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Exhibit R-2, PB 2010 Office of Secretary Of Defense RDT&E Budget Item Justification								DATE: May 2009		
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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	202.976	207.096	198.352						Continuing	Continuing
P648: Joint Capability Technology Demonstration (JCTD)	202.976	207.096	198.352						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 2009 \$10.000 million was transferred from the JCTD BA3 PE to the JCTD BA4 PE to increase funding available for assisting the transition of the most promising capabilities. 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 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 over the past three years.

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0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD)	PE 0603648D8Z Joint Capability Technology Demonstration (JCTD)

- 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 7 new start JCTDs; includes an estimate of five potential rolling starts.
- Presidents Budget FY 2010 supports 49 active projects: 2 continuing ACTDs; 29 prior year JCTDs; includes 8 (estimated) FY 2010 immediate and 5 (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 80 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).

B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	202.484	206.337	201.975	
Current BES/President's Budget	202.976	207.096	198.352	
Total Adjustments	0.492	0.759	-3.623	
Congressional Program Reductions		-7.000		
Congressional Rescissions	-0.405	-1.141		
Total Congressional Increases		8.900		
Total Reprogrammings	5.150			
SBIR/STTR Transfer	-4.253			
Other			-3.623	

Congressional Increase Details (\$ in Millions)

Project: P648, Distributed Network Switching (DNS)

	FY 2008	FY 2009
		2.000

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Congressional Increase Details (\$ in Millions)		FY 2008	FY 2009
<p>Congress appropriated funds to integrate a maturing high-speed optical switching capability combined with a networking appliance that enables to masking of network media access control addresses. The outcome of DNS is to develop and demonstrate a stealth core backbone network for interoperable IP-based, high-capacity data transfer through secure networking functionality more immune to cyber-attack.</p> <p>Project: P648, Maritime UAS Demonstration for the SOUTHCOM Region 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</p> <p>Project: P648, Simultaneous Field Radiation Technology (SFRD) 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. The efficiency is that mobile users will have improved communications while enjoying more covert antenna profiles.</p> <p>Project: P648, Spartan Advanced Composite Technology 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</p>			
			3.000
			2.300
			1.600

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Congressional Increase Details (\$ in Millions)

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.

FY 2008	FY 2009

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<ul style="list-style-type: none"> • 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 7 new start JCTDs; includes an estimate of five potential rolling starts. • Presidents Budget FY 2010 supports 49 active projects: 2 continuing ACTDs; 29 prior year JCTDs; includes 8 (estimated) FY 2010 immediate and 5 (estimated) rolling start new start JCTDs to be selected in June 2009. <p>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 80 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).</p>					
B. Accomplishments/Planned Program (\$ in Millions)		FY 2008	FY 2009	FY 2010	FY 2011
Actionable Situational Awareness Pull (ASAP) The Joint Requirements Oversight Council (JROC) validated the need for capability from ASAP as a FY 2005 new start ACTD. ASAP developed, integrated, demonstrated and transitioned software that provides a "Smart Pull" capability to the tactical, operational and/or strategic user on the Global Information Grid (GIG) for accessing critical situation awareness information resident on distributed databases. Utilizing the Net-Centric Enterprise Services (NCES) core service architecture and the Net-Enabled Command Capability (NECC) framework, a "Smart Pull" service was demonstrated operationally and transitioned into a pre-NECC capability module and the Integrated Broadcast System (IBS). ASAP outputs and efficiencies include (1) increased availability of useable data for a user, (2) increased performance through decreased latency of data, (3) increase in data obtained via "pull" vice "push" procedures, and (4) increased interoperability with coalition forces by use of XML Common Message Format Standards. Efficiencies include response time performance on the return of data as a web service. Transition: Software tools and documentation have transitioned to pre-Net-Enabled Command Capability (NECC) and the Integrated Broadcast System (IBS). The ASAP User Sponsor was the U. S. Pacific Command (PACOM) and the lead service/agency was the Defense Information Systems Agency (DISA).		0.600	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> - FY 2008 Output - Finalized CONOPS and Tactics, Techniques, and Procedures, training package and DOTMLPF change recommendations. Completed transitioning ASAP ACTD products. Completed the ACTD.</p>				
<p>Adaptive Planning Pilot (APP)</p> <p>The Adaptive Planning Pilot JCTD is a rolling start in FY 2008. The outcome of the APP JCTD is to provide Combatant Commanders with urgently needed dynamic and agile planning capabilities as outlined in the Adaptive Planning Road Map II. The APP JCTD will provide vitally needed strategic guidance tools for Adaptive Planning and Execution (APEX) users concurrently with the rollout of NECC Increment I. The APP JCTD is a three-year project under the sponsorship of Joint Forces Command and U.S. Force Korea and will be used to provide early capability to planners by providing additional services to Increment I that are not present in the GCCS Migration of (legacy) Systems. The JCTD is also used as a risk mitigation tool for the NECC program by providing valuable lessons learned from the FDCE development approach. Completion of development and demonstration is planned for 2010. The lead service is Army and the transition manager is the NECC Joint Program Office. The primary output will be the ability of COCOM and Joint Staff planners to conduct parallel, collaborative planning with subordinate elements and with members of the Joint Planning and Execution Community (JPEC).</p> <p><i>FY 2009 Plans:</i> - FY 2009 Planned Output - Spiral 1 technical demonstration strategic guidance services</p> <p><i>FY 2010 Plans:</i> - FY 2010 Planned Output - Spiral 1 operational demonstration, develop Spiral 2 and Spiral 3 technical demonstration</p>	0.000	2.800	2.000	
<p>Advanced Distributed Aperture System (ADAS)</p> <p>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-spectral suite of sensors on an H-60 aircraft to provide full spherical imagery to aircrew members via head-tracked</p>	6.000	5.000	5.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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.</p> <p><i>FY 2008 Accomplishments:</i> First prototype-baseline, prepared assessment plan with Operational Manager. Implementation Directive signed and approved by all stakeholders. Draft Management Plan and Transition plan.</p> <p><i>FY 2009 Plans:</i> Complete baseline development and system hardening. Draft integration plan onto aircraft. Complete transition plan, and assessment plan for the final Military Utility Assessment.</p> <p><i>FY 2010 Plans:</i> Complete Military Utility Assessment, begin transition to PEO Rotary Wing. Complete transition to PEO Rotary Wing. ADAS JCTD scheduled completion date is December 2010.</p>				
<p>Agile Rapid Global Combat Support (ARGCS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for ARGCS as an FY 2004 start which is using advanced technologies to demonstrate a family of testers for electronic</p>	0.750	0.000	0.000	

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<p>components and provide unprecedented interoperability between weapon systems, Services, and levels of maintenance. This will reduce costs and the proliferation of testers while improving the availability and performance of weapon systems. In addition, ARGCS will demonstrate technologies to facilitate net-centric diagnostics by capturing historical logistics data and developing an expert support system that will further reduce repair times and costs, as well as future sparing requirements. Outputs and efficiencies will include increases in performance, test accuracy, interoperability, reduced logistics and weapon system support costs, and reduced proliferation of automatic test systems in the future. Technologies demonstrated will reduce the time to field new tester, a reduction in the time to diagnose and repair, a reduction in proliferation of test systems, and a reduction in the logistics footprint. The ARGCS technology will be transitioned to the Services through existing automated test programs of record. The user sponsor is U.S. Pacific Command and the lead service is the Navy.</p> <p><i>FY 2008 Accomplishments:</i> Completed project documentation and final report. Supported transition of ARGCS technologies to Services and continued Joint Capabilities Document (JCD) development that guide the future direction of automatic test systems. JCD focused on net-centric diagnostics and interoperability within and between Services.</p>				
<p>Airborne Weapons Surveillance System (AWSS)</p> <p>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 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</p>	0.800	3.900	1.642	

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<p>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.</p> <p><i>FY 2008 Accomplishments:</i> Project Agreement with Republic of Korea negotiated by US Army International Programs. Developed Concepts of Operations and Tactics, Techniques, and Procedures. Integrated sensor/processor into form factor required for unmanned air systems.</p> <p><i>FY 2009 Plans:</i> Complete component testing. Integrate payload into unmanned air systems. Conduct laboratory and field trials. Conduct military utility assessment.</p> <p><i>FY 2010 Plans:</i> Deliver residual capability to Combined Forces Korea. Integrate refinements identified in utility assessments. Refine concepts of operations. Support residual operations.</p>				
<p>CORPORAL</p> <p>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 Soldiers with the capability to take full advantage of tactically relevant sensor data, Command & Control (C2), and Electronic Attack (EA) in near real time.</p> <p>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</p>	5.500	5.500	2.000	

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<p>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.</p> <p><i>FY 2008 Accomplishments:</i> Combat Information Network Application Systems (CINAPS) capability was delivered in September 2008. Technical Demonstration # 1 was conducted in September-October 2008. This was a major part of Spiral 1 and has dovetailed to work already started for Spiral 2.</p> <p><i>FY 2009 Plans:</i> 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.</p> <p><i>FY 2010 Plans:</i> 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 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.</p>				
Chemical Unmanned Ground Reconnaissance (CUGR)	1.700	0.000	0.000	

