonstrations in FY 2010. *FY 2010 Plans:* Complete the design and integration of the launcher and rockets aboard the MH-60 aircraft. Complete preliminary demonstrations. *FY 2011 Base Plans:* Final Demonstration and JCTD completion will be in the first quarter of FY 2011.	5.638	5.000	4.310	0.000	4.310

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Transition Strategy: Flight-qualified launchers and rockets, along with modified MH-60 software builds will be made available for limited use in theaters immediately post-MUA. At this same time, Milestone B documentation will have been prepared along with and SD&D contract package to establish LOGIR as a Program of Record. Medusa rocket and launcher designs, software, CONOPS, and TTPs will transition directly to the LOGIR and MH-60 PORs.					
Multi-Function Threat Detector (MFTD)	0.650	0.000	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the need for MFTD JCTD capabilities as a FY 2008 new start. The output of MFTD JCTD will be to provide indication, warning, or situational awareness to the pilot or aircrew of non-guided threats such as small arms fire, tracer fire, anti-aircraft artillery fire, and rockets/rocket propelled grenades (RPGs). The efficiencies of MFTD JCTD will be to reduce significant and unacceptable vulnerabilities to highly proliferated battlefield threats to include MANPADs, RPGs and Unguided Rockets (UR). MFTD JCTD expands aircraft MWS to include Hostile Fire Warning (HFW) from MANPADS, RPGS, URs and incoming Surface-to-Air Fire from small arms to Anti-Aircraft Artillery. MFTD JCTD will develop software algorithms to detect, characterize, and display unguided threats to the aircrew. MFTD JCTD plans to develop an infrared micro-lens optics package that provides simultaneous spatial and temporal co-registration of spectral images. The HFW algorithm will not degrade the current operational performance of the Missile Warning (MW) or LW Sensors. *FY 2009 Accomplishments:* Conduct the MFTD JCTD module demonstration with MFTD sensor module mounted on tripod and tested against HFI threats. Test data to be acquired and analyzed. FY 2010 plans will be accomplished with FY 2009 "two year" funding and partnerships. MFTD JCTD will be integrated into AAR-47 sensor head as Hostile Fire Indicator (HFI) detector demonstration with the planned demonstration venue at China Lake, CA. It will test the HFI system installed in a remotely controlled helicopter in self-powered hover under realistic flight loads and against actual threats at					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and around the helicopter in-hover to assess accurate HFI. Recorded measured data to determine project operational utility, provide for system integration, and expedite flight qualification. The final demonstration and OUA will be conducted in a flight simulator in FY 2010. Acquisition/Transition Strategy: MFTD JCTD is targeted to transition into the Navy AAR-47 Program of Record (POR). First, the MFTD JCTD module will be integrated into the AAR-47C(V)1 sensor, and fielded to those aircraft that currently are outfitted with the AAR-47. Also, since the MFTD JCTD technology potentially compliments the Joint and Allied Threat Awareness System (JATAS) program will look at the MFTD JCTD HFI technology during the JATAS program RFP process which is estimated to go out in early FY 2009.					
Net Zero Plus (NZP)	2.423	3.025	0.650	0.000	0.650
The Joint Requirements Oversight Council (JROC) validated the capability need for NetZero Plus (NZP) as an FY 2008 Rolling Start. The outcome of the NZP JCTD is to demonstrate and assess reduced fuel demand, improved infrastructure and alternative energy supply seamlessly provided to the warfighter. This will be accomplished by reducing external fuel requirements for facilities/ forward operating bases and reducing risk to coalition lines of communication, i.e., reducing delivery of fuel to bases and facilities by soldiers, sailors, airmen, and marines. NZP leverages research and development from federal and private labs and COTS/GOTS technology in innovative power generation and distribution, energy efficient enduring and expeditionary structures, efficient lighting and renewable energy. The combined capabilities will establish an energy efficient Forward Operating Bases blueprint that may be utilized by tactical elements, operational commanders, theater planners, interagency organizations, and coalition partners. The emphasis will be on replacing or improving temporary living, office, and operational facilities with energy efficient structures and integrating renewable energy technologies with improved energy generation to power those structures. NZP JCTD is a three-year demonstration under the sponsorship of U.S. CENTCOM with the completion of the demonstration by end of FY 2010; and transition to programs of records as early as 2010. The lead Service is the Army but the Air Force and Marine Corps are also participants. The primary					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment (MUA) are: the performance of alternative structures, distribution and supply with metrics measuring the number of kilowatts used with a goal of 40 percent reduction the first year, 50 percent in the second year and 60 percent the third and final year along with a integrated DOD energy strategy and roadmap. The schedule is to conduct utility assessments in FY 2009 and FY 2010 to achieve Final Demonstration, Completion and Transition FY 2010. After completing a demonstration, a technology will be spiraled, transitioned, or ended due to lack of operational utility. Demand, Infrastructure, and Supply technologies are planned for transition to Mobile Electric Power Program of Record, PEO (Combat Support and Combat Services Support) Force Provider Program of Record, Air Force Basic Expeditionary Airfield Resources (BEAR), and placed on the General Services Administration (GSA) Schedule or Defense Logistics Agency (DLA) acquisition. *FY 2009 Accomplishments:* Completed exterior insulation of structures; installed various expeditionary structures including solar power tents and different insulation technologies, installed various internal lighting; installed solar operated perimeter lighting; initiated demonstration of the Deployable Renewable Energy Alternative Module (DREAM) and installed the Electronic Power Control and Conditioning (EPCC) for smart power distribution systems; Data collection continues including user data. *FY 2010 Plans:* Install a two-story energy efficient dome, expand intelligent power distribution with installation of a 1 megawatt microgrid, add a Waste to Energy system and integrate Alternative Power Generation. Continue data collection and analysis; Conduct final Military Utility Assessment; develop Net Zero Plus strategy and roadmap for foreign operating bases (FOB) and U.S. installations. NZP JCTD scheduled completion date is September 2010.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Planned Output: Complete data collection and assessment and finalize military utility assessment for final Net Zero-Plus strategy and roadmap for FOBs and U.S. installations.					
Shadow Harvest The Joint Requirements Oversight Council (JROC) validated the capability need for SHADOW HARVEST as an FY 2008 new start. The outcome of the SHADOW HARVEST JCTD is to provide Combatant Commands an integrated, joint airborne capability to provide persistent surveillance to consistently, accurately and efficiently find, fix, track and target enemy assets obscured by weather, vegetation, camouflage, concealment and/or deception (CC&D). The program leverages the Defense Intelligence Agency's (DIA) SHADOW HARVEST C-130 based program along with several maturing sensors and relevant networking/data fusion/recognition technologies. SHADOW HARVEST will provide a timely and low cost C-130 based approach to integrate, operationally deploy, and demonstrate new sensor processing, exploitation, and dissemination (PED) capabilities into the intelligence production cycle and will require fewer personnel, reduce or eliminate dependence on specialized collection platforms, mitigate the problems associated with equipment standardization and minimize the impact on the maintenance infrastructure. The goal of this JCTD is to transition a mature system, architectures, flexible adaptive CONOPS and platform which will allow for flexible airborne remote sensing in a tactical or irregular warfare environment. SHADOW HARVEST will be compatible with intelligence community, DoD and COCOM requirements and will provide a rapid to-the-field development capability for future sensor systems. SHADOW HARVEST is a two-year project sponsored by USSOUTHCOM, and the JCTD is scheduled to be complete by the end of FY 2009. It will transition to selected Program Manager(s) / Program of Record(s) by FY 2012. The lead service is the US Air Force. The DIA is the lead agency responsible for organizing a multi-agency, multi-service team for the JCTD. The primary outputs and efficiencies of the JCTD Joint Military Utility Assessments are: (1) Conduct multiple airborne mission demonstrations against challenging CC&D/ OTs using a tailorable C-130 multi-sensor system complete with on-board multi-phenomenology data	6.100	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

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fusion and ground PED, (2) Demonstrate and assess sensor cross-cueing/collaboration techniques for both baseline/new electro-optical/radar sensors and maturing MASINT sensors (to include low frequency/Multi-Band Synthetic Aperture Radar (MB-SAR), and hyperspectral imaging (i.e., Spectral Infrared Remote Imaging Transition Testbed (SPIRITT)), (3) Demonstrate dynamic in-flight mission tasking against emerging/evolving target sets, (4) Publish an OUA of the capabilities demonstrated and develop joint CONOPS and TTPs for COCOM target sets that will help the MAJCOM to develop sensor-mix strategies for COMCOM Target sets/missions and develop theater specific CONOPS to enable new collection capabilities to be integrated into the COCOM intelligence production cycle, (5) Maintain operation readiness, in flight status, for Extended Use of Residuals (EUR) assets to include a DIA SHADOW HARVEST system available for USAF and DIA tasking until transition to POR. *FY 2009 Accomplishments:* Coordinated the Management Plan (to include initial transition plan) and begain final system integration activities. Coordinate and plan demonstration activities to requested CoCom AOR. FY 2010 Planned Activities to include additional demonstrations will be funded with "two year" FY 2009 funds and partnerships and will conduct the final demonstration in a CoCom's AOR and complete the JCTD.					
Small Unmaned Aerial Vehicle (SUAV) The JROC approved the capability need for SUAS as an FY 2006 new start. The outcome of SUAS is to address Joint operational concerns noted during on-going operations through the integration of new technology across the entire class of Small UAVs. The outputs and efficiencies to be demonstrated are: technology insertions to provided measurably improved performance/logistical support in the following areas: Command, Control and Communications (C3); Payload Integration; Targeting; Platform Related Issues (power, propulsion, etc.); improved operator training though the use of integrated training programs with emphasis on simulation; improved and more efficient Tactics, Techniques, and Procedures (TTP) across the Services for small unit real-time reconnaissance and surveillance	1.300	1.210	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
capabilities. New operational capabilities will be evaluated and no less than once per year. Transition strategy: FY 2009/2010 is the transition period. The capabilities will be integrated into USSOCOM systems, and available for integration into all SUAS customers assets (spiraled out of the ACTD into the field as they become available). The User Sponsor and Lead agency is U.S. Special Operations Command (USSOCOM). *FY 2009 Accomplishments:* Military Utility Assessment (MUA) - Performed the final (culminating) assessment, capturing overall improvement to operational capabilities, Extended Use (EU) and transition support of fielded technology and training packages will continue. *FY 2010 Plans:* MUA reporting, Extended Use (EU) support of fielded technology and training packages will begin. The ACTD will complete in FY 2010.					
Smart Threads Integrated Radiation Sensors (STIRS) The Joint Requirements Oversight Council (JROC) validated the capability need for Smart Threads Integrated Radiological Sensors (STIRS) Joint Capabilities Technology Demonstration (JCTD) as an FY 2007 new start. The objective of the JCTD is to demonstrate and transition the capability to detect, identify, and disseminate radiological information on land, maritime, and airborne environments in order to enhance combating weapons of mass destruction operations. The capability suite will use a combination of proven and innovative radiation detection capabilities, networked through open-architectures, to aid in counterproliferation and consequence management missions. These capabilities have global applicability with forward-deployed Combatant Command (CoCom) ground forces (U.S. Army), U.S. Naval Maritime Components, and US Coast Guard elements in the transient areas. In all mission areas, the systems will be capable of being networked and radiological information can be provided through existing tactical, operational and strategic command and control	4.050	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

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(C2) networks. The is a three year JCTD sponsored by the US Northern Command (NORTHCOM); Defense Threat Reduction Agency (DTRA) is Lead Agency and US Naval Sea Systems Command (NAVSEA O4LR) and the Joint Program Executive Office for Chemical and Biological Defense (JPEO CBD) are co-Transition Managers. The operational demonstration/exercise (ODX) phase will complete in FY 2009 and transition will begin in FY 2009 through FY 2010. The capabilities and attributes below are the basis for the Joint Operational Utility Assessment (OUA) measures of effectiveness (MOEs) and measures of performance (MOPs): a. Detect and identify concerning R/N material/threats. - Attributes: precision, spectrum, quality, timeliness. b. Correlate and fuse information to develop shared understanding. - Attributes: quality, scalable, tailored to users. c. Enable support of/execution across, spectrum of battlefield environments (land, sea and airborne). - Attributes: robustness, persistence. d. Collaborative, networked joint and interagency information sharing. - Attributes: networked, interoperable, and fully integrated. *FY 2009 Accomplishments:* Conduct operational demonstrations/ exercises (ODX) with US Navy Level I, II and III Boarding Teams (MPDS capabilities); Conduct VMDS technical testing followed by technical demonstrations with operational unit training; Plan and conduct operational demonstrations/exercises (ODX) with 20th Support Command (CBRNE) for both MPDS and VMDS capabilities; Conduct Aerial Radiation Detection, Identification and Measurement System (ARDIMS) technical testing and system characterization, followed by unit training; plan and conduct operational demonstrations/exercises (ODX) with 20th Support Command (CBRNE) for ARDIMS capabilities, supporting/interdiction missions, and post-event radiation mapping/detection, utilizing manned and/or unmanned aerial					

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B. Accomplishments/Planned Program ($ in Millions)

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platforms. Complete the JCTD. The FY 2010 Transition Strategy - begin Extended Use activities, continue with transition of STIRS JCTD capabilities to Programs of Record (POR).					
Tactical Service Provider (TSP)	3.000	0.000	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the need for TSP functionality. The TSP JCTD began in FY 2007. The TSP JCTD takes advantage of emerging wireless commercial technologies to enhance and improve C2 and Net-Centric capabilities to meet critical present and near-term requirements. TSP conducted a final operational demonstration and assessment in the fourth quarter of FY09. Transition to the Global Broadcast Service (GBS) program of record entailed non-recurring engineering to add bi-directional functionality testing to the GBS Test and Evaluation Master Plan, definitize acquisition documentation for Service ordering of upgraded GBS terminals, and inclusion of TSP JCTD demonstrated functionality in the GBS migration of broadcast management to the Defense Enterprise Computing Centers in FY 2010-FY 2011. TSP outcome improves throughput, efficiency and availability of broadband communications between strategic information sources and tactical users, as well as between tactical users. The output is wideband SATCOM multicast/broadcast of information products to deployed forces while providing lower data rate reach back SATCOM supporting two-way services for tactical users. The efficiency is substantial increase in delivery of tactically relevant command and control and intelligence-related information products to land mobile troops, and the near real time delivery of tactically generated information to operational and strategic echelons. TSP was a three year JCTD co-sponsored by USCENTCOM and USTRANSCOM. The Defense Information Systems Agency (DISA) is the integrating lead agency. US Air Force is the lead transition Service.					
FY 2009 Accomplishments:					
Demonstrated militarily useful functionality in operationally relevant scenarios. Conducted operational utility assessment. Finalized documentation to transition functionality to programs of record. Completed the demonstration phase of the JCTD. Produce GBS Program focused developmental test and evaluation documentation for transition to sustainment and implementation. Perform pre-					

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acquisition activities for Service implementation in the next cycle of terminal buys. Transition the TSP interface specifications, architectural documentation and services definitions to the GBS Program. Complete transition of TSP produced specification documentation, training and use documentation and TEMP adjustments to USAF GBS Program. Participate in USAF GBS OT&E events to confirm integration of TSP functionality into next generation GBS architecture and hardware foundation. Complete JCTD activities.					
Theater Effects Based Operations (TEBO) The Joint Requirements Oversight Council (JROC) validated the capability need for the TEBO ACTD as a new start in FY 2004. The outcome of the TEBO ACTD is to provide Combatant Commanders with enhanced capabilities to analyze, plan, execute, and assess Effects-Based Operations (EBO) at the strategic and operational levels by integrating computer-aided decision support tools, Concept of Operations (CONOPS), and Tactics, Techniques and Procedures (TTPs) into the command's Mission Architectures. The TEBO ACTD is a six-year project under the sponsorship of Pacific Command and Combined Forces Command/U.S. Forces Korea (CFC/USFK) as the Operational User. Completion of development and demonstration is planned for by the end of CY 2009 with transition to the Net Enabled Command Capability (NECC) System of Record in 2010. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the TEBO ACTD Military Utility Assessments are (1) Exploit existing knowledge base(s) of strategic, operational and tactical environments (e.g. Operational Net Assessments [ONA] - critical capabilities and vulnerabilities, centers gravity [COG] and nodal analysis, (2) Facilitate collaborative effects-based campaign planning within a combined/ Joint environment, (3) Support execution with prioritization of strategic and operational levels of effort, synchronization of actions, and battle tracking, (4) Comprehensively assess and forecast progress toward the desired end state by analyzing observed direct and indirect effects. *FY 2009 Accomplishments:* Integrated with Turbo Planner and modeling/simulation tools to fulfill Adaptive Planning Strategic Guidance requirement for APEX. Will transition to the Department's Enterprise C2 System/POR	2.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

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(currently envisioned to be GCCS-J) POR. ACTD completion in September 2009. Transition Strategy: FY 2010 User Assessment and participation in UFL 2009. FY 2011 - Transition to the Department's Enterprise C2 System/POR (currently envisioned to be GCCS-J).					
Transnational Information Sharing - Cooperation (TISC) The Joint Requirements Oversight Council (JROC) validated the capability need for TISC as an FY 2008 rolling start. The outcome of TISC is to provide software tools for a non-classified portal for collaboration, planning and assessment by external partners and interagency organizations. The TISC capability will allow disadvantaged users to use the portal at low or no cost and accessibility will be possible in austere and minimal network infrastructure environments. This capability will provide collaborative chat, identity management, translation and multi-lingual text chat and Web 2.0 social networking tools. Outputs and efficiencies will include improved planning and response to theater security cooperation challenges and stability and reconstruction operations. Technologies demonstrated will reduce the time and increase the effectiveness of disaster relief, humanitarian assistance and stability operations where DoD, interagency, non-governmental organizations, international organizations, coalition nations and other first responders need to cooperatively act, plan and assess courses of action. The TISC initial demonstration occurred in the 2008 Coalition Warrior Interoperability Demonstration events held at multiple locations. USEUCOM and USSOUTHCOM serve as sponsors and COCOM representatives to determine operational requirements, demonstrations, assessment and operational concepts. Requirements and operational assessment will include external partners outside of DoD in the TISC community of interest. The TISC capability (operational concepts, tactics and procedures) will transition to the Theater Security Cooperation community, while the sustainment of the information sharing portal will become the responsibility of DISA using a fee for service model. The lead COCOM responsibilities are jointly shared between the US Southern Command (SOUTHCOM) and the US European Command (EUCOM) and the lead agency is the Defense Information Systems Agency (DISA). TISC is a four year JCTD that will conclude in March 2011.	3.000	3.630	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Spiral 2 and later spirals demonstration and assessment will complete in African Endeavor and Common Endeavor for the EUCOM sponsor. Approval of the Management and Transition Plan. Continuing series of incremental capability technical demonstrations leading to the spiral 2 assessment. *FY 2010 Plans:* Demonstrate and operationally assess TISC in the SOUTHCOM area of operations in Fuersas Aliadas Humanitarias (FAHUM) in April 2010 or another operational venue. FY 2011 Planned Output – Transition TISC capabilities and operational concepts to the Office of Primary Responsibility (OPR) for Theater Security Cooperation policy. Transition sustainment of the TISC portal will transition to DISA and other sustaining organizations in DOD, USG or others.					
One Box One Wire (OB1) The Joint Requirements Oversight Council (JROC) validated the need for OB1 as an FY-09 new start. The outcome of OB1 will be a generic computer workstation using a secure operating system separation kernel, virtual machine technology, and encrypted network communications path to enable a user to access multiple computer networks and information services operating at different levels of security from Top Secret to Unclassified from a single computer workstation. The information domains are kept separate. OB1 consolidates the network infrastructure from multiple terminals and network cabling at individual workstations to a single terminal connected to multiple data centers via one wire (network cable) — one box, one wire, multiple network and security domain access. The OB1 JCTD output will be formally evaluated and certified information security products pursuant to the combined DOD Intelligence Community Cross Domain Solution evaluation process managed by the Unified Cross Domain Management Office (UCDMO) and accredited for use in a broad spectrum of operational environments. The primary efficiencies include significantly reduced physical infrastructure (numbers of computers and network interface cards and wires), time and manpower savings in establishing	0.500	7.260	7.800	0.000	7.800