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<p>The Joint Requirements Oversight Council (JROC) validated the capability need for CUGR as an FY 2005 new start. The outcome of CUGR is to provide manned nuclear, biological and chemical (NBC) reconnaissance units with two new technology applications to be demonstrated in the Joint Service Light NBC Reconnaissance System's (JSLNBCRS) High Mobility Multipurpose Wheeled Vehicle (HMMWV) variant providing an unmanned capability. The first of these new systems (Thrust One) will replace the Double Wheel Sampling System (DWSS), currently in use, with a mobile Mass Spectrometer, using RAMAN technology, called the Joint Contaminated Surface Detector (JCSD). Since the DWSS can only be used when the vehicle is moving at a fast walk, replacing it with the JCSD, which is producing reliable results at maximum vehicle speed, greatly increases mobility and flexibility for these units. The second technology (Thrust Two) is the incorporation of a small, remote controlled, sensor-equipped robot to be the recon crew's "point man" in high risk contamination reconnaissance. The robot is called the CUGR Unmanned Ground Vehicle (CUGV). The efficiency of CUGR will be to utilize a machine rather than put a soldier at risk. CUGR addresses the capability gaps identified in the CBRN Baseline Capability Assessment, the JRO-CBRN Defense Mobilization Plan, and the supporting JCIDS Functional Area Analysis. Thrust One will transition as part of the Reconnaissance and Platform integration sensor block upgrade program and replace DWSS on Stryker, HMMWV and LAV vehicles. Thrust Two will become part of the Joint CBRN Dismountable Reconnaissance System (JCDRS). DTRA provides overarching program management. The Technical Manager is the U.S. Army Research, Development and Engineering Command's Edgewood Chemical and Biological Center. The Joint Program Executive Office for CBD assigned the Joint Product Manager for NBC Reconnaissance as the Transition Manager. The U.S. Pacific Command is the ACTD sponsor with Operational Manager responsibility with the U.S. Army Pacific who is providing the 95th Chemical Company as the ACTD demonstration unit. ACTD will complete in FY 2007. Outputs will be: to increase maneuver speed to 45 kph vice 11-22 kph; allow detection/identification of various classes of substances simultaneously vice one at a time; reduce mission consumables; enable reconnaissance into areas that otherwise would be inaccessible by manned vehicles; can be deployed into hazardous environments; offer a point detection capability; and provide the ability to collect liquid, solid and aerosol samples.</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> CUGV Military utility Assessment completed, system assessed ready for transition. Six CUGV systems delivered for residual use and for development of System Performance Specification for the Joint NBC Reconnaissance System Increment 2 Program. Funding for CUGV integration is programmed. JCSD efforts focused on integration into the Stryker NBC Reconnaissance Vehicle, with integration and test funded by Program of Record. Effort will define technology readiness and System Performance Specification for the Stryker NBCRF Product Improvement Program. Completed the ACTD.</p>				
<p>CoCom Direct Support, Pre-Transition and Classified Programs</p> <p>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 four programs include (1) Unified Combatant Commander (CoComs); (2) JCTD Pre-Transition Support; (3) Interagency Classified Projects, and (4) Joint enabling technologies that are either directed by Congress or initiated by DUSD (AS&C).</p> <p>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 DUSD (AS&C) 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).</p> <p>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.</p>	19.961	22.672	23.000	

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<p>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.</p> <p>4) Joint Enabling Technologies: 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. DUSD (AS&C) also becomes aware of promising technologies which may have transformational application to JCTDs. The need for these technologies may 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.</p> <p><i>FY 2008 Accomplishments:</i> Unified Combatant Commander (UCC) Direct Support: Vetted over 60 CoCom potential project candidates for selection, validation, demonstration, and transition of JCTDs. 2) JCTD Pre-Transition Support: Special Capabilities Office (SCO)/Interagency Classified Support for JCTDs: Supported several classified efforts coordinated with other agencies and detailed in separate DoD budget exhibits.</p> <p><i>FY 2009 Plans:</i> Liasion and review with CoComs and Coalition high leverage, joint urgent requirements for possible candidate. Support SCO office in demonstration of classified technology capabilities.</p> <p><i>FY 2010 Plans:</i> Liasion and review with CoComs and Coalition high leverage, joint urgent requirements for possible candidate. Support SCO office in demonstration of classified technology capabilities.</p>				
<p>Coalition Joint Spectrum Management and Planning Tool (CJSMPT)</p> <p>The Joint Requirements Oversight Council (JROC) validated the requirements for the capabilities needed from CJSMPT for an FY 2006 new start. The outcome of CJSMPT is force structure driven coordination of friendly force communications and counter-Improvised Explosive Devices (C-IED) jammers through</p>	0.600	0.000	0.000	

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<p>software based spectrum management tools to enable the Warfighters to synchronize electromagnetic spectrum allocation and usage more effectively and efficiently. CJSMPPT is a three year project under the sponsorship of US European Command with direct engagement by US Central Command, and included phased software deliveries and demonstrations in FY 2007 and FY 2008. The US Army is the technical lead Service for the JCTD and had agreed to sustain the delivered capability in the USEUCOM and USCENTCOM theaters until transition of the initial capabilities to the Defense Information Systems Agency (DISA), the lead Agency for the Global Electromagnetic Spectrum Information System program. The primary output and efficiencies demonstrated in the JCTD Military Utility Assessment in FY2009 are (1) interfaces to currently disparate and isolated data bases into a virtual knowledge repository, (2) interactive emitter, receiver and terrain models permitting user visualization of spectrum usage, and (3) spectrum use plans for operational coordination, scenario development and course of action evaluation.</p> <p><i>FY 2008 Accomplishments:</i> Refined phase one software capability, expanded to additional friendly force spectrum usage beyond C-IED coordination. Services' spectrum managers engaged in advising the technical lead on tool suite refinements including integration of spectrum coordination procedures. US Army expanded mobile training, classroom instruction and doctrine for spectrum coordination with relevant operational scenarios. Conducted Joint Military Utility Assessment of capabilities delivered in early FY 2009: delay from original schedule was a result of necessary modifications identified by early user trials. Finalized sustainment activities within US Army, and transition documentation with DISA. Completed the development of CJSMPPT software capability and demonstrations by March 2009. Completed the JCTD, with sustainment of functionality by US Army.</p>				
<p>Coalition Mobility System (CMS)</p> <p>The Joint Requirements Oversight Council validated the capability need for CMS as an FY 2007 new start. The outcome of CMS is to develop the capability for rapid coordination of coalition movement execution. CMS will integrate selected, operationally relevant data from U.S. systems with data sources used by coalition partners to establish a working coalition environment, which meets the needs of U.S. and CTF decision makers. The primary outputs and efficiencies to be demonstrated in the JCTD are: 1) U.S. operators gain access to coalition movement data (military and commercial) using familiar U.S.</p>	3.021	0.000	0.000	

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<p>national systems (Single Mobility System, Global Transportation Network, etc.), 2) Supports the Common Operating Picture for Deployment & Distribution (COP D2), 3) Coalition partners and CTF staff gain access to selected, operationally relevant information on U.S. and coalition airlift, sealift, road, and rail movements (military & commercial) supporting coalition activities. CMS is a 4-year project co-sponsored by US Pacific Command (USPACOM) and US Transportation Command (USTRANSCOM). Key participants include the Quadripartite Logistics Forum consisting of Australia, Canada, United Kingdom, and the United States. Initial capabilities were demonstrated in FY 2007, with full-scale multinational demonstrations on a coalition network in FY 2008. Multimodal, multinational movements are planned in FY 2009. USTRANSCOM is the Transition Manager and transition activities began in FY 2008.</p> <p><i>FY 2008 Accomplishments:</i> Identified the existing US SMS data elements to be made available in CMS; identified appropriate queries for use by CMS users; adjusted the coalition data format as required to ensure operational efficiency; addressed policy, technical and operational issues associated with replicating SMS data in a CMS data server; defined report formats for CMS users and identified existing SMS functionalities available in the CMS application; operationally hardened the Phase I prototype; designed and implemented an electronic data interface (EDI) which allowed the acceptance of properly formatted coalition partner information into the CMS database; determined, designed and delivered CMS reports in coalition-preferred format; operationally tested the ability of CMS to provide coalition data to SMS; operationally tested the ability of CMS to export data; integrated CMS into the Coalition Theater Logistics (CTL) portal v2.0; conducted an appropriate Limited Operational Utility Assessment (LOUA) utilizing an Independent Test Agent not affiliated with product development; completed an LOUA employing the Internet. Spiral Output _ the execution software was successful and in the field two years early providing valuable if limited capability to USCENTCOM and 8 nations. FY 2009 output funded with two FY 2008 funding - Develop additional capabilities as identified in the Functional Requirements Document, integrate CMS into the Coalition Theater Logistics (CTL) portal v3.0; finalize CONOPS documentation; complete DOTMLPF Change Recommendation, conduct Final OUA; codify functional requirements not addressed during JCTD development. Transition Manager is USTRANSCOM. Funding from TRANSCOM partnership sustains these activities in FY 2009 and 2010. CMS to USTRANSCOM as a new Program of Record in FY 2010.</p>				