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
mission networks, and savings in power, air conditioning, and other base/installation/office operating requirements. OB1 JCTD plans for a final demonstration and assessment in the fourth quarter of FY 2011. OB1 is a three year JCTD sponsored by USCENTCOM. *FY 2009 Accomplishments:* Commenced assurance evaluation. Commenced network systems and security engineering and implementation planning with representative operational employment venues. Commenced assessment and deployment planning. *FY 2010 Plans:* Continue security assurance evaluation, network systems and security engineering and implementation planning with representative operational employment venues. Commence operational assessment and deployment planning. Transition manager is Air Force Cryptologic Systems Group. *FY 2011 Base Plans:* Conduct military utility assessment in operational network environments. Complete accreditation documentation and prepare for initial deployment. Transition to configuration management for sustainment Complete the JCTD.					
Mission Assurance Decision Support System (MADSS) The Joint Requirements Oversight Council (JROC) validated the need for MADSS functionality. The MADSS JCTD began in FY 2009. The expected output is a standardized framework and global capability for Commanders C2-related anomaly response and execution, and defense support to civil authorities. The MADSS JCTD will provide integrated C3 Operational and critical infrastructure relationships understanding by correlating data from different data sources, using web-based services, secure network and automated data transformation services. MADSS JCTD final demonstration and assessment will occur in the third quarter of FY 2011, with transition to Defense Information Systems Agency programs of record in the fourth quarter of FY 2011. The expected efficiencies are improved	2.500	1.283	1.313	0.000	1.313

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
responsiveness and proactivity through integrated real-time communications anomaly data feeds, telecommunications infrastructure analysis and assessment data, and a mission area knowledge base for rapid event analysis and Warfighter analysis of alternatives development. MADSS is a three year JCTD sponsored by USSTRATCOM. The Defense Information Systems Agency (DISA) is the lead agency. NSWC Dahlgren is the technical lead. *FY 2009 Accomplishments:* Refined operational user requirements for development of system architecture. Conducted limited functionality technology demonstration to refine specific functionality needed for mission thread assessment scenarios for the operational architecture. Complete Spiral 1. Efficiencies are expected from web-based community of interest (COI) specific access, COI mission area mapping, and automated data collection of DoD Information Technology (IT) infrastructure. *FY 2010 Plans:* Develop communication path to mission linkages. Develop knowledge base architecture and SOA design. Define Authoritative Data Sources. Develop standard data format and semantic mediation services among information feeds. Conduct technical demonstrations and limited operational demonstrations. Finalize operational and system architectures. Complete Spiral 2. *FY 2011 Base Plans:* Conduct final technical demonstration. Conduct operator training. Conduct final operational demonstrations and utility assessment (August 2011). Finalize documentation and transition MADSS functionality to DISA programs of record. Complete the JCTD.					
Joint Recovery and Distribution System (JRaDS)	5.700	4.786	5.850	0.000	5.850
The Joint Requirements Oversight Council (JROC) validated the capability need for Joint Recovery and Distribution System (JRaDS) as a Fiscal Year (FY) 2009 new start. The Joint Recovery and Distribution System (JRaDS) Joint Capability Technology Demonstration (JCTD) will develop and demonstrate					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the military utility of a new family of transportation trailers for the Department of Defense (DOD). JRaDS provides a Family of Systems (FoS) which enables execution of multiple mission profiles via a small number of trailer variants versus the large inventory of distinct type trailer systems currently in the DOD trailer inventory. This FoS will offer high reliability and parts commonality and modularity in design thus reducing Service logistics and maintenance requirements and associated costs of ownership. Additionally, due to the semi-autonomous operating capability of JRaDS, and reduced need for supplementary Materiel Handling Equipment (MHE) needed supporting personnel may be reduced. These aspects will expedite cargo movement from Sea Ports of Debarkation (SPOD), Aerial Ports of Debarkation (APOD), and Theater Supply Depots to front-line users, while reducing costs associated with movement of cargo within theater. JRaDS will also afford an expeditious and efficient method of recovering disabled and catastrophically damaged Tactical Wheeled Vehicles (TWV) such as the Mine Resistant Ambush Protected Vehicles (MRAP) and light to medium weight Rotary Wing aircraft. The JCTD will also produce an Aircraft Interface Kit (AIK) that allows Army Container Roll-On Platforms (CROP) and Flat Racks to be expeditiously loaded into C-130 and C-17 cargo aircraft. The efficiencies to be gained are: JRaDS reduces the time, vehicle and manpower requirements for Tactical Wheeled Vehicle recovery by estimated 50 percent. JRaDS will reduce MHE requirements by estimated 20 percent during operations in an austere environment and improve theater cargo velocity by estimated 20 percent. By having a standardized FoS trailer fleet that has common replacement parts, in-service effectiveness will improve by estimated 20 percent and parts inventory and costs will be reduced by estimated 50 percent. The transition strategy is to have Program Executive Office Combat Support/Combat Service Support (PEO CS/CSS) become the Joint Program Manager to procure and manage the supply of needed JRaDS trailers to the Services. Residual trailers from the JCTD will be used by field units thereby placing the JRaDS capability into forces sooner that waiting for production of trailers. The sponsoring Combatant Command (CoCom) is the U. S. Transportation Command (USTRANSCOM). The lead service is the Army.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Developed Implementation Directive and Management Transition Plan; developed operational and system architecture; developed CONOP draft; and purchased first demonstration trailers. *FY 2010 Plans:* Conduct technical and operational demonstrations #1, #2 and #3; Complete final Joint Operational Utility Assessment (JMUA) *FY 2011 Base Plans:* Submit final Operation Utility Assessment Report; Complete Capability Development Document (CDD); Planned transition is to PEO CS/CSS.					
Joint Medical Distance Support & Evacuation (JMDSE) The Joint Requirements Oversight Council (JROC) validated the capability need for JMDSE as a FY 2009 new start. The outcome of JMDSE will demonstrate capabilities mitigating problems associated with low density, high demand casualty evacuation forces; provide virtual/distant triage capability on a noncontiguous battlefield; extend care of medical forces; and provide medical reach-back from first responder to forward resuscitative care facilities. The primary outputs to be demonstrated include battlefield telemedicine, precision aerial delivery of small quantities of critical medical supplies and equipment for casualties in hostile and inaccessible areas. The efficiencies to be gained include: less costly and timelier delivery of critical medical supplies and casualty care equipment; improved battlefield care of casualties; reduced health risk to personnel on the battlefield. The transition strategy includes inclusion of precision aerial medical delivery systems, medical kits, and telemedicine capability in theater-based programs of record. The sponsoring combatant command is US Joint Forces Command and the executive agent is OSD Health Affairs.	4.800	1.379	0.520	0.000	0.520

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Completed Implementation Directive; completed first draft of Concept of Operations; conducted multiple Joint Precision Airdrop System Medical Express (Micro Lightweight (JPADS-MedEx MLW) technical tests from C-123 and C-130 aircraft; developed a warfighter capabilities document; completed Management and Transition Plan (MTP); concluded Analysis of Alternatives (AoA); completed the design and tested JPADS-MedEx delivery pod on the Tigershark Unmanned Aerial System (UAS). *FY 2010 Plans:* Identify and select competitive prototype contracts for JPADS-MedEx Ultra Lightweight (JPADS-MedEx ULW) systems; complete technical multiple technical test for Joint Combat Casualty Care System (JCCCS); conduct operational demonstrations #1 and #2; conduct limited operational utility assessment; and execute spiral development #1. *FY 2011 Base Plans:* Conduct operation demonstration #3 to fully integrated JCCS and JPADS-MedEx (ULW and MLW) systems; conduct final operation utility assessment; execute spiral development #2; and complete final report and training documents.					
Cooperative Security Engagement (CSE) The Joint Requirements Oversight Council (JROC) validated the capability need for CSE as an FY 2009 new start. The outcome of CSE is to demonstrate operational concepts and tools for enabling joint, multi-national planning, coordination and synchronization. CSE will provide a framework for improved inter-agency adaptive planning, regional/event based information sharing, and integrated event assessment. The JCTD is a three year project under sponsorship of U.S. Southern Command (SOUTHCOM) with U.S. European Command (EUCOM), and U.S. Agency for International Development (AID) as cosponsors. Technical lead is the US Army Corps of Engineers. Transition will incorporate CSE capabilities into COCOM stability operations, including CONOPS and policy. JFCOM	3.500	0.000	1.697	0.000	1.697

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
is the transition lead for the JCTD. The primary outputs and efficiencies to be demonstrated in the JCTD Operational Utility Assessment are (1) improved interagency adaptive planning, and (2) streamlined regional and inter-agency assessment. The JCTD is scheduled to complete at the end of FY 2011. *FY 2009 Accomplishments:* Complete implementation directive, integrate assessment plan; identification of planning, information sharing and assessment tools, initial operational concepts. Initial demonstration. *FY 2010 Plans:* Integrated architecture, interagency assessment plan; identification of planning, information sharing and assessment tools, initial operational concepts. Technical demonstration of software solutions. *FY 2011 Base Plans:* Demonstration in operational context of tools and operational concepts with cooperative security community of interest in selected regions within SOUTHCOM/ EUCOM/AID areas of operations. Operational Utility Assessment. Development of Tactics, Techniques and Procedures. Transition to JFCOM and AID.					
Daily Watch The Joint Requirements Oversight Council (JROC) validated the capability need for Daily Watch as an FY 2009 new start. Classified content only. FY2009 new start, U.S. European Command is the lead CoCom. National Reconnaissance (NRO) is the lead agency. *FY 2009 Accomplishments:* Classified content only *FY 2010 Plans:* Classified content only	2.800	4.500	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Precision Acquisition Weaponized System (PAWS)	4.400	4.500	0.000	0.000	0.000
The Joint Requirements Oversight Council (JROC) validated the capability need for PAWS as an FY 2009 new start. The objective of the PAWS JCTD will integrate multiple precision weapons aboard organic tactical ISR platforms, and demonstrate neutralization of threats. The weapon designs will allow multiple kills per sortie and engagement in environments where collateral damage and fratricide are unacceptable. This program will resolve the inability of Special Operating Forces (SOF) Intelligence, Surveillance, and Reconnaissance (ISR) platforms to prosecute targets. Currently, these platforms relay target data to SOF on the ground, who must then engage the targets directly. In this process, the risk to SOF is increased greatly. The PAWS JCTD will alleviate this risk. Deliverables will include documented Concept(s) of Operation, Tactics, Techniques, and Procedures, (software and hardware changes to demonstration platforms and weapons). Following the demonstration, fieldable prototypes will be made available to operational SOF units in their respective theaters. Tactical ISR system programs of record will make the changes necessary to incorporate this platform-independent technology. The Combatant Command/User Sponsor is the U.S. Special Operations Command (SOCOM) and the Lead Service/ Agency is the U.S. Special Operations Command (SOCOM). *FY 2009 Accomplishments:* Concept of Operations (CONOPS), Tactics, Techniques, Procedures (TTP) Development, Weapon Link Development, Safety Assessments, and Arming/Firing Development. *FY 2010 Plans:* Concept of Operations (CONOPS), Tactics, Techniques, Procedures (TTP) Development, Weapon Link Development, Safety Assessments, and Arming/Firing Development. FY11 Planned Output: Low Collateral Damage Testing, Certification, Integration with Host UAV, End-to-End Testing, and Demonstration #1 and Demonstration #2. Transition planning and execution of residuals to USSOCOM/PEO-FW. The Transition Manager is NAVAIR 4.5.					
Counter-Electronics High Powered Microwave System Advanced Missile Project (CHAMP)	5.800	6.050	6.500	0.000	6.500

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Joint Requirements Oversight Council (JROC) validated the capability need for CHAMP as an FY 2009 new start. The outcome of CHAMP is to demonstrate and assess a multi-shot and multi-target aerial HPM platform that is capable of degrading, damaging, or destroying electronic systems. For this effort a compact HPM payload will be integrated into an appropriate aerial vehicle to create the aerial HPM platform demonstrator. CHAMP is a three year project under sponsorship of United States Pacific Command (USPACOM), with completion of integration and final demonstration in FY 2012, and transition to an Air Combat Command program of record in POM FY 2012-2017. The lead service is Air Force. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment (MUA) are: (1) Delivery of the HPM aerial system to the target; (2) Minimum effectiveness HPM range; (3) Stand-off distance from launch to target; (4) Multiple geographically separated targets; and (5) Navigation, orientation, and fuzing accuracy. *FY 2009 Accomplishments:* Developed Implementation Directive and Management and Transition Plan. Conducted a Broad Area Announcement to identify potential industrial partners. Review analysis and solution alternatives. Conducted modeling and simulation and assemble test hardware components. The Air Force Research Laboratory, Directed Energy Directorate, High Power Microwave Division is the designated Technical Manager. *FY 2010 Plans:* Develop Concepts of Operations (CONOPs) and Tactics, Techniques, and Procedures (TTPs). U.S. Pacific Command (PACOM) is the Operational Manager. Develop or refine training, test and security plans. Begin component systems integration and operator training. Conduct ground testing. *FY 2011 Base Plans:* Complete component integration and ground testing. Complete operator training. Refine CONOPs and TTPs. Complete operational demonstration #1 to demonstrate the ability to accurately navigate to a target building and illuminate the building to ensure effects on the internal electronic components					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
at a distance from the target to be a viable military option. Develop/refine requirements and documentation for formal acquisition effort.					
Joint Multi-Effects Warhead System (JMEWS)	3.000	3.630	6.500	0.000	6.500
The Joint Requirements Oversight Council (JROC) validated the capability need for JMEWS as an FY 2009 new start. The JMEWS JCTD will demonstrate an updated multi-effect warhead system aboard the Tomahawk Land Attack Missile (TLAM). This warhead technology will provide a leap-ahead capability against a widely varied target set, which includes hard and soft targets. In concert with this warhead, a Third-Party In-Flight Targeting (3PT) system will be demonstrated that will allow dynamic targeting and retasking of the missile as intelligence is updated. Using these technologies, Combatant Commanders will have the reliable option of neutralizing heavily defended and dynamic targets without the incursion of manned platforms. Hardware and software changes to the TLAM Program of Record (PMA-280) will be incorporated via Engineering Change Proposals once demonstrated. Deliverables will also include documented Concept(s) of Operation, Tactics, Techniques, and Procedures. Production of the TLAM will be shifted to replace the current warhead with the JMEWS warhead, and to add the datalink, radio equipment, and interfaces necessary for 3PT. JMEWS value to Joint Warfighter is it increases number of targets held at risk and reduces cost; Increased flexibility in access denied environments; provides a long range, survivable, high-lethality weapon. The User Sponsor U.S. Special Operations Command (SOCOM), U.S. Strategic Command (STRATCOM) and the Lead Service is the US Navy. *FY 2009 Accomplishments:* Completed systems engineering, integration, & testing. *FY 2010 Plans:* Multiple targets demonstration, Validation, Joint Military Utility Assessment (JMUA).					

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FY 2011 Base Plans: Transition to Tactical Tomahawk (TACTOM) production. Transition to Program of Record (POR) first quarter of FY 2012 .					
FY 2011 JCTD New Starts Funding for FY 2011 JCTD new starts that will result from the JCTD selection process that will begin in March 2010. New start selections will be finalized in August/September of 2010, just prior to the year of execution. These funds will start ten to twelve new starts in FY 2011. Although the specific projects are unknown at this time, the 2011 selection process provides a more rapid delivery of capabilities than the traditional, incremental programming and budgeting methods that are supported by the deliberative Planning, Programming, Budgeting and Execution (PPBE) process. The JCTD process is adaptive and provides an agile technology development and demonstration program to better address a quickly changing threat. The JCTD model is an agile process spanning of two to four years. The concept falls between the Joint Rapid Action Cell (JRAC) urgent needs process of less than two years with little or no development, and the traditional, more deliberate, formal acquisition process that can stretch five to ten years. Final selection of projects just prior to the fiscal year allows for the program to be as agile as possible. *FY 2011 Base Plans:* Anticipate starting twelve to fifteen new start projects in FY 2011.	0.000	0.000	68.000	0.000	68.000
Tactical Edge Data Solutions (TEDS) The Tactical Edge Data Solutions JCTD was validated by the Joint Requirements Oversight Council for a FY 2010 start. The stated outcome of the JCTD is the implementation of C2 Core extensions for tactical information at the Battalion level so that Web-services data sharing frameworks based on Universal Core (UCore) can enable data sharing among disparate systems. The JCTD will focus on exchanging data from Army and Marine Corps C2 Authoritative Data Sources (ADS) for the	0.000	1.500	1.500	0.000	1.500

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Command and Control (C2) and Battlespace Awareness domains. The efficiencies to be gained will be reduction of redundant software being developed across multiple programs and the ability to seamlessly exchange data within Military Services as well as NATO and coalition partners who adopt UCore. UCore is the U.S. Government standard for interagency data exchange. The lead CoCom is U.S. JFCOM. The Marine Corps is providing the technical lead and the Army is providing the transition manager. Transition of the C2 Core extensions and Web services for translation and semantic mediation is planned for programs of record in the Army, Marine Corps and DISA. The output of the JCTD will enable moving C2 systems to DoD's goal of implementing a Service Oriented Architecture (SOA) environment. The final demonstration date will be in midyear FY 2012 and the JCTD will complete in September 2012 with transition expected in FY 2013 of data pilot services. *FY 2010 Plans:* Implementation Plan and Management development. Architecture definition, C2 Core extensions, develop web services for mediation of data (translation and semantic), define repeatable business process and objective services. Demonstrate net enabled tactical edge data exchange in Pilot 1 using a joint Maneuver Mission thread *FY 2011 Base Plans:* Net enabled Coalition Data Sharing demonstrated, expanded web services and C2 core extensions including NATO systems. Net enabled SOA environment using tactical ISR systems. Post extensions to Metadata repository. Provide Web services and standards to C2 community to assist PORs in exposing and daring data. Provide repeatable process for extending C2 Core into other communities of interest.					
Partnering Earth Observation for People Living Environmentally (PEOPLE) The Joint Requirements Oversight Council (JROC) validated the capability need for PEOPLE as an FY 2010 new start. By partnering the US with other nations for the sharing earth observation data the PEOPLE JCTD will provide four capabilities: a monitoring, analysis, and visualization decision	0.000	3.689	1.498	0.000	1.498