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<p>Coalition Secure Management and Operations System (COSMOS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the multinational information sharing requirements and capabilities to be delivered by COSMOS for a FY 2005 new start. 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 through FY 2009 is doubtful 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.</p> <p><i>FY 2008 Accomplishments:</i> Technology evolution required migration to the MIP Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) to conform to US ratification of NATO Standardization Agreement (STANAG) 5525 as foundation for tools and information sharing. Preliminary capability was demonstrated in a Military Utility Assessment (MUA) at the end of CY2008. The ACTD development activity completed in FY 2008.</p>	1.900	1.900	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i> The COSMOS ACTD demonstrates the concepts for selected, protected, policy-based information sharing among coalition partners (Canada, United Kingdom and Australia. Singapore observed). Transition into US Marine Corps Marine Air Ground Task Force Command and Control Command Operations Center for data interoperability between Marine forces and US Army and selected coalition partners. Complete the ACTD.</p>				
<p>Combat Autonomous Mobility System (CAMS)</p> <p>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 to extend ISR range and targeting coverage, improve Joint fires support, C2 multiple unmanned ground and air systems, and provide automated support for multiple SOF mission profiles. The CAMS JCTD efficiencies will integrate ground-based autonomous technology to leverage current SOF manpower. In short, CAMS will provide the technology to force multiply the available manpower.</p> <p><i>FY 2008 Accomplishments:</i> Implementation Directive, Management and Transition Plan, CONOPs, Integrated Assessment Plan, TLOE #1, and built platforms.</p> <p><i>FY 2009 Plans:</i> Deliver Platforms, Demonstration #1, and Interim Operational Utility Assessment. FY 2010 activities funded with "two year" FY 2009 funds and project partnerships - TLOE #2, Demonstration #2, Final Operational Utility Assessment and Extended User Eval. Transition Strategy - CAMS technology will transition to Program Executive Office - SOF Warrior. Robotic Systems Joint Program Office is postured to manage the USSOCOM Program of Record.</p>	4.610	5.100	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Communications Air-Borne Layer Expansion (CABLE)</p> <p>The Joint Requirements Oversight Council (JROC) validated the need for CABLE as an FY08 new 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 U.S. Joint Forces Command (USJFCOM) are the sponsors. US Navy and US Air Force are lead Services.</p> <p><i>FY 2008 Accomplishments:</i> Completed the JCTD governing documentation and inter-Service requirements and interface definitions. Developed the initial Operational and System Architecture. Reviewed JEFX08/ Objective Gateway performance for CABLE CONOPS insights. Performed laboratory experiments focusing on high capacity backbone communications capabilities for potential CABLE solutions.</p> <p><i>FY 2009 Plans:</i> Conduct demonstrations of prototype technologies for tactical edge access and forward tactical services and applications. Fabricate, integrate and conduct flight testing of CABLE prototypes. Complete first phase planning for operational demonstrations and Operational Utility Assessment.</p> <p><i>FY 2010 Plans:</i> Complete operational Concept for Employment. Conduct the operational demonstration and Operational Utility Assessment. Begin transition to the Services' PORs. Transition Manager is Air Force Global Cyberspace Integration Center.</p>	4.800	4.800	4.300	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Comprehensive Maritime Awareness (CMA)</p> <p>The Joint Requirements Oversight Council validated the capability need for CMA as an FY 2006 new start. The outcome of CMA is demonstration and transition of technologies and operations concepts showing the value of information sharing and effective information management for improving global Maritime Domain Awareness. CMA will demonstrate the value of both interagency and international (Republic of Singapore) information sharing. CMA will demonstrate data management techniques such as automated anomaly detection and threat evaluation, and application of the Department of Defense Net-Centric Data Strategy. CMA is a 4-year project sponsored by U.S. Pacific Command, U.S. Northern Command, and U.S. European Command. Initial capabilities were demonstrated and operated in FY 2007, with advanced capability spirals later in FY 2007 through early FY 2009, and transition support in FY 2009. The lead Service is U.S. Navy. The primary outputs and efficiencies to be demonstrated in CMA Military Utility Assessments are (1) percent increase in the number of maritime tracks and identified tracks in U.S. military, interagency, and coalition maritime operational pictures; (2) percent increase in numbers of maritime contacts with amplifying information (such as crew list, cargo manifest, port-of-call history, etc.); (3) percent increase in numbers of vessels of interest monitored by maritime intelligence analysts; (4) number of automated anomaly detections and threat alerts provided to maritime intelligence analysts; (5) increase in number of agencies (U.S. and international) engaged in information sharing across a common service oriented architecture.</p> <p><i>FY 2008 Accomplishments:</i> Operated FY 2007 and early FY 2008 spiral capabilities at key maritime analysis nodes (Maritime Intel Fusion Center Atlantic, Maritime Intel Fusion Center Pacific, National Maritime Intelligence Center, PACFLT HQ, USNORTHCOM HQ, others). Integrated additional capabilities based upon additional data sources, including interagency data, and threat assessment capabilities. Executed two additional operational demonstrations and interim utility assessments. Supported transition to US Navy and US Coast Guard programs. FY 2009 activities funded with "two year" FY 2008 funds and project partnerships - Completed integration of net-centric services. Conducted final operational demonstration and complete military utility assessment. Supported transition to US Navy and US Coast Guard programs. Estimated to complete the JCTD in FY 2009.</p>	5.000	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Counter Bomb/Counter Bomber (CB2)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for CB2 as a FY 2003 new start. The outcome is to provide improved capabilities for military installations against the threat posed by terrorist delivered bombs and improvised explosive devices (IEDs). The capabilities include technologies for detection, identification, mitigation, and command/ control/ communications (C3); along with tactics, techniques, and procedures, and concepts for operations. The sponsoring Combatant Commands (CoComs) are USSOUTHCOM and USEUCOM. Other organizations involved as participants, users of capabilities, and/or observers include USCENTCOM, Department of Homeland Security, and US Coast Guard. The lead service is the U. S. Navy. The primary outputs to be demonstrated to the users and evaluated in the Military Utility Assessment (MUA) are 1) ability to perform surveillance on the movements of people and vehicles near the installation as possible precursor to the threat, 2) detection and identification of the threat device prior to blast, 3) mitigation of the bomb, and 4) C3 to tie together the people, systems, and data critical to the accomplishment of the mission. The efficiencies to be gained are 1) the ability to perform an important and increasingly critical mission that had little priority until a few years ago, 2) the ability to perform that mission at little or no increase in manpower to military force protection organizations, 3) the ability to reduce the vulnerability and casualties of the force protection personnel while performing this dangerous mission. The transition strategy is to roll CB2 capabilities into existing programs of record (POR) and acquisition program elements of Service force protection projects, and also to utilize the J34 sponsored Combating Terrorism Readiness Initiative fund. User data packages for each of the systems will be developed, along with a users' guide on how to select and introduce new technology for force protection. Four critical products from this ACTD have already been deployed to Iraq: 1) van-mounted backscatter x-ray for vehicle inspection, 2) vehicle under carriage video inspection systems, 3) infra-red imaging system, and 4) off-leash trained canines for explosives detection. Transition plans will include program of records for Anti Terrorism/Force Protection acquisition agencies in each of the 3 services, GSA, and the J34 Combating Terrorism Readiness Initiative Fund. Due to initiation of a newer JCTD called Joint Force Protection Advanced Security System (JFPASS) and efforts of Joint Improved Explosive Device Organization (JIEDDO), the CB2 ACTD will complete one year early in FY 2008 vice FY 2009.</p>	0.500	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> Extended User Evaluation and transition activities continued for all Spirals and publish CB2 ACTD results. Completed ACTD early in FY 2008.</p>				
<p>Counter Intelligence - Human Intelligence Architecture Modernization Program, Intelligence Operations Now (CHAMPION)</p> <p>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-HUMINT mission 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 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.</p> <p><i>FY 2008 Accomplishments:</i> Complete Spiral 2 assessment plan and prepare final assessment plan. Conduct final military utility assessment. Complete approval of transition plan. Interim capabilities fielded to unit in Afghanistan.</p>	3.465	2.500	0.400	