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support system for ecological and environmental forecasting and management; world-wide collaborative data sharing; cross-border, interdependent, national and regional solutions for ecological decision support; and scalable, adaptable, and sustainable core systems. Participants include European Command (EUCOM), National Aeronautics and Space Administration (NASA), German Aerospace Center (Deutsches Zentrum fur Luft-und Raumfahrt) (DLR), University Alabama Huntsville (UAH), Von Braun Center for Science and Innovation (VCSI) and Partner Nations, Operators / Analysts and Decision-makers. PEOPLE JCTD is a monitoring, analysis, and visualization decision support system based on earth observation data and modeling analysis. It capitalizes on existing space, air, ground-based and NASA's decision support architecture assets. This project will technically and operationally demonstrate, assess and transition a decision support system for cross border, regional and multi-national environmental, humanitarian and hazard risk forecasting and management. PEOPLE JCTD configuration consists of one regional node and two national nodes, at an unclassified and commercially secured information level, with the ability to access data in a Web-based construct. This project is a true Multi-Agency, Multi-National, Building Partnership Capacity effort enhancing global security with low-cost, mature planning, and decision support system for Partner Nations and COCOMs. The DoD user sponsor is European Command. *FY 2010 Plans:* Develop CONOP, functional requirements and TTPs plus, define and establish system architecture. Build and test PEOPLE JCTD system components. Conduct technical demos (x2) and user suitability evaluations. Perform component integration test and demonstration. Reduce risk via test-fix-test approach and operator / user input. Technical Demonstration (TD) serve as “dress rehearsal” for operational demonstration (OD). TDs will be conducted June 2010, Stuttgart, Germany and August 2010, National Space Science and Technical Center (NSSTC), MSFC NASA. *FY 2011 Base Plans:* Conduct operator and user training. Conduct operational demonstration and perform operation utility assessment. Transition capability/solution to limited operational use and follow-on development					

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acquisition and sustainment. The demonstrations are planned for completion in the first half of FY 11. Transition will commence in 3rd quarter FY11, pending successful OUA results.					
Pacific Sail Pacific Sail was an FY 2009 rolling start JCTD. Classified content only. The user sponsor is USPACOM and the Operational Manager is US Pacific Fleet. This project integrates US Air Force and US Navy capabilities into a new capability that addresses one of USPACOM's priority capability gaps. An initial demonstration was conducted in late FY 2009, and final demonstration is scheduled for late FY 2010. Pacific Sail project details are classified. *FY 2009 Accomplishments:* Classified content. Integrated US Air Force and US Navy components, conducted land-based demonstration, validating the potential capability of the planned sea-based system. *FY 2010 Plans:* Classified content. Conduct systems integration of sea-based components, and complete operational demonstration of sea-based system. Complete coordination for follow-on transition.	4.000	4.000	0.000	0.000	0.000
Rapid Reaction Tunnel Detection (R2TD) The Joint Requirements Oversight Council (JROC) validated the capability need for R2TD as an FY-10 new start. The outcome of R2TD is to demonstrate a set of detection and mapping technologies, and establish procedures to provide Joint Force Commanders with a capability to detect characterize and interdict tunnels on the battlefield and beneath the US borders. R2TD is a two-year project under the sponsorship of the United States Northern Command (NORTHCOM) and Joint Task Force North support from the United States Army Corps of Engineers. R2TD will complete development and demonstration by end of CY 2011, and transition to NORTHCOM and Joint Program Manager Guardian by 2Q FY12. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are (1) accurately locate subsurface voids up to 100 feet, (2)	0.000	3.525	3.460	0.000	3.460

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
detect tunnel construction in real-time and report summaries every 4 hours, (3) detect movement of contraband through tunnel in near-real time and report summaries every 4 hours, (4) precisely locate tunnel axis, ingress and egress points, (5) characterize physical dimensions of tunnels including depth, cross-section, and azimuth, and (6) characterize internal features of tunnels including floor, shoring, lighting, ventilation, and water presence/flow. *FY 2010 Plans:* Integration of sensor feeds into single operational picture to produce verification of tunnel detection and movement activity. Sensors to be integrated and technically demonstrated include Border Tunnel Activity Detection Systems (BTADS), Electromagnetic Imaging (EMI), and Active Seismic Imaging Systems (ASI). Characterization o of the tunnel will be technically demonstrated via tele-operated robot. *FY 2011 Base Plans:* fully integrated sensors and tactics, techniques and procedures (TTPs) will be operationally demonstrated at Yuma Proving Ground, problems identified and resolved, then the entire integrated detection and characterization system operationally demonstrated along the US southwest border. The final Operational Demo is scheduled for 4Q FY11, and completion of the JCTD is scheduled for 2Q FY12 to enable transition of all detection and characterization capability to JPM Guardian. The R2TD Transition manager is Joint Program Manager Guardian. The JCTD is structured to enable a potential “off-ramp” after 12 months if appropriate to deploy the integrated sensor suites and software algorithms for tunnel detection with Joint Task Force North to establish an initial residual detection capability. Follow-on characterization capability will be transitioned at this point for continued development if a transitioning organization can accept, or the JCTD will continue to mature the characterization technology for full-up integrated detection and characterization capability.					
Dark Fusion	0.000	4.000	4.000	0.000	4.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Joint Requirements Oversight Council (JROC) validated the capability need for R2TD as an FY-10 new start. The outcome of Dark Fusion is a CLASSIFIED capability to detect and track non-emitting maritime threats using Synthetic Aperture Radar (SAR), Electromagnetic and Infrared sensing modalities. Dark Fusion is a three year project under the sponsorship of United States United States Northern Command (NORTHCOM) and CENTCOM/NAVCENT with the Navy as the lead Service via Naval Research Laboratory. Technologies involve SAR, acoustic tripwire, intelligence fusion, and service oriented architecture. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are CLASSIFIED. *FY 2010 Plans:* Capability outputs are CLASSIFIED, and will be technically demonstrated in 4QFY10. *FY 2011 Base Plans:* Capability outputs are CLASSIFIED, and will be technically demonstrated in 3QFY11 and operationally demonstrated and assessed in 3Q FY11. Extended use is expected to initiate 4QFY11. FY 2012 Planned Output - Capability outputs are CLASSIFIED, and will be technically demonstrated in FY12 and operationally demonstrated and assessed in FY12. The transition Manager is PM National Tactical Integrated Processing Service (NTIPS) and expects to transition Dark Fusion to the NTIPS Program of Record 1QFY13.					
Command and Control Gap Filler (C2GF)	0.000	4.000	4.000	0.000	4.000
The Joint Requirements Oversight Council (JROC) validated the capability need for C2GF as an FY-10 new start. Participants include Department of Defense, Department of Homeland Security (DHS) and other U.S. Gov't agencies. The C2GF JCTD will provide an information systems architecture that can share all-source air surveillance data between government departments. The C2GF solution will also provide data fusion services to users or enable users to operate their existing fusion processes if desired. C2GF will demonstrate for Joint, Interagency, intergovernmental and Multinational (JIIM) partners a capability that enables efficient, secure, timely and trusted exchange of information resulting					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
in enhanced aerospace by shared situational awareness, persistent Wide Area Surveillance, actionable intelligence and information, and event Surveillance and Reporting. Additionally, the C2GF JCTD will also refine the concept of operations and employment and techniques, tactics and procedures necessary for JIIM coordination for air domain surveillance. Demonstrations are planned for FY10, 11, and 12. The COCOM user/sponsor is USNORTHCOM. *FY 2010 Plans:* Architecture, testbed, multi-sensor correlator, data exchanged with DHS AMOC *FY 2011 Base Plans:* SIGINT and additional data to correlators, initial 2-dimensional OTH radar transmit/receive demos. Advanced classified sensor integration, demonstrations and utility assessments					
Joint UAS Precision Targeting (JUPT) The Joint Requirements Oversight Council (JROC) validated the capability need for JUPT JCTD as an FY 2010 Rolling Start. The objective of the JUPT JCTD is to rapidly provide precision coordinates from UAS generated imagery for use with coordinate seeking weapons. The Joint Commander must be able to rapidly transition from observing to striking high value targets with coordinate seeking weapons in all terrain, while minimizing collateral damage. Current UASs and targeting pods are unable to generate precision coordinates (category 1) under most conditions. The ability to rapidly strike targets identified by UAS assets is delayed because UAS derived coordinates lack precision required for coordinate seeking weapons. The JUPT JCTD is designed to provide that capability. In order to expedite putting demonstrated capabilities into the hands of Combatant Commands, products and deliverables will be transitioned to the Services in FY12 pending successful JOUA. Deliverables include hardware, software, and documentation and a finalized CONOPS, TTPs, training package, and DOTMLPF change recommendations. The Combatant Command/User Sponsor is the U.S. Special Operations Command (SOCOM) and the Lead Service/Agency is also SOCOM.	0.000	1.000	2.000	0.000	2.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Approved Implementation Directive (ID). Conduct two technical demonstrations, Conduct repetitive evaluations of CONOPs / TTPs, threats and environment, and scenarios / vignettes. Spiral out capabilities as approved by National Geospatial-Intelligence Agency (NGA). *FY 2011 Base Plans:* Approved Management Transition Plan (MTP). Conduct two operational demonstrations. Conduct Joint Operation Utility Assessment (JOUA). Spiral out capabilities as approved by NGA. FY12 Planned Output: Execute transition activities to provide deliverables to USA (PM-BC PM-UAS). The Transition Manager is USA PM-UAS and SOCOM.					
Fixed Wing Advanced Precision Kill Weapon System (FW-APKWS) The Joint Requirements Oversight Council (JROC) validated the capability need for FW- APKWS JCTD as an FY 2010 New Start. The objective of the FW APKWS JCTD is to provide the legacy AV-8B and A-10 aircraft with a precision air-to-ground low collateral damage weapon for use in irregular warfare operating theaters and beyond. The FW- APKWS JCTD provides a guided rocket that will help fill the gap left by a diminishing supply of laser Maverick (LMAV) missiles which are out of production. In addition, these legacy platforms are not included as threshold platforms in the Joint Air-to-Ground Missile (JAGM) Program of Record (POR). The FW-APKWS JCTD is considered very low risk as it leverages the existing APKWS POR developing laser guided rockets for the AH-1W rotocraft. As such it is anticipating a rapid transition to the APKWS POR upon completion of the Military Utility Assessment (MUA). Deliverables will include documented Concept(s) of Operation, Tactics, Techniques, and Procedures, and the Technical Data Package necessary to offer a fixed-wing variant in the APKWS POR. In addition, 50 combat-ready residuals will be delivered (25 USN, 25 USAF). The Combatant Command/User Sponsor is the U.S. Central Operations Command (CENTCOM) and the Lead Service/ Agency is USN (PMA-242).	0.000	3.500	4.000	0.000	4.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Approved Implementation Directive (ID). Conduct Critical Design Review (CDR), Update Technical Data Package as allowed, Conduct Technical Demonstrations. *FY 2011 Base Plans:* Approved Management Transition Plan (MTP). Conduct operational demonstrations (USN and USAF flight tests). Finalize Technical Data Package. Begin fabrication of residuals. FY12 Planned Output: Complete Military Utility Assessment (MUA) and Operational Assessment (OA), Modify Operation Requirements Document (ORD) of APKWS to include fixed-wing production requirements. Deliver combat-ready residuals. The Transition Manager is USN PMA-242.					
Sea Tracker (ST) The Joint Requirements Oversight Council (JROC) validated the capability need for ST as an FY-10 new start. The outcome of ST is a CLASSIFIED capability. The ST JCTD is sponsored by USSOCOM in cooperation with the Navy. The objective of the ST JCTD is to develop and transition capabilities to tag, track, and locate surface vessels of interest for all Theater Commanders for a variety of warfare purposes including: Counter Terrorism; Counter Proliferation; Counter Piracy; and Counter Narcotics. Details are classified. *FY 2010 Plans:* Capability outputs are CLASSIFIED. *FY 2011 Base Plans:* Capability outputs are CLASSIFIED.	0.000	2.000	1.000	0.000	1.000
Operational 3- Dimension (Op3D) The Joint Requirements Oversight Council (JROC) validated the capability need for Op3D as an FY-10 new start. The Op3D JCTD is a joint interagency-sponsored program sponsored by USSOCOM. The	0.000	3.400	3.085	0.000	3.085

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
objective of the Op3D JCTD is to develop and transition capabilities to quickly discover, manage, generate, exploit, disseminate and accurately update 3D GEOINT data from multiple collection systems to the warfighter. This JCTD will also develop and deliver Standard Operating Procedures (SOPs), and appropriate Concept of Operations (CONOPS) with Tactics, Techniques & Procedures (TTPs). This controlled process will enhance effective transition to multiple GEOINT and 3D database production facilities to support military operations. The JCTD will consist of three overlapping development and demonstration spirals. The focus of Spiral One will be on GEOINT Production Centers such as the Special Operations Forces Planning, Rehearsal and Execution Preparation (SOFPREP) facility and will run ten months. The duration of Spiral Two will be eleven months and will focus on dissemination of 3D products to the warfighter and the means for the warfighters to exploit the products. The duration of Spiral Three will be eight months and will focus on final enhancements, user evaluations and transition. It is the intent of the JCTD to demonstrate the capabilities during Special Operations Forces (SOF) Emerald Warrior exercises. Residuals from the effort will include an enhanced 3D data processing pipeline, warfighter/analyst exploitation tools, TTPs, CONOPs, user guides and training packages. The Op3D CONOP consists of four phases: Phase I – Collection/Discovery – Import and export modules exercising standards for a variety of 3D sources result in improved sharing of 3D source data. GEOINT source data discovery and management via automated search, retrieval and management processes enhance data and product retrieval. Phase II – Processing – 3D scene visualization databases are the output of data processed through imagery manipulation, feature extraction and digital elevation model (DEM) production tasks. Phase III – Dissemination – Databases are efficiently disseminated to various production facilities and the warfighters, including disadvantaged users, by employing compression, data streaming, database update subscription, and automated database update pushes.					

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B. Accomplishments/Planned Program ($ in Millions)

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Phase IV – Exploitation – The warfighter/analyst uses exploitation tools to take advantage of the 3D products provided by Op3D to establish a common operational picture of urban and austere environments and serve other critical functions for military operations. USSOCOM acts as Lead Service and is responsible for requirements validation and transition management for the SOF community. The Director, Army Geospatial Center (AGC), will be the Technical Manager (TM) providing: program management for funding and technical development; interagency coordination; oversight for contracts to provide technologies; and direct development community activities. The TM will plan and conduct technical testing, demonstrations, and test readiness reviews; and provide components and/or enhancements to existing components to the Operational Manager (OM) to support timely execution of operational demonstrations. The USSOCOM Special Operations Planning, Rehearsal and Execution Preparation Planning (SOFPREP) Branch Chief will provide the TM with subject matter expertise. As Deputy TM will also support all transition activities associated with the SOFPREP facility. USSOCOM J7T will plan, coordinate, and direct all user activities related to the JCTD. The OM will coordinate user participants, user-provided equipment, and user-provided facilities for both technical and operational demonstrations and events. The OM will develop the CONOPS, mission scenarios, requirements documentation, and demonstration plans, and will plan for extended user evaluations and operational use of residuals. The OM is responsible for coordinating with an Operational Test Agency (OTA) for the development of the Integrated Assessment Plan (IAP) and conduct of the assessments. The OM will develop the final OUA report. The National Geospatial-Intelligence Agency (NGA) will develop and implement a Transition Plan to transition successful Op3D technologies into programs of record. However, the ultimate responsibility for transition rests with the Services of JCTD stakeholders and their production centers including USSOCOM and the SOFPREP Production Center. The transition strategy for the Op3D JCTD is to					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
spiral off capabilities throughout the JCTD into Agency and Service Production Centers. Residuals from the effort will include data archiving and management tools, data processing software, data dissemination capabilities, warfighter/analyst exploitation tools, TTPs, CONOPS, user guides and training packages. *FY 2010 Plans:* Execute, evaluate, and transition Spiral 1 tasks. Develop CONOPs, SOPs, TTPs, user guides, and training packages for successful Spiral 1 processes. *FY 2011 Base Plans:* Execute, evaluate, and transition Spiral 2 tasks. Develop CONOPs, SOPs, TTPs, user guides, and training packages for successful Spiral 2 processes. FY 2012 Planned Output – Execute, evaluate, and transition Spiral 3 tasks. Develop CONOPs, SOPs, TTPs, user guides, and training packages for successful Spiral 3 processes.					
Pre-Positioned Expeditionary Assistance Kit (PEAK) The Joint Requirements Oversight Council (JROC) validated the capability need for PEAK as an FY-10 new start. The outcome of PEAK is to demonstrate and transition an array of capabilities that can be pre-positioned to help provide sustainable, essential services of value to partner nations through military-to-military operations. PEAK is a three-year project under sponsorship of USSOUTHCOM, with completion of development and demonstration by end of CY 2012 and transition to US Government Agencies related to USSOUTHCOM and other Regional Combatant Commands and partner nations by FY 2012. The lead service is to be determined. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are (1) To enhance partner nation capabilities to carry out key missions through proactive military-to-military engagement, (2) improve partner nations' ability to provide critical services for targeted purposes during the first days of a natural or man-made crisis through a structured planning process, (3) collaboratively enhance regional stability, (4) Four types of emergency assistance kits focused on power generation, communications and information	0.000	2.130	2.505	0.000	2.505

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
sharing as the key enablers of distributed essential services, (5) A process for social networking and trust-building that can enhance partnership relationships in many areas, and contingencies, and (6) An international, searchable, knowledge base of cost-effective infrastructures that can be used in HA/DR, BPC and other missions. *FY 2010 Plans:* Developed four types of emergency assistance kits focused on power generation, communications and information sharing as the key enablers of distributed essential services. Limited Operational Utility Assessment (LOUA) conducted in September 2010 and successfully demonstrated the Peace Keeping Operations (PKO) support prototype kit. Spiral Output – the Peace Keeping Operations (PKO) support prototype kit type was left behind for continued use and evaluation by operational users. *FY 2011 Base Plans:* Complete development of Humanitarian Assistance/Disaster Relief, Law Enforcement/First Responder, & Remote operations in a tropical environment kits. Final operational utility demonstration of PEAK emergency assistance kits is scheduled for September 2011 building on the scenario and technical success of the 2010 LOUA. Demonstrate kits in collaboration with nations from the four regions of the USSOUTHCOM AOR; Central America, Caribbean, Andean Ridge, and Southern Cone. Spiral Output – the Humanitarian Assistance/Disaster Relief, Law Enforcement/First Responder, & Remote operations in a tropical environment kits will be left behind for continuing use and evaluation by operational users. FY 2012 Planned Output - Begin transition to US Government Agencies related to USSOUTHCOM and other Regional Combatant Commands and to partner nations both for purchase and local production. Develop integration and employment CONOP to integrate PEAK capability with other partners. Business Case Analysis (BCA) completed. Transition manager is to be determined.					
Integrated SATCOM-GIG Operations and Management (ISOM)	0.000	3.126	2.624	0.000	2.624