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<p>CHAMPION tactical communication package expedited fielding throughout CENTCOM area of operations. The CORVET Annex begins which is a voice biometrics enhancement to CI-HUMINT capabilities. CORVET is a technology used in speaker identification as another biometric modality to help counterintelligence and human intelligence forces contend in Overseas Contingency Operations (OCO). Speaker identification would join iris scan, fingerprints, and facial photographs as another means to verify and confirm identities. CORVET completed its Limited Utility Assessment at Camp Bullis.</p> <p><i>FY 2009 Plans:</i> Finalize CONPs and TTPs. COCOM sponsor issue final assessment report. Continue to field interim capabilities into CENTCOM 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.</p> <p><i>FY 2010 Plans:</i> Corvet Annex enhancement to CI-HUMIT will complete and transition to PM Biometrics.</p>				
<p>Critical Runway Assessment and Repair (CRATR)</p> <p>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 into a final modular repair kit that will transition to the USAF Airfield Damage Repair (ADR) program. CRATR is a 3-year project sponsored by US Pacific Command.. Lead service is the US Air Force. Air Combat Command is the Transition Manager.</p>	2.600	4.100	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> Conducted technology demonstrations to identify the best capabilities available for demonstration. Demonstrated and began operational assessment of crater filling and capping capabilities, as well as damage assessment techniques and platforms.</p> <p><i>FY 2009 Plans:</i> Downselect demonstrated technologies and integrate into an operational capability is being demonstrated at Tyndall AFB and Yuma Proving Ground in April 2009. Coordinate and initiate the final demonstration of CRATR capabilities beginning in August 2009. Finalize CONOPS documentation. FY 2010 accomplishments are funded with "two year" FY 2009 funding and partnership funding. Complete live aircraft test in CONUS during final operational utility assessment. Complete final assessment report and send residuals with operational utility to forward based airfields. Conduct SDD and transition to ADR program. Complete JCTD in September 2010.</p>				
<p>Cross Domain Collaborative Information Environment (CDCIE)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for CDCIE as an FY 2008 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 domain environments. The JCTD is a two-year project under sponsorship of JFCOM with STRATCOM as a cosponsor. CDCIE will transition to DISA Global Information Grid (GIG) Enterprise Services program office. 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 communicate with all mission partners, including coalition, multinational and interagency partners, and (2) ability to share information with mission partners across different networks, classification levels and releasabilty boundaries.</p>	3.471	2.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> Completed integration of spiral 2 and demonstrated spiral 1 in Warfighter exercises and experiments. The first spiral demonstrated the ability to use a synchronous online chat program with language translation in a cross domain environment. Achieved initial authority to operate, and connected USSTRATCOM and UK MoD weblog functions in operational venues.</p> <p><i>FY 2009 Plans:</i> Complete security testing of spiral 2 and operational utility analyses on the system. Spiral 2 will demonstrate the addition of collaborative white boarding and Web Services gateway functions in a cross domain environment. Operational prototype systems are being installed in CENTCOM and PACOM for real-world use. Transition manager is DISA. Transition Strategy in FY 2010 - Transition functionality to configuration management and sustainment by the DISA NCES program. Complete the JCTD.</p>				
<p>Distributed Network Switching (DNS) Joint Capability Demonstration</p> <p>Congress appropriated funds to integrate a maturing high-speed (40+ GBps) optical switching capability combined with a networking appliance that enables to masking of network media access control addresses. The outcome of DNS is to develop and demonstrate a stealth core backbone network for interoperable IP-based, high-capacity data transfer through secure networking functionality more immune to cyber-attack. The capabilities proposed for development in this capability demonstration will improve network defenses while enabling high-speed data transfer between authorized nodes. Navy will participate in developing and demonstrating the functionality. The primary outputs and efficiencies to be demonstrated are: 1) improved core networks capacity and redundancy, (2) improved cyber-attack immunity, and (3) users able to seamlessly use network services. DNS output is demonstrated stealth core functionality. The efficiency is that Warfighters will be able to interoperate in a over a new networking framework that provides increased immunity from cyber-attack. DNS may transition to Global Information Grid (GIG) core services.</p> <p><i>FY 2008 Accomplishments:</i> Initial stealth core prototype.</p>	1.600	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Event Management Framework (EMF)</p> <p>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 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. The lead agency is the Defense Information Systems Agency (DISA).</p> <p><i>FY 2008 Accomplishments:</i> Spiral 1.1 and 1.2 completed. Completed two services: (EMF Semantic Correlation Service (EMF-SCS) and EMF Event Alerting Service (EMF-EAS).</p>	3.000	3.600	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i> Output Deliver Spiral 2.0 and 3.0. Conduct MUA. Working with 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 NECC. 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 the National Senior Level Decision Support System JCTD. FY 2011 Planned Output - Transition to NECC Increment TBD.</p>				
<p>Extended Space Sensors Arch (ESSA)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for ESSA as a FY 2006 new start. The ESSA ACTD is creating a joint, distributed, net-centric space surveillance framework. The expected outcome of the ESSA ACTD is a flexible, responsive and scalable command and control family of systems which enhance United States Strategic Command's (USSTRATCOM) Space Situational Awareness (SSA) capability. ESSA is a three-year ACTD sponsored by USSTRATCOM and Commander Joint Forces Component Command Space (CDR JFCC SPACE). The ESSA Operational Utility Assessment (OUA) is planned for mid FY 2009, and the capability will transition to Programs of Record (PORs) by the end of FY 2009. The lead service is the U.S. Air Force. The ESSA ACTD will develop and demonstrate a net-centric sensor architecture which provides more timely SSA information via the Secret Internet Protocol Router Network (SIPRNET) to decision makers. ESSA efficiencies will include: increased timeliness for delivering data products from sensor to command and control (C2) node; ability of netted sensors to perform more efficient strategies for searching, tracking, identifying and monitoring space object population; ability of C2 node to observe sensor operations in real-time and make rapid decisions in response to space events; and the ability of an architecture to support both theater and strategic users. While this ACTD does not answer all of the SSA gaps and shortfalls identified in USSTRATCOM's Space Control Joint Capability Document (JCD), it does address the number one priority identified in the JCD of synergistically exploiting all available SSA data.</p> <p><i>FY 2008 Accomplishments:</i> Demonstration 2 was completed in May 2008. This demonstration included deep-space satellite monitoring, change detection and satellite conjunction analysis.</p>	1.600	1.700	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2009 Plans:</i> The ESSA ACTD is culminating in March/April 2009 with a final demonstration. This demonstration is centered on the characterization of a New Foreign Launch (NFL). The Ops IPT is leading the objective/sub-objective development, as well as the DED and associated assessment methodology. The ESSA transition manager, with the help of the entire ESSA management team, is finalizing the transition plan for migrating ESSA ACTD capabilities into the hands of the warfighter. The transition plan will include two critical portions: the extended use of residuals and transition. The extended use of residuals, a two year period beginning April 2009, is increasing the number of space surveillance network (SSN) sensors connected in a net-centric service orientated architecture and defining an operationally focused concept of operations and tactics, techniques, and procedures. The transition period begins after the extended use of residuals period has ended. During the transition period, additional SSN sensors are being added to the net-centric C2 network; however, detailed oversight and procedural development support are the responsibility of the warfighter. The ACTD will complete in FY 2009.</p>				
<p>FLM Small Diameter Bomb</p> <p>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.</p> <p>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</p>	6.200	2.200	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>integration design,(5) a full and complete characterization of FLM's capability against defined a target set for USCENTCOM.</p> <p>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</p> <p><i>FY 2008 Accomplishments:</i> Final operational demonstration of FLM. Delivered approximately 50 residual FLMs to CENTCOM. Initiated 2-years of operational logistical field support. Begin FLM insensitive munition and hazard classification certification. Initiated preparation for formal acquisition program transition. Transition manager was 918th Armament Systems Group.</p> <p><i>FY 2009 Plans:</i> 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.</p>				
<p>Common Ground</p> <p>The Joint Requirements Oversight Council (JROC) validated the need for Common Ground functionality for a FY 2009 new start. The Common Ground JCTD seeks to provide the analytic and architectural components necessary to achieve common, inter-Service, Joint and NATO/Coalition ground forces interoperability with respect to actionable geospatial data and information. 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 addressing information modeling and exchange (JC3IEDM). This results in the capability to unify Command and Control and Simulation systems to provide the ability to perform course of action development, assessment and rehearsal over correct terrain products such that planners and executors can be proactive and prepared for the unexpected by concentrating on</p>	0.000	6.100	5.375	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>identifying the information needed, the paths and timing of force movements, and a more refined estimate of resources needed for successful operations.</p> <p>The expected outcome is to have Joint or Coalition capability to interoperate on common, actionable geospatial and C2 data and information and to have shared awareness to achieve unity of adaptive planning, execution and effects among C2 enclaves. The expected Service, Joint and Coalition operational capabilities and efficiencies provided by Common Ground are: 1) a user-definable Common Operating Picture (COP) supporting predictive analysis; 2) analytics for force on force wargaming, COA analysis and mission rehearsal; 3) analytic C2 services for ground and UAS platform operational management, sensor effects; leading to 4) a 3x reduction in the time from Mission definition to execution and a 4x acceleration in the execution response to dynamic Operating Environment conditions and objectives (i.e. Fragmentary Orders). From an information superiority standpoint, Common Ground will enable: 1) the sharing of digital orders and plans across C2 and Simulation systems, a reduction of errors and misunderstanding by 5x in distributed collaboration. The last are of value to the operational force is that of the unit cost and sustainability of C2 and geospatial interoperability to the DoD. All Common Ground capabilities described will be incorporated as commercial software under a DoD Enterprise License currently available to over 200 Joint and Service Programs of Record (POR) through 2014.</p> <p>Common Ground plans for a final demonstration and assessment in the fourth quarter of FY 2010 and transition to the CJMTK, NECC and Army / USMC geospatial and C2 systems in the US and NATO's Core Geographic Services Enterprise and Land C2 Information System program of records in FY 2011. Common Ground is a three year JCTD sponsored by USJFCOM. The US Army ERDC is the lead agency.</p> <p><i>FY 2009 Plans:</i> Verify unified doctrine for US and NATO ground operations C2, missions and tasks. Establish a prototype of a geospatially extended JC3IEDM supporting US-NATO interoperability. Implementation of common US analytic services in US ground C2 Systems. Conduct functional technology demonstrations to ensure architectural and IT stability and interim user juries to facilitate a user centric design for the components and information products within mission thread / use case assessment scenarios.</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2010 Plans:</i> Continue evolution of unified doctrine enhancements needed for US /NATO and a Coalition Nation ground operations C2, missions and tasks. Demonstrate commercial geospatially extended 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. Produce test reports on architectural stability and 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. Award DoD Enterprise contract for all analytic and interoperability software. Initiate DTMOLPF activities.</p>				
<p>FY 2010 JCTD Rolling Starts</p> <p><i>FY 2010 Plans:</i> In FY 2010 JCTD selection process there will be three to five JCTDs identified by the Department as potential rolling starts. These projects will be selected because they represent important warfighter concerns and capabilities. Some of these compelling proposals will address issues with emerging technologies that could be significant game changers. While these projects will be successfully vetted through the JCTD selection process, some additional proposal development must be addressed with the stakeholders (i.e., Services, Agencies, Coalition and Inter-agency partners), prior to project initiation. In FY 2009 there are several candidates that are particularly compelling; however, due to technology or resource related issues, they are still in a developmental stage. These projects show such great potential capability that they will be included as part of the official congressional notification requirement anticipating initiation as they become ready. This helps meet the new JCTD goal of being a more agile process to meet urgent warfighter needs faster.</p>	0.000	0.000	22.387	
<p>FY 2010 JCTD New Starts</p> <p><i>FY 2010 Plans:</i> Funding for FY 2010 JCTD new starts that will result from the JCTD selection process that will begin in March 2009. New start selections will be finalized in August/September of 2009, just prior to the year</p>	0.000	0.000	54.855	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
of execution. These funds will start six to ten new starts in FY 2010. Although the specific projects are unknown at this time, the 2010 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 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 six to ten new starts in FY 2010. 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.	0.000	0.000	0.000	
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	7.348	8.100	2.800	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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 Observe 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.</p> <p><i>FY 2008 Accomplishments:</i> Designed, developed, fabricated, integrated, and tested of 1 GO UAS, to include 1 air vehicle and 1 launch and recovery element (LRE). The final demonstration and JCTD completion will be in FY 2010.</p> <p><i>FY 2009 Plans:</i> Supporting the manufacture, integration, and test of Aircraft #1 and Aircraft #2; Aircraft #1 complete & ready for integrated system testing, 3Q FY 2009; the manufacture, integration, and test of LRE #1 & LRE #2 - LRE #1 complete and ready for integrated system testing, 3Q FY 2009; LRE #2 complete and ready for integrated system testing, 4Q FY 2009; System flight test events at the flight test range; Flight test venue preparation, range safety reviews, test planning 2 – 3Q FY 2009; System deployed to flight test venue, 4Q FY 2009; Flight test range operations and T&E support and Operational Test Agency.</p> <p><i>FY 2010 Plans:</i> Aircraft #2 complete & ready for integrated system testing, 1Q FY 2010; Flight Readiness Review, 1Q FY 2010.</p> <p>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 Ectro-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.</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>Hard Target Void Sensing (HTVS) Fuse</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for HTVS Fuze as a FY 2008 new start. The HTVS Fuze JCTD incorporates two significant features: (1) Capability to count voids and detonate at the optimal point, (2) Capability to survive and function in today's harder target environments. The HTVS fuze business model provides a fuze approach that is applicable to the BLU-109, BLU-113 and BLU-122 legacy warheads. 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 Systems Development and Demonstration (SDD) in FY 2010 followed by production. The U.S. Navy also has a requirement for this capability and has agreed to fund part of the JCTD in FY 2009. To date, the HTVS Fuze JCTD has accomplished the following: Management transferred from AAC/XRS to 708 ARSG; Sufficiency review for FY09 APOM initiative to fund JCTD complete; Sufficiency review for SDD, Production and Sustainment completed; Acquisition Strategy for entire HTVSF Program Approved; Contract Award to two contractors; Systems Requirements Review and Systems Functional Review for both contractors.</p> <p><i>FY 2008 Accomplishments:</i> Implementation Directive approved. Contract awarded for two contracts in March (08) for a 27 month rolling down-select to one contractor for SDD and Production. Systems Requirements Review and Systems Functional Review for both contractors completed. The focus was initially on Modeling and Simulations (M&S) in the appropriate target environments for the BLU-109 and BLU-113 warheads. The contractors refined void sensing modules to ensure effective operation.</p> <p><i>FY 2009 Plans:</i> 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.</p>	6.000	6.100	6.200	

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<p><i>FY 2010 Plans:</i> Sled and Flight testing completed. Critical Design Review completed. As the down-select to one contractor approaches the contractors will be required to meet the governments' exit criteria for the HTVSF JCTD. The fuze must (1) survive and function during a fuze demo while penetrating 10K+PSI targets, (2) demonstrate successful capability for detecting and counting more than one void during target penetration (3) demonstrate time-delay capabilities, (4) demonstrate cockpit programmability (5) Demonstrate trend toward affordability goal. In the 3Q. FY 2010 will award a 33 month SDD and production contract for 5000 units. Complete the JCTD.</p>					
<p>Hardware Encryption Tech Program</p> <p>Congress appropriated funds to counter the recurring issue of lost computers and resultant compromise of sensitive but unclassified information (such as social security numbers, personal identifying data, or agency information) by maturing foreign developed intellectual property and open source code encryption algorithms (Advanced Encryption Standard - AES) hardware-based hard disk encryption technology. The outcome of the Hardware Encryption Tech Program is data-at-rest encryption in mobile computing devices. The Hardware Encryption Tech Program output is certified commercially available hardware products for data-at-rest protection of sensitive but unclassified information in mobile environments, including but not limited to Defense applications. Navy was the lead Service in productizing the intellectual property, working through the formal United States National Institute of Standards and Technology (NIST) and National Security Agency (NSA) encryption product certification processes, and demonstrating hard disk encryption functionality. The efficiency demonstrated is protection of data-at-rest in commercially available and certified mobile computing devices and reduced risk of loss of sensitive information. The Hardware Encryption Tech Program will transition to a commercially available product line for use by any executive department agency requiring protection of data at rest.</p> <p><i>FY 2008 Accomplishments:</i> Productization of the FIPS 140-2 and Common Criteria/Evaluation Assurance Level Four plus (EAL 4+) certified components and transition to commercial production.</p>	1.600	0.000	0.000		
Internet Protocol Router in Space (IRIS)	5.500	5.200	0.000		

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<p>The Joint Requirements Oversight Council (JROC) validated the need for capability from IRIS as a FY 2007 new start. IRIS leverages 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 durability 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. The Defense Information System Agency (DISA) is the lead Service and 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.</p> <p><i>FY 2008 Accomplishments:</i> Validated and verified draft CONOPS and demonstration architectures to enable a limited military utility assessment of an emulated IRIS capability. Participated in the industry led end-to-end IRIS technical capabilities demonstration with representative hardware prior to Intelsat General IS-14 launch. Conducted high bandwidth video teleconference demonstration of counter-drug interdiction operations with underway USCG cutter as first operational application of IRIS functionality.</p> <p><i>FY 2009 Plans:</i> Industry launches IS-14 spacecraft in CY2009. Conduct a live scenario and capability based demonstrations culminating in a final military utility assessment of the IRIS JCTD. The IRIS JCTD is leaving behind knowledge of the functionality and application of the commercially provided IRIS capability on a fee for service basis to provide a space based routing enterprise solution that enables video, voice and data network services. Complete the JCTD. Long range transition is dependent on industry ability</p>					

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to deliver functionality usable by military users, and contracting language and processes to provision the network services. Introduce the functionality to international partners through USAFRICOM sponsored capacity building demonstrations.				
<p>Joint Coordinated Real-time Engagement (JCRE)</p> <p>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 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.</p>	1.200	1.000	0.000	

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<p><i>FY 2008 Accomplishments:</i> Demonstration #3 (Fall 2007). Demonstrated Joint Force Global Situational Awareness Tools, Joint Force Engagement Packages, and Joint Force Synchronization Tools in a battle staff exercise. A Joint MUA was performed in conjunction with the final demonstration.</p> <p><i>FY 2009 Plans:</i> Prepare JCRE capability for primary transition to Net Enabled Command Capability (NECC). The 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 CONOPS and 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 Planning Environment (SOMPE), respectively. Navy PEO C4I and Space are transitioning relevant capabilities as web services into GCCS-M/NECC. The ACTD completes in FY2009.</p>				
<p>Joint Enable Theater Access (JETA-SPOD)</p> <p>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</p>	3.500	0.600	0.500	

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<p>(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 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.</p> <p><i>FY 2008 Accomplishments:</i> Developed final LMCS and Decision Support Tool CONOPS; finalized extended user evaluation and Interim Transition Planning; conducted LMCS full-scale functional system demonstrations and CONUS</p>				

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<p>LMCS testing; completed system integration and incorporated lessons learned; completed LMCS fabrication; conducted Decision Support Tool Limited User Evaluations (LUE); delivered final version of Decision Support Tool; completed Training Plan; conducted user training in preparation for MUA; completed MUA/Final Demonstration in September 2008.</p> <p><i>FY 2009 Plans:</i> Develop final MUA and ACTD report; plan transition of Decision Support Tool and LMCS to Programs of Record NLT FY 2009 and FY12, respectively. Deliver pre-transition and interim capability/residuals to the user (includes LMCS system and Decision Support Tool with Final Data Set); plan the use of LMCS and Decision Support Tool in exercises for continued refinement and continued socialization for transition.</p> <p><i>FY 2010 Plans:</i> JETA-SPOD ACTD scheduled completion date is September 2010. These activities in FY 2010 will be funded with resources from JCTD partnerships with the services and agencies sponsoring the project.</p>				
<p>Joint Force Protection Advanced Security System (JFPASS)</p> <p>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</p>	4.800	4.800	4.800	

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<p>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.</p> <p><i>FY 2008 Accomplishments:</i> Completed participation in Joint experiments to assess situation awareness and systems integration concepts for access control, vehicle inspection, intrusion detection, unmanned sensor, waterside security, and CBRN systems. Completed project Implementation Directive and draft Management Plan. Completed equipment selection for in-theater Operational Demonstration 2. Conducted technical demonstration 1, and planning and concepts of operation for Operational Demonstration 1.</p> <p><i>FY 2009 Plans:</i> Refine situation awareness and systems integration architecture. Complete Operational Demonstration 1 and limited utility assessment at CONUS facility. Install integrated capability at high priority EUCOM-selected base. Conduct Operational Demonstration 2. Continue transition planning.</p> <p><i>FY 2010 Plans:</i> Complete utility assessment. Complete JCTD. See JCTD BA4 R2a for additional transition activity.</p>				
<p>Joint Multi-Mission Electro-Optic Sys. (JMMES)</p> <p>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</p>	2.950	4.600	0.000	

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<p>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. Transition activities began in FY 2007, leading to firm transition to programs of record, with proposed BA-4 funding bridge if the Navy transition Program of Record slips to FY 2012. The lead Service is U.S. Navy.</p> <p><i>FY 2008 Accomplishments:</i> Flight tested second generation JMMES system, collected data for algorithm development. Continued algorithm testing for mine detection, search and rescue, counter concealment and deception, and illicit crop detection. Completed Project Agreement with Canada, enabling Canadian participation in additional algorithm development and testing aboard Canadian aircraft. Integrated sensors for third generation JMMES system. Informed that targeted Navy Program of Record for transition will slip to FY 2012, therefore planned transition funding and sustainment/integration activities to bridge the FY 2010-FY2011 gap.</p> <p><i>FY 2009 Plans:</i> Completing flight testing and conducting military utility assessment. Supports ongoing transition and preparation for FY 2010 sustainment/integration activities (bridge to program of record). Completing Concept of Operations, Tactics/Techniques/Procedures, and System Architecture documentation. Completing military utility assessment. Completing the JCTD.</p>				
<p>Joint Precision Air Drop System (JPADS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for JPADS as an FY 2004 new start. The outcome of JPADS is to demonstrate a fast, flexible, direct projection-based distribution</p>	2.500	0.000	0.000	

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<p>system to sustain rapidly deployed forces at any global destination - strategically, operationally, and tactically. The primary output and efficiencies are to demonstrate a high-altitude (25,000 ft. Mean Sea Level (MSL)) autonomous offset airdrop capability (goal 8-25 miles offset) with the option to deliver separate and distinct payloads (up to 10,000 lb total, full rigged weight, minimum of 8.5Klbs of usable payload) to multiple locations from one release point to within a 250 meter (threshold) Circular Error Probable (CEP) (50 meter CEP objective). This effort focuses Army and Air Force programs and initiatives on meeting joint airdrop requirements. JPADS will provide a seamless and flexible system of systems approach, providing materiel resupply capabilities to meet dynamic in theater operational requirements and the strategic requirement of the CoComs worldwide no later than 24 hours from the request. JPADS is a four-year project with completion of the Advanced Concept Technology Demonstration (ACTD) development and demonstration by end of FY 2008 transitioning to United States Army (USA) Program Manager Force Sustainment Systems (PM FSS), U.S. Air Force (USAF) Mobility Systems Wing systems (Mission Planner (MP) hardware) and the USAF Electronic Systems Command (MP Software) by FY 2008. Transition accomplished to date: USAF Mission planner to both Afghanistan and Iraq, ongoing integration of MP into the Marine Corps C130J and into USSOCOM/USMC navigational aid for Military Free Fall (MFF) systems.</p> <p><i>FY 2008 Accomplishments:</i> Transitioned residual systems to USSOCOM (USASOC) units in requesting the residual systems by an approved ONS/MNS. Continued to execute interim transition with users in conjunction with PORs to include training and numerous weeks of airdrops with remaining systems available. Executed the first of three planned extended user evaluation (EUE) during DoD and NATO sponsored Precision Airdrop Technology Conference and Demonstration (PATCAD) October 2007 and Precision Airdrop Capability Demonstration May 2008. Extended user training completed in September 2008.</p> <p>FY 2009 Transition Strategy - The ACTD is transitioning high-altitude, aircraft deployable, autonomous, airdrop systems, and in-flight mission planning with wireless communication to guidance, navigation, and control systems to the Army Product Manager, Force Sustainment Systems and Air Mobility Command's Combat Operations.</p>				

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<p>Joint Surface Warfare (JSuW)</p> <p>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.</p> <p><i>FY 2008 Accomplishments:</i> Deliverables included documented Concept(s) of Operation (CONOPS), Tactics, Techniques, and Procedures (TTP), and software changes to operational flight programs aboard demonstration ISR platforms. Transition Strategy: Following the demonstration, validated software has readily available to incorporate into additional assets via each individual acquisition program's mode of software push. CONOPS and TTP were disseminated to the Services through their respective training commands to capitalize on enhanced capabilities. All platforms and weapons involved are Programs of Record.</p> <p><i>FY 2009 Plans:</i> System testing and flight demonstration.</p> <p><i>FY 2010 Plans:</i> Final demonstration and JCTD completion.</p>	5.500	5.800	1.200	
<p>Large Data</p> <p>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</p>	9.100	9.000	0.000	