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Joint Requirements Oversight Council (JROC) validated the need for ISOM as FY-10 new start. The ISOM JCTD outcome is to demonstrate real-time Internet Protocol (IP) satellite communications (SATCOM) situational awareness (SA) and a scalable and policy-based management system that enables dynamic allocation and provisioning of SATCOM resources. The JCTD will streamline existing SATCOM resource management tools which will greatly improve the ability to make the most of underutilized SATCOM resources or to resolve complex warfighter communications outages. The lead agency is DISA. The primary outputs and efficiencies to be demonstrated are: (1) integrated, real-time situational awareness of SATCOM resources that provides a single, over-arching view of current SATCOM allocations and the load on these links, and (2) an automated ability to act on this SA information by dynamically re-allocating or re-provisioning the SATCOM resources given to IP SATCOM networks. ISOM JCTD plans for a final demonstration and assessment in the third quarter of FY 2012. ISOM is a three year JCTD sponsored by USSTRATCOM. *FY 2010 Plans:* Developed Implementation Directive and Management and Transition Plan. Begin development of Concepts of Operations (CONOPs), Tactics, Techniques, and Procedures (TTPs) and Training documents. Conduct initial technical and operational demonstration. Complete Spiral 1 - the implementation of Web Services and the integration of a data exchange model via industry standards within the ISOM lab test bed architecture. Demonstrate an integrated, real-time SA of IP modem hub and terminal information, within the ISOM lab testbed architecture. Technical manager is DISA. *FY 2011 Base Plans:* Continue development of Complete CONOPS, TTPs, and Training documents. Conduct second technical and operational demonstration. Complete Spiral 2 – the integration of ISOM SA server and policy-based management system. Development of a common information exchange schema for integration with Defense Information Systems Network. Transition manager is DISA. FY 2012 Planned Output: Conduct operational utility assessment in operational network environment. Demonstrate a scalable and policy-based management system that enables dynamic allocation and provisioning					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
of SATCOM resources in an end-to-end over the air architecture. Complete CONOPS, TTPs, and Training documents. Prepare for initial deployment. Transition to configuration management for sustainment. Complete the JCTD					
Orion Unmanned Aircraft System	0.000	5.000	5.000	0.000	5.000
The Joint Requirements Oversight Council (JROC) validated the need for Orion as FY-10 new start. Additional, persistent Intelligence, Surveillance and Reconnaissance capability is critically needed across the Combatant Commands. The Orion UAS outcome will demonstrate 120 hr sortie endurance with nominal 1000 lbs payload (max of 2600 lbs) at 15,000 ft with modular design allowing for integration of a myriad of payloads including EO/IR, SIGINT, Ground Moving Target Indication, wide area surveillance, and communications relay. The demonstration of this 5-day capability will validate decreased manning levels necessary to operate autonomous systems thereby reducing life-cycle costs. Additionally, the integration of advanced avionics, commercially available propulsion, and standards based (open-architecture) interfaces will allow the Department an affordable, flexible solution to the CoCom ISR demands. The Orion JCTD will initially demonstrate 5-day endurance and reliability. Subsequent efforts will evaluate payload flexibility and modularity. The lead service/agency is the Air Force. The Orion JCTD plans for a final demonstration and assessment in 2011. Orion is a two year JCTD sponsored by USCENTCOM. *FY 2010 Plans:* Develop Implementation Directive and Management Plan with Transition Strategy. Assessment Organization Identified and develop Integrated Assessment Plan (IAP). Develop TTPs and CONOPS. Develop Training Support Packages Complete Assessments and System Critical Design Review, Flight Readiness Review. *FY 2011 Base Plans:* Demonstration schedule: First flight: early FY 2011, First 5-day flight: late FY 2011, Payload demonstrations: FY 2011					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Planned Transition Strategy: 1) Develop and validate manning for long-endurance, autonomous ISR platforms. 2) Capability to provide flexibility of configuration with open-architecture design. 3) Provide Orion UAS to USAF (303rd AESW) for theater deployment.					
National Technical Nuclear Forensics (NTNF)	0.000	2.750	3.950	0.000	3.950
The Joint Requirements Oversight Council (JROC) validated the need for NTNF as FY-10 new start. This project will strengthen strategic nuclear deterrence by enhancing nuclear forensics capabilities supporting attribution after release of nuclear materials. Classified details of the problem can be provided upon request. The outcome and efficiencies of NTNF will be to integrate advanced air and ground debris sample collection technologies in both manned and unmanned platforms, and develop and assess a joint interagency concept of operations for advanced sample collection with global applicability. The project will also demonstrate enhanced integrated yield estimation methods for nuclear events. The techniques to be employed will increase capabilities to collect nuclear debris, while enhancing safety for federal and local incident responders. Details of collection capabilities and concepts of operation are classified and can be provided upon request. The lead service/agency is the Air Force and Defense Threat Reduction Agency (DTRA). The NTNF JCTD plans for a final demonstration and assessment in 2012. Orion is a three year JCTD sponsored by USSTRATCOM. *FY 2010 Plans:* Capability outputs are CLASSIFIED. *FY 2011 Base Plans:* Capability outputs are CLASSIFIED.					

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Planned Transition Strategy: 1) Sample collection technologies, incident mapping capability, yield estimation software; 2) Training packages, concepts of operation, tactics/techniques/procedures; 3) Transition to US Air Force and Joint programs of records to be determined.					
Emerging Technologies	3.000	5.602	12.597	0.000	12.597

Joint enabling technologies that are either directed by Congress or initiated by the Rapid Fielding Directorate. Over the past several years' congressional committees have highlighted the potential of mature, joint technologies and provided resources to the JCTD program to investigate the military utility of these technologies. The Rapid Fielding Directorate also becomes aware of promising technologies which may have transformational application to JCTDs. The need for these technologies may not be realized until an JCTD is mid-way through its development or after a final demonstration. In most cases, these enabling technologies have broader application across several functional capabilities addressed by various JCTDs. This funding is used to assist in the rapid of development emerging capabilities that are deemed most critical to the combatant commanders where agility and rapid fielding are the most important criteria or issues of extreme national interest. These issues are of high interest by the warfighter that are deemed most urgent. These funds act as a catalyst and used to aid a service or developing partner to ensure the capability reaches the warfighter in the most rapid fashion. Recent examples of emerging technologies funded are Mini PTDS and Next Generation Over the Horizon Radar and Netted Iridum.

FY 2009 Accomplishments:

NEXGEN OTH and Mini PTDS: A portion of these funds aided the development of the Next Generation Over the Horizon Radar (NEXGEN OTH) which is a project that is critical to USNORTHCOM and homeland defense. It is also being developed in partnership with Austrailia. The US has limited homeland defense capability to track cruise and ballistic missiles and other low-altitude, small sized air targets. NORTHCOM has no 24/7 wide-area maritime surface surveillance capabilities. The solution is to install a small-scale two-dimensional antenna array(s) at a CONUS site with established infrastructure and environmental clearances using digital, two dimensional

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	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
(2D) transmit and receive arrays; advanced waveforms and adaptive processing array processing equipment – demonstrate noise and clutter mitigation. The objective if to review design, cost and performance implications of a full-scale system and determine business case to follow up. If feasible, Next Gen OTHR could become a contributing element to Next Generation Gap Filler capability. Participants in NEXGEN are: N-NC, USAF, USN, DHS, OSD, ROTHR, FFRDCs, Universities, Industry consultants, Australia. Additionally a portion of the funds went to the rapid fielding of the Mini-PTDS capability to be fielded in Afganistan in 2010. The funds will be used toward the planned Phase II Mini-PTDS Persistent Ground Surveillance System (PGSS) integration and assessment. The efforts include demonstrations/ assessments of maturing aerostat systems, affordable payloads and integration concepts. Slew-to-cue integration techniques and modular, open architecture payload integration concepts for PGSS will be developed. Demonstrations and assessments will be conducted at Yuma Proving Grounds, Yuma, AZ. *FY 2010 Plans:* Additional funding will be put into Mini PTDS to provide the initial capability in Afghanistan in 2010. In FY10 funding will assist the delivery of the Netted Iridium communication capability in Afghanistan. It will provide the warfighter with netted “one to many”push-to-talk tactical voice and data service to small units (Co & below) that is small (handheld), lightweight, easy to use both in mounted and dismounted roles with no reliance on ground infrastructure. It will provide a simple to use, on the movesupplementto TacSat for small tactical units and convoys; true global coverage(pole-to-pole); Mitigate decreasing UFO availabilityduring MUOS start-up. *FY 2011 Base Plans:* FY11 funding will assist the delivery of the Netted Iridium communication capability in Afghanistan. It will provide the warfighter with netted “one to many”push-to-talk tactical voice and data service to small units (Co & below) that is small (handheld), lightweight, easy to use both in mounted and					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
dismounted roles with no reliance on ground infrastructure. It will provide a simple to use, on the movesupplementto TacSat for small tactical units and convoys; true global coverage(pole-to-pole); Mitigate decreasing UFO availabilityduring MUOS start-up.					
Distributed Tactical Communications System (DTCS) The Joint Requirements Oversight Council (JROC) validated the need for DTCS functionality. The DTCS JCTD was designated a rolling start JCTD for FY 2009. The DTCS JCTD takes advantage of Single Vehicle Multi Beam Architecture in the Iridium satellite communication system to provide a tactical voice and data service to small units (Company and below) using a small handheld device. DTCS planned a final demonstration and assessment in the fourth quarter of FY 2011 and transition to the Defense Information Systems Agency (DISA) Enhanced Mobile Satellite Service (EMSS) program of record commencing in FY 2011. DTCS outcome will deliver a tactical, scalable Over-the-Horizon (OTH)/On-the-Move (OTM)/Beyond Line of Sight (BLOS) small unit focused capability that can be handheld or vehicle mounted to provide tactical voice and narrow band data to disadvantaged users. The expected efficiency is substantial increase in delivery of tactically relevant command and control and intelligence-related information products to land mobile troops, and the near real time delivery of tactically generated information to operational and strategic echelons. DTCS is a three year JCTD sponsored by USCENTCOM. The USMC is the lead Service for operational assessment and early deployment. DISA is the lead Agency for transition and sustainment. *FY 2010 Plans:* Conduct limited functionality technology demonstrations as operational users refined specific functionality needed for mission thread assessment scenarios. Demonstrate militarily useful functionality in operationally relevant scenarios. Conduct operational utility assessment. Finalized technical and operational use documentation and began transition to EMSS Program.	0.000	0.000	6.500	0.000	6.500