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<p>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 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.</p> <p><i>FY 2008 Accomplishments:</i> Provided capability to the edge -- from CoComs to low bandwidth users. Refined software with advanced geospatial and temporal search capabilities. Added a Zoomable User interface. Initiated JWICS accreditation. Added metadata tagging enhancements. Provided large data capacity to xESSA, JCRE ACTD and other net-centric capabilities. Conducted JMUA.</p> <p><i>FY 2009 Plans:</i> Finalize JMUA reporting. Continue use of functionality in preparation for integration and transition into program of record. Complete the JCTD.</p>				
<p>Louisiana Command and Control Interope Communications and Information</p> <p>An operational model for high speed reliable wireless communications in Louisiana that is standards-based and is accessible to the Department of Defense when required during military support operations. The venue was selected in part due to the convergence of elements of the national critical infrastructure and defense industrial base. By adhering to open networking standards the functional advantage of this high capacity digital network is to provide new and innovative ways to fuse sensor and C2 functions which advances the daily operations of the practitioners and has scalability in times of crisis regardless of origin, man-made or natural disaster. Operating with a hybrid 5.8 GHz and 4.9 GHz implementation, the project provides the advantage of using uncluttered public safety radio licenses for reliable communications and</p>	2.000	0.000	0.000	

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<p>higher performance equipment to support non-public safety participants and backup communications pathways. Congressional funding was provided in 2006 to finish the build-out and testing of the network.</p> <p><i>FY 2008 Accomplishments:</i> Congressional funding has expanded those Command and Control capabilities in Louisiana.</p>				
<p>MASINT Tactical Intelligence Fusion (MASTIF)</p> <p>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 multidisciplined 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).</p> <p><i>FY 2008 Accomplishments:</i> Matured fusion capability. Completed final test configuration of data fusion engine software and conducted Demo 1 with sensor integration and ground test on-board aircraft. Began flight testing and test-fix-test iteration for developmental testing phase.</p> <p><i>FY 2009 Plans:</i> Perform final stages of sensor integration and complete developmental testing; carry out operational testing activities; and conduct final demonstration on airborne test platform for JMUA. Coordinate with transition partners for custom capabilities to field during transition and identify opportunities for integration</p>	3.700	2.500	2.696	

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<p>of other on- or off-board sensor information. Support modifications to and provide documentation required for transition.</p> <p><i>FY 2010 Plans:</i> 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 CONOPs and TTPs, based on user feedback.</p>				
<p>Mapping the Human Terrain (MAP-HT)</p> <p>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.</p> <p>(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</p>	2.700	1.200	0.000	

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<p>Command (USSOCOM) and the U.S. Army Civil Affairs and Psychological Operations Command. The U.S. Army is the lead organization.</p> <p><i>FY 2008 Accomplishments:</i> Technical demonstration of spiral 1 capability. Modified technical and transition paths for application to a web services portal accessible by users on the unclassified networks. Incorporated civil affairs forces into the operational concepts document. Prepared integrated assessment plan with Operational Manager. Conducted oversight group review to determine changes necessary to the technical path and technical team.</p> <p><i>FY 2009 Plans:</i> Revise Management & Transition Plan to incorporate changes determined by oversight group. Integrate, demonstrate and assess spiral 2 capability and provide interim capability for fielding. Develop spiral 3 capabilities and associated assessment plan and conops. Complete the JCTD. FY 2010 Transition Strategy to DCGS-A.</p>				
<p>Maritime Auto Super Track enhance Reporting (MASTER)</p> <p>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 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 will also provide 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</p>	5.600	3.100	0.000	

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<p>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 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.</p> <p><i>FY 2008 Accomplishments:</i> Developed worldwide multi-INT tracking, enhanced web portal, cargo information at the JWICS level. Created initial JWICS level SOA, linkage of vessel and cargo alerts; conducted technical demonstration One & Two; conducted operational demonstration One.</p> <p><i>FY 2009 Plans:</i> Conduct Technical Demonstration Two; Conduct 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.</p>				
<p>Medical Situational Awareness in Theater (MSAT)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for MSAT as a FY 2005 new start. The outcome is to provide improved capabilities for medical situational awareness to commanders with integrated and timely health information fused with non-medical operational information incorporating a tailored decision support tool to make critical strategic and tactical decisions in a deployed environment. This capability will provide a fusion of medical data, personnel location information and health threat intelligence for situational awareness in theater. The capabilities include technologies for a web services environment fusing intelligence, chem.-bio threat, environmental health, unit location information; risk assessment; and decision support tools. The primary outputs to be demonstrated to</p>	2.500	0.000	0.000	

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<p>the users and evaluated in the Military Utility Assessment (MUA) are 1) ability to perform surveillance of medical threats in deployed environments, 2) model threat dynamics, and 3) conduct risk assessment using decision support tools. The efficiencies to be gained are 1) the ability to provide commanders with a more complete medical situational awareness in an actionable time-frame, 2) the ability to make knowledge-based decisions with an automated decision-making tool tailored to medical operations. The transition strategy is to incorporate MSAT system tools and operational concepts, tactics, techniques and procedures into theater medical operations through the Theater Medical Information Program - Joint Program of Record, now re-named as Defense Health Information Management System. The sponsoring Combatant Command (CoCom) is U. S. Pacific Command (PACOM). Other organizations involved as participants, users of capabilities, and/or observers include: Armed Forces Medical Intelligence Center; OSD Health Affairs; and the Joint Staff Surgeon. The executive agent is the Joint Staff, Logistics Directorate, Health Services and OSD Health Affairs.</p> <p><i>FY 2008 Accomplishments:</i> Completed Spiral 1 capability and demo assessment. Completed technical test of Spiral 2 development. FY 2009 Output has been funded with "two year" FY 2008 and partnership funding. ACTD completion.</p>					
<p>Medusa</p> <p>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. The initiation of the JCTD has been delayed until FY 2009.</p> <p><i>FY 2009 Plans:</i> Design of the of the launcher and rockets aboard the MH-60 aircraft, with preliminary demonstrations in FY 2010.</p>	0.000	5.638	5.977		

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<p><i>FY 2010 Plans:</i> Complete the design and integration of the launcher and rockets aboard the MH-60 aircraft. Complete preliminary demonstrations.</p>				
<p>Multi-Function Threat Detector (MFTD)</p> <p>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.</p> <p><i>FY 2008 Accomplishments:</i> MFTD JCTD started in July 2008, published Implementation Directive & draft Management Plan & Program Risk Assessment.</p> <p><i>FY 2009 Plans:</i> 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.</p> <p>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 HFI detector demo with the planned demonstration venue at</p>	3.700	2.800	0.000	

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<p>China Lake. 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 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. MUA</p> <p>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.</p>				
<p>Multi-Sensor Aerospace-ground Joint ISR IC (MAJIIC)</p> <p>The JROC approved the capability need for MAJIIC as an FY 2004 new start. The outcome of MAJIIC is to develop, test and transition a set of standards, eXtensible Markup Language (XML) formats, and information services to promote intelligence, surveillance and reconnaissance (ISR) interoperability between U.S. and Coalition ground stations and systems. MAJIIC will demonstrate near-real-time interoperability of data from electro-optical, infrared, motion video, moving target indicators, synthetic aperture radar, and other sensors; enhance collaborative targeting operations; improve ISR data accessibility and sense making to support U.S. Joint ISR operations. Outputs and efficiencies include: 1) Near real-time MAJIIC ISR mission and sensor data is available for discovery and smart pull within the Collateral Space in near real time (i.e. Post in Parallel); 2) MAJIIC services and data are readily discoverable via portals, C2 Visualization and other applications, and other Global Information Grid (GIG) service providers; 3) MAJIIC data pedigree is trustable by users; 4) MAJIIC service access is assured for authorized users and denied for unauthorized users; 5) MAJIIC data access is provided based on user clearance, country affiliation, and role and protected from those not meeting the minimum policy requirements. Transition is planned for FY 2008 by the U.S. Army Training and Doctrine Command (TRADOC) System Manager to the Service Distributed Command Ground Station (DCGS) programs,</p>	1.100	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>to satisfy their requirements for coalition ISR interoperability and Network Centric Enterprise Services compatibility. Transition already Accomplished: The MAJIIC Full-Motion Video ISR Information Services (ISRIS) capability deployed as part of JIOC-I to OIF, and is transitioning to the Army Distributed Common Ground System (DCGS-A). NATO is deploying the MAJIIC coalition shared database (CSD) as part of the NATO Intelligence Management and Reporting Tool (IMART) to OEF. Remaining transition: NATO, Supreme Headquarters Allied PowerEurope (SHAPE), and the U.S. will adopt demonstrated capabilities and concepts of operation into existing national and coalition systems. MAJIIC technology and lessons learned will transition to the Service DCGS programs to satisfy their requirements for Coalition ISR interoperability and Network Centric Enterprise Services compatibility. U.S. Joint Forces Command is the operational sponsor and the Air Force is lead service.</p> <p><i>FY 2008 Accomplishments:</i> Participated in the annual MAJIIC coalition exercise with possible NATO Allied Command transformation with NATO Air Group IV ISR capability. Validated CONOPs and conduct MUA. Transition capability into the DCGS Integration Backbone spiral baseline. ACTD completed at the end of FY 2008.</p>					
<p>Net Zero Plus (NZZP)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for Net Zero Plus (NZZP) as an FY 2008 new start. The outcome of the NZZP 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. NZZP leverages research and development from federal and private labs and COTS/GOTS technology in alternative fuels, novel power storage, innovative power generation, brilliant distribution systems, efficient structures, collection, analysis, and visualization technology. 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. NZZP JCTD is a three-year demonstration under</p>	2.500	2.436	2.500		

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<p>the sponsorship of U.S. CENTCOM with the completion of the demonstration by end of FY2010; and transition to programs of records as early as 2010. The lead Service is the Army. The primary 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.</p> <p>The planned schedule is to conduct utility assessments in FY08 and FY09 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, and placed on the General Services Administration (GSA) Schedule or Defense Logistics Agency (DLA) acquisition.</p> <p><i>FY 2008 Accomplishments:</i> Installed survey and monitoring equipment for baselining FOB operations; initiated exterior insulation of structures; examined tactical garbage to energy refinery; began development of CONOPS and TTPs.</p> <p><i>FY 2009 Plans:</i> Complete exterior insulation of structures; install intelligent generator sets and electronic power control and conditioning for smart distribution systems; demonstrate intelligent power distribution to optimize efficiency's.</p> <p><i>FY 2010 Plans:</i> Expand intelligent power distribution with integration of Waste to Energy system and Hybrid Power Generation into intelligent power distribution; conduct final Military Utility Assessment; develop Net Zero-</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
Plus strategy and road map for FOB and U.S. installations. NZP JCTD scheduled completion date is September 2010.				
<p>Night Vision Cave/Urban Assault (NVCUA)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for NVCUA. The outcome of NVCUA is to demonstrate a suite of lightweight, soldier-borne sensor technologies, together with new Concepts of Operation (CONOPs) and Tactics, Techniques and Procedures (TTPs), to enable decisive overmatch for dismounted assault in subterranean and urban environments. Five-year project under sponsorship of U.S. Special Operations Command (USSOCOM), with completion of development and final demonstration in FY05, and final completion date in FY 2008. The lead service is U.S. Army. The primary outputs and efficiencies to be demonstrated in the Night Vision ACTD Military Utility Assessment are: 1) Increased capability for Special Operations Forces (SOF) to identify detected targets during Special Reconnaissance (SR) missions; 2) Increased capability for SOF during Direct Action (DA) missions; 3) Enhanced SOF capabilities to move and identify targets in low/no-light environments; 4) Enhanced SOF capabilities to move and identify targets in urban/restrictive terrain. Current Efficiency Goals: SWIR Standoff Identification Range - 2k = IR Detection Range; UCIR Detection Range (Cave Assault) 150m, 200m, 250m; UCIR Detection Range (Urban UGS) - 15m, 25m; Pd (Approach Sensors) -- 90 - 95 percent; STTW Detection Range -- 10m, 20m. Transition status: Long Range Identification (LRID) system was successfully demonstrated and is currently undergoing an Extended User Evaluation in Iraq for consideration for transition to Army Programs of Record (POR). Additionally, the NVCUA ACTD developed and demonstrated a Fast Obscurant Grenade (FOG) which Transitioned to the U.S. Army Joint Program Manager NBC Program Of Record and recently was approved for Milestone C procurement status. In addition, efforts are underway to provide selected items (e.g., Combat Periscope, ENV Goggles) for operational use on a rapid-equipping basis.</p> <p><i>FY 2008 Accomplishments:</i> Completed interim capability/residual support. Completed transition to designated Programs of Record. Completed the ACTD.</p>	0.600	0.000	0.000	
Node Mgt and Deployable Depot (NoMaDD)	2.500	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>The Joint Requirements Oversight Council (JROC) validated the capability need for NoMaDD as a FY 2006 new start. The outcome of NoMaDD is to demonstrate technologies which address critical delays in getting needed supplies to the warfighter. Loss of visibility of items in the distribution pipeline and the inability to provide realistic delivery dates or effectively adjust the flow of commodities for delivery at the right place at the right time continue to impact the effectiveness of our forces. Node Management will provide distribution node managers the visibility needed to make logistics decisions to positively affect the distribution system. Deployable Depot will provide the ability to quickly establish a supply and distribution center in theater to control the physical flow of materiel moving into and through the theater. Together, these capabilities will provide the logistic responsiveness necessary to support our warfighters in any theater of operation. NoMaDD's effectiveness will be measured through its contribution to sustained logistics for major military deployments. Specific outputs and efficiencies will include: 1) increased accuracy in accounting for supplies resulting in reductions in customer wait time; 2) improvements in required airlift to support sustainment; 3) reductions in repeat requisitions. The planned transition for NoMaDD: Node Management will transition to the Army's Battle Command Sustainment Support System and U.S. Transportation Command's (TRANSCOM) Intelligent Road/Rail Information System (IRRIS) Program which will provide a web based version on Node Management. The Deployable Depot will become a program of record and be managed by DLA. The Combatant Command/User Sponsor is TRANSCOM and the lead service/agency is Defense Logistics Agency (DLA).</p> <p><i>FY 2008 Accomplishments:</i> Performed the final Joint Military Utility Assessments of the Deployable Depot in March - April 2008. Continued spiral development of BCS3 Node Management capabilities and development of the IRRIS web-based capability. Integrated BCS3 and IRRIS capabilities to ensure data and views are consistent. Development and integration of BCS3 and IRRIS Node Management Capabilities continued as a joint DLA/USTRANSCOM project. JCTD completed in September FY 2008.</p>				
<p>Regional Maritime Awareness Capability (RMAC)</p> <p>The JROC approved the capability need for RMAC as an FY 2006 new start. RMAC is a coordinated DoD and Department of State project to build maritime awareness capacity for friendly nations. The outcome of RMAC will demonstrate and transition a regional maritime awareness solution set consisting</p>	3.500	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>of sensors and their indigenous processors, communications systems, and software, suitable for nations with little or no previous maritime awareness capability. The initial application of the capability will enable friendly nations in the Gulf of Guinea region to develop maritime domain awareness in the regional waters, and share their data with each other and with the U.S. This solution set will be equally applicable to local sensor sites, national operations centers, regional coordination centers, and external users. The sensors and processors include Automated Information System (AIS), surface search radars, video cameras, and night vision devices. Communications will be done through UHF/VHF Radios, W3C-compliant, commercially secure, IP-based networks and cell phones. RMAC's outputs and efficiencies include surveillance, tracking, fusion and analysis, vessel tracks, and multi national information sharing and collaboration capabilities. The current Transition Strategy will deliver: 1) Residuals: AIS, radars, video cameras, night vision devices, radios, cell phones; 2) Documentation: training package, software / hardware specifications, site surveys, frequency management plan and user maintenance manuals, CONOPS / TTPs; 3) Post-JCTD acquisition strategies for procurements of capability will be developed by host nations and U.S. Program Managers pending outcome of demonstrations and assessments. The User Sponsor is the U. S. European Command (EUCOM) and the lead service is the Navy.</p> <p><i>FY 2008 Accomplishments:</i> Finalized requirements definition and architectures for Nigeria installations. Completed installation of RMAC capability in Nigeria. Continued development of CONOPS, TTP, and training packages. Conducted operational demonstration and Coalition Utility Assessment (CUA) of RMAC capability in Sao Tome and Principe, planning for operational demonstration and utility assessment of capabilities in Nigeria, and data sharing between Nigeria and Sao Tome and Principe. Sao Tome and Principe built up their Coast Guard around RMAC capabilities, and used the system as its core maritime awareness capability in daily operations.</p> <p>FY 2009 Planned Output will be funded with "two year" FY 2008 funding and partnerships. Execute second operational demonstration, with capabilities in both Nigeria and Sao Tome and Principe. Complete utility assessment. Support transition activities for US Navy program of record, and sustainment in partner nations. Complete the JCTD.</p>				

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<p>SPARTAN Advanced Composite Technology</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for SPARTAN as a FY 2002 start. The outcome is to provide 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, noncombatants, and other national and strategic assets. The user sponsor is U.S. Pacific Command whose Operational Manager is the U.S. Third Fleet, lead service is the U. S. Navy. The primary outputs to be demonstrated to the users and evaluated in the Military Utility Assessment (MUA) are 1) Conduct critical missions Antisubmarine Warfare (ASW); Mine Warfare (MIW); Intelligence, Surveillance, and Reconnaissance/Force Protection/precision Engagement (ISR/FP/PE); 2) Prepare the water space for Amphibious and Sealift Ops; and 3) Provide port-protection when launched/operated from shore. The efficiencies to be gained are 1) force multiplication using low-cost deployable sensors and weapons; 2) provide a symmetric response to asymmetric threats; 3) expanded range to provide for a reduced risk to personnel and capital assets during the conduct of dangerous missions. The Transition Strategy: The SPARTAN USV Command and Control system and Concept of Operation (CONOPS) will transition to the U.S. Navy Littoral Combat Ship (LCS) (PEO-LMW, PMW 420) Program of Record (POR) for the LCS USV. Transition is scheduled to begin with LCS Flight Zero, Ship number One production in January 2007. The ACTD officially completed in FY 2006, however a \$1.300 million congressional add was provided in the ACTD PE in FY 2007 for composite technology research to support Navy transition efforts into the LCS program of record.</p> <p><i>FY 2008 Accomplishments:</i> Congressional funding was added to continue composite technology development for Spartan. The effort encompassed three phases in the evaluation and characterization of advanced composite materials for Spartan and future USV applications. Phase 1: USV Payload/Sensor Performance Improvement - payload/sensor improvement efforts included an FEM analysis that was be conducted with known properties of structural components. Early and later full-scale testing was conducted on prototype and full-scale payload/sensor hardware and the supporting platform interface foundations. Material Characterization was conducted to evaluate performance of the materials. Static and dynamic material</p>	1.600	0.000	0.000	

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<p>response will be characterized to validate the FEM analysis. Volume fraction optimization and material processing/fabrication techniques were investigated. A Final Design and FEM analysis was conducted using new material properties. "Build-to" drawings was developed after the design was finalized. At-sea testing was conducted with packages installed on a SPARTAN USV (or next-generation SPARTAN platform) under operationally representative conditions. Test instrumentation were used to record load conditions.</p> <p>Phase 2: Electronic Sensors/Payload - following successful completion of Phase 1 in it intended to assess, design, fabricate and test additional mission/payload components (structural and non-structural) of more complex shapes and configurations used in SPARTAN including electronics and sensor enclosures. Also in this phase is the potential to explore the need to meet low-smoke requirements.</p>				
<p>Sea Eagle</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for Sea Eagle as an FY 2005 start. The outcome of Sea Eagle will be to demonstrate and transition technologies to provide persistent, clandestine, and unattended monitoring of maritime areas in a Special Operations Forces (SOF) deliverable "system of systems". These sensors and systems will be deliverable by SOF and networked in a multi-media (sea, air, land) system-of-systems approach. Sea Eagle will greatly increase SOF's ability to clandestinely conduct persistent, intrusive Intelligence, Surveillance, and Reconnaissance (ISR) in maritime areas. The war fighter will tactically emplace Sea Eagle systems to provide targeted, tactical information that complements national and theater intelligence assets to enable a layered intelligence collection strategy. These funds will be used to support technical down-select, systems integration, and demonstrations of sensors and communication technologies. The funds will support: 1. Johns Hopkins University Applied Physics Lab (JHU APL) and Naval Surface Warfare Center Panama City (NSWC PC) as the technical integrators for Sea Eagle; 2. Operational Manager support and demonstration costs; and 3, Procurement and integration of components for the demonstrations. Outputs and Efficiencies.</p>	0.800	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>The overarching output for Sea Eagle is persistence. This output incorporates a variety of initiatives such as power management, intelligent triggering, and signal discrimination to optimize system performance and persistence. Measures of persistence will be relevant for individual component, subsystem, and overall system performance.</p> <p>Quantitative metrics are classified. USSOCOM is the COCOM/User Sponsor; Navy is the Lead Service.</p> <p><i>FY 2008 Accomplishments:</i> Incorporated underwater communications and sensors into a clandestine, close access, ad-hoc, self-healing mesh network. Demonstrated the undersea network and sensors in 3Q FY 2008. Conducted final Military Utility Assessment of the entire Sea Eagle network 3Q FY 2008. Upgraded land network protocol and integrated additional land sensors. Refine CONOPS and TTPs. The ACTD was completed in FY 2009.</p> <p>FY 2009 Planned Transition to U.S. SOCOM Global Sensor Network POR.</p>				
<p>Shadow Harvest</p> <p>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</p>	5.500	6.100	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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.</p> <p>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 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.</p> <p><i>FY 2008 Accomplishments:</i> Successfully completed second test flight series in December 2007. Conducted flight support to US NORTHCOM by conducting flights over burned areas from October 2007 California wildfires. Conducted demonstration of concept of support to USNORTHCOM's Operation CLEAR VIEW requirements and DoD Support to Civilian Authorities (DSCA). Conducted a limited military utility assessment in USSOUTHCOM's AOR during 3QFY08. Complete the coordination of the Implementation Directive.</p> <p><i>FY 2009 Plans:</i> Coordinate the Management Plan (to include initial transition plan) and begin final system integration activities. Coordinate and plan demonstration activities to requested CoCom AOR. FY 2010 Planned</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
Activities 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.				
<p>Simultaneous Field Radiation Tech (SFRT)</p> <p>Congress appropriated funds to develop 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. The efficiency is that mobile users will have improved communications while enjoying more covert antenna profiles. Simultaneous Field Radiation Tech (SFRT) will transition to a commercially available product line for use by any executive department agency requiring tactical communications.</p> <p><i>FY 2008 Accomplishments:</i> Developed, demonstrated and productized new antenna technology. Applied the antennas to legacy radios to demonstrate improved gain and reduced profile.</p>	3.100	0.000	0.000	
<p>Small UAV (SUAV)</p> <p>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 capabilities. New operational</p>	3.700	1.700	1.000	