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Conduct additional operational use demonstrations. Complete transition to EMSS Program sustainment. Complete the JCTD					
Accomplishments/Planned Programs Subtotals	187.176	166.977	206.917	0.000	206.917

	FY 2009	FY 2010
Congressional Add: Distributed Network Switching (DNS)	2.000	1.600

FY 2009 Accomplishments:
Congress appropriated funds to integrate a maturing high-speed optical switching capability into operational environment(s) to demonstrate significantly improved network robustness, reliability and availability. The outcome of DNS is to integrate existing US-produced switching technology for interoperable IP-based, high-capacity data transfer through secure networking functionality. FY 2010 Output: Conduct field trial implementation in Marine Corps training venue to evaluate applicability, robustness and supportability of the emergent high-speed switching technology in realistic operational environment. Navy evaluate application of the technology to existing shipboard environment in land-based laboratory pending report results. FY 2011 Planned Output: None, pending Congressional support.

FY 2010 Plans:
Congress appropriated funds to integrate a maturing high-speed optical switching capability into operational environment(s) to demonstrate significantly improved network robustness, reliability and availability. The outcome of DNS is to integrate existing US-produced switching technology for interoperable IP-based, high-capacity data transfer through secure networking functionality. FY 2010 Output: Conduct field trial implementation in Marine Corps training venue to evaluate applicability, robustness and supportability of the emergent high-speed switching technology in realistic operational

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
environment. Navy evaluate application of the technology to existing shipboard environment in land-based laboratory pending report results. FY 2011 Planned Output: None, pending Congressional support.		
Congressional Add: Maritime UAS Demonstration for the SOUTHCOM Region *FY 2009 Accomplishments:* Demonstrate current "off-the-shelf" Medium Altitude Long Endurance (MALE) Unmanned Air System (UAS) to support counter illicit trafficking and maritime domain awareness operations in the SOUTHCOM Area of Focus (AOF). Intent is to provide a evaluation OCONUS in the SOUTHCOM AOF in real world operations, integrated with ongoing efforts under Tactical Control (TACON) to the Joint Interagency Task Force South (JIATF-S). US SOUTHCOM will work in conjunction with the Counter Narcotics Terrorism Program Office (CNTPO) to advertise an open competition for any UAS MALE system to demonstrate effectiveness of real time detection and monitoring of air, land and maritime targets associated with illicit traffickers	3.000	0.000
Congressional Add: Simultaneous Field Radiation Technology (SFRT) *FY 2009 Accomplishments:* Congress appropriated funds to apply emerging research to a new type of antenna for use on radio-frequency (RF) communications devices. The emergent research proposed use of cylindrical RF antenna forms to reduce antenna profile and length while improving antenna gain. The outcome of Simultaneous Field Radiation Tech (SFRT) is to develop and demonstrate improved antennas for tactical radios in the High Frequency, Very high Frequency and Ultra High Frequency radio bands. The capabilities proposed for development in this technology program will improve communications capabilities while reducing antenna visibility. Navy is participating in developing and demonstrating the new antenna functionality. The primary outputs and efficiencies to be demonstrated are improved tactical communications. SFRT output is certified antennas for at least two classes of tactical radios.	2.300	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
The efficiency is that mobile users will have improved communications while enjoying more covert antenna profiles. FY 2010 Output: Develop, demonstrated and productized new antenna technology. Apply the antennas to legacy radios to demonstrate improved gain and reduced physical profiles. Demonstrate improved coverage for tactical radios in urban environments. Introduce new antenna technology and configuration to original equipment radio (OEM) producers, for potential adoption within existing radio product lines. FY 2011 Planned Output: None, pending Congressional support.		
Congressional Add: Spartan Advanced Composite Technology *FY 2009 Accomplishments:* Spartan is a modular, multi-mission, unmanned surface vehicle (USV) used to deploy sensors and weapons as low-cost force multipliers with integrated expeditionary sensor and weapon systems for use against asymmetric threats. The expanded range provides a layered defense, early warning/ intercept capability for incoming threats, thereby improving protection of surface combatants and noncombatants. Missions - 1) Conduct critical missions Antisubmarine Warfare (ASW); Mine Warfare (MIW); Intelligence, Surveillance, and Reconnaissance/Force Protection/precision Engagement (ISR/ FP/PE); 2) Prepare the waterspace for Amphibious and Sealift Ops; and 3) Provide port-protection when launched/operated from shore. These funds are to develop composite technologies for Spartan.	1.600	0.000
Congressional Adds Subtotals	8.900	1.600

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Line Item #48/ PE 0603750D8Z: *ACTD*	1.169	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
	10.856	18.557	18.570		18.570	19.517	19.959	19.838	20.159	Continuing	Continuing

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Line Item #96/ PE 0604648D8Z: *JCTD Transition*											

D. Acquisition Strategy

The strategy for JCTDs has always been to rapidly develop technologies, conops and TTPs that answer a validated joint/coalition warfighter need and provide a transition path into an existing program of record or to establish a new program for those projects that show significant military utility in the demonstration phase. The following questions are used for the selection of compelling JCTD capability projects:

- Does the action address CoComs needs?
- Is a Joint capability or military advantage gained?
- Do we have a clearly stated and attainable goal?
- Have risks and costs been fully and frankly analyzed?
- Have all other DOTMLPF means been fully explored?
- Is there an exit strategy to avoid endless development?
- Have consequences of inaction been fully considered?
- Can genuine support be garnered from interested partners?
- Are experienced people available to execute the effort?
- Can results be demonstrated to the project champion?

Under the new JCTD program, only the JCTDs that demonstrate the highest military utility will be considered for the transition funding in the JCTD BA4 Transition PE. Many JCTDs will transition smoothly into a well identified program of record and not require funding from the transition PE (the transition arm of the JCTD model). Promising ongoing ACTDs may also receive transition funding from the JCTD Transition arm as the remaining few ACTD projects complete. Some initiatives that are successful but have smaller "sustainment of residual capabilities" issues may receive "pre-transition" funding from the JCTD BA3 PE to aid transitioning the capability to an identified program of record or to the warfighter. JCTD metrics and guidelines are:

- Capability Based: Greater CoCom influence looking at nearer term joint/coalition needs.
- Provide Spiral Technologies - 25 percent will provide an operationally relevant product demonstration within 24 months of Implementation Directive (ID) signature.
- Agile Demonstration - 75 percent complete final demonstration within three years of ID signature.
- JCTDs not necessarily tied to an exercise. Greater flexibility to establish military utility via operational "real-world" demonstration or specifically designed test/venue.
- 80 percent of JCTDs transition at least 50 percent of their products to sustainment.

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E. Performance Metrics

Strategic Goals Supported FY 2008:
- Project Selection Focus
- Spiral Technologies
- Time to Final Demonstration
- Adequately Shared Funding and Visibility
- 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. DUSD(AS&C) maintains and provides overall programmatic oversight for the JCTD program, to include the individual JCTD projects. The JCTD performance metrics center on how fast relevant joint and/or transformational technologies can be demonstrated and provided to the joint warfighter. These metrics are driven by the overall business process which includes six parts: (1) selection focus; (2) ability to spin-off spiral technologies; (3) time necessary to complete a final demonstration; (4) adequately resourced projects with appropriate oversight; (5) capability to complete an independent assessment of the technology; and (6) the number of successful capabilities that are actually transitioned to the warfighter. The table below defines the metrics of the JCTD business process model.

1) Project Selection Focus: Capability Based: Greater Combatant Command (CoCom) influence looking at nearer term joint/coalition needs.
2) Spiral Technologies: 25 percent of JCTDs will provide an operationally relevant product demonstration within 24 months of ID signature.
3) Final Demonstration Completed: 75 percent of JCTD projects will complete final demonstration within three years of ID signature.
4) Shared Funding and Viability of resources: OSD provides significantly more funding than the former ACTD program, greater than 30 percent in some cases; a majority of projected funding, especially in the first two years.
5) Complete independent assessment.
6) Number of capabilities transitioned to the warfighter.

Transition Achievement: The JCTD Program defines transition as a project's product or products going to new or existing Programs of Record (PoR) and/or providing residual products in direct support of the Warfighter that satisfies a specific requirement. Of all completed AC/JCTDs, the transition rate is currently 73% (to **PoR: 45% (53 of 118); to **Residual: 28% (33 of 118)). In FY09 100% of the AC/JCTDs completing demonstrations are going to new or existing PoRs or are providing residual products in direct support of the warfighter. FY09 transitions for the 17 completed projects are 15 projects to Programs of Record and 2 projects to residual sustainment to the warfighter. Of 184 total AC/JCTDs, 64 have deployed in support of OEF/OIF covering the following Functional Areas: Battlespace Awareness: 26, Command & Control: 11, Force Application: 9, Logistics: 14, Protection: 13, Net-Centric: 2. CENTCOM-sponsored AC/JCTDs deployed in OEF/OIF: 13. This exceeds

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the objective of 30 percent for demonstration programs (Draft Strategic Objective 4-2, Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD (AT&L)).