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<p>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).</p> <p><i>FY 2008 Accomplishments:</i> Continued technology definition and cut in (spiral fielding). Continued TTP development and refinement. Continued CONOP refinement. Performed one limited assessment, one Interim Military Utility Assessment to support fielding of capabilities. .</p> <p><i>FY 2009 Plans:</i> Military Utility Assessment (MUA) - Perform the final (culminating) assessment, capturing overall improvement to operational capabilities, Extended Use (EU) and transition support of fielded technology and training packages will continue.</p> <p><i>FY 2010 Plans:</i> MUA reporting, Extended Use (EU) support of fielded technology and training packages will begin. The ACTD will complete in FY 2010.</p>				
<p>Smart Threads Integrated Radiation Sensors (STIRS)</p> <p>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 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.</p> <p>These capabilities have global applicability with forward-deployed Combatant Command (COCOM) ground forces (US Army), U.S. Naval Maritime Components, and US Coast Guard elements in the transient areas.</p>	6.100	4.700	0.000	

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<p>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 (C2) networks. The is a three-year JCTD sponsored by the US Northern Command (NORTHCOM); 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.</p> <p>The capabilities and attributes below are the basis for the Joint Operational Utility Assessment (OUA) measures of effectiveness (MOEs) and measures of performance (MOPs):</p> <ol style="list-style-type: none"> a. Detect and identify concerning R/N material/threats. <ul style="list-style-type: none"> - Attributes: precision, spectrum, quality, timeliness. b. Correlate and fuse information to develop shared understanding. <ul style="list-style-type: none"> - Attributes: quality, scalable, tailored to users. c. Enable support of/execution across, spectrum of battlefield environments (land, sea and airborne). <ul style="list-style-type: none"> - Attributes: robustness, persistence. d. Collaborative, networked joint and interagency information sharing. <ul style="list-style-type: none"> - Attributes: networked, interoperable, and fully integrated. <p><i>FY 2008 Accomplishments:</i> Requirements validation and refinement of STIRS JCTD capabilities into man-portable detection systems (MPDS) and vehicular mounted detection systems (VMDS) to confirm presence of R/N materials and identify the same; began STIRS integration into service and joint C2 networks to send STIRS data to required users in near real-time; conducted initial MPDS technical testing and system characterization. Continue MPDS technical testing followed by technical demonstrations with operational unit training; Plan operational demonstrations/exercises (ODX) with US Navy Level I, II and III Boarding Teams employing MPDS capabilities.</p>				

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<p><i>FY 2009 Plans:</i> 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 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).</p>				
<p>Special Operations Forces (SOF) Long Endurance Demonstrator (SLED)</p> <p>The JROC validated the capability need for SLED as an FY 2005 new start. The outcome of SLED is to demonstrate an unmanned vertical take off and landing vehicle (the DARPA developed A160 Hummingbird VTOL UAV) capable of flying long range (2000+NM/24+ hours) and employing a wide variety of adaptable payloads, supporting combating terrorism (CT), counter proliferation (CP), special reconnaissance (SR), direct action (DA), psychological operations (PSYOP), and other mission areas. Efficiencies and outputs will be evaluated the A160 for its capability to perform designated functions. Platform performance must be compatible with payload and mission requirements in terms of altitude, endurance, range, weight (platform and payload), and payload power. The payloads must meet mission requirements and be compatible with A-160 capabilities and constraints. Planned Transition is to integrate with USSOCOM components.</p> <p>U.S. Special Operations Command is the user sponsor and lead agency.</p> <p><i>FY 2008 Accomplishments:</i> Completed final MUA activities and reports. Updated CONOPs. Performed Extended User Evaluation. Completed the ACTD.</p>	5.000	0.000	0.000	
Tactical Service Provider (TSP)	3.700	3.700	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>The Joint Requirements Oversight Council (JROC) validated the need for TSP functionality for a FY 2007 new start. The TSP ACTD takes advantage of the Joint IP Modem (JIPM) and emerging wireless commercial technologies to enhance and improve C2 and Net-Centric capabilities to meet critical present and near-term requirements. TSP plans for a final demonstration and assessment in the fourth quarter of FY 2009, with sustainment of the demonstrated capabilities by DISA through FY09 and transition to the Global Broadcast Service (GBS) program of record in FY 2011. TSP outcome will enable broadband communications between strategic information sources and tactical users as well as between tactical users. The expected output is wideband SATCOM multicast/broadcast of information products with lower data rate reachback SATCOM supporting two-way services for tactical 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. TSP is a three year ACTD co-sponsored by USCENTCOM and USJFCOM. The Defense Information Systems Agency (DISA) is the lead agency.</p> <p><i>FY 2008 Accomplishments:</i> Conducted limited functionality technology demonstrations as operational users refined specific functionality needed for mission thread assessment scenarios. Efficiencies expected include enhanced situational awareness, real- or near-real-time intelligence sharing, and more agile and effective combat force with collaborative capabilities at the "tactical edge" to and from mobile troops.</p> <p><i>FY 2009 Plans:</i> Demonstrate militarily useful functionality in operationally relevant scenarios. Conduct operational utility assessment. Finalize documentation and transition functionality to programs of record. Complete the JCTD.</p>				
<p>Theater Effects Based Operations (TEBO)</p> <p>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</p>	4.400	2.700	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>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.</p> <p><i>FY 2008 Accomplishments:</i> Limited Military Utility Assessment (LMUA) was completed at KEY RESOLVE 2008. Final MUA August 2008. Final enhancement and integration of COA planning capabilities through the use of modeling and simulation. Developed strategic assessment capability to provide interagency, strategic level inputs to the CG operational perspective and improvements to timeline visualization. Synchronization matrix delivered.</p> <p><i>FY 2009 Plans:</i> Integrate with Turbo Planner and modeling/simulation tools to fulfill Adaptive Planning Strategic Guidance requirement for APEX. Transition to Net Enabled Command Capability (NECC) POR as part of KPP#2. Scheduled completion of the ACTD in September 2009. Transition Strategy: FY 2010 User Assessment and participation in UFL 2009. FY 2011 - Transition to NECC as part of Increment 1.</p>					
<p>Transnational Information Sharing - Cooperation (TISC)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for TISC as an FY 2008 rolling start. TISC will provide open source software tools and non-classified portal for collaboration, planning and assessment by external partners and interagency organizations. The TISC capability design allows disadvantaged users to use the portal at no cost and accessibility will be possible in</p>	4.000	3.000	3.000		

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<p>austere and minimal network infrastructure environments. This capability will provide collaborative chat, identity client, trans-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. TISC initial demonstration occurred in the 2008 Coalition Warrior Interoperability Demonstration events held at multiple locations. USEUCOM and USSOUTHCOM will act as sponsors and Cocom representatives to determine operational requirements, demonstration conduct, assessment and operational concepts. Requirements and operational assessment will include external partners outside of DoD acting as the TISC community of interest. The TISC capability will transition to Theater Security Cooperation operational concepts, tactics and procedures, while the sustainment of the information sharing portal will become the responsibility of DISA, U.S. Government and other international organizations. Since the information technology solution and the associated operating concepts will be open source software and doctrine, the product will be free to authorized users, e.g. United Nations. The user sponsor is U.S. European Command and the lead organization is the Defense Information Systems Agency.</p> <p><i>FY 2008 Accomplishments:</i> Spiral 1 capability demonstrated and assessed in the 2008 CWID. Technical demonstrations refine capabilities for multiple sprints comprised in each spiral. Spiral capabilities defined by operational sponsors and integrated into the TISC instance. Integrated assessment plan developed</p> <p><i>FY 2009 Plans:</i> 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.</p>				

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<p><i>FY 2010 Plans:</i> Demonstrate and assess TISC in the SOUTHCOM area of operations in FAHUM 2010 exercise. Prepare final operational utility assessment and report from the sponsors. Transition TISC capabilities and operational concepts to Theater Security Cooperation policy and planning documents and to DISA and other sustaining organizations in DoD, U.S. Govt or others. JCTD completes.</p>				
<p>Zephyr</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for Zephyr as an FY 2007 new start. The Zephyr JCTD is a transformational technology program that proposes to demonstrate and transition into service a solar-powered unmanned aerial vehicle to meet urgent operational requirements for USCENTCOM and USEUCOM. The output of Zephyr will be to provide low-cost persistent surveillance and communications relay, flying continuous operations for periods of months at a time using solar power plus batteries for continual day/night operations. The efficiencies of Zephyr's sensors will provide ground radio communications links over hundreds of square miles and surveillance of logistics routes and ground threats. Zephyr is hand launched and requires no formal infrastructure and little manpower to operate. Zephyr solution provides cross-theatre benefits to all U.S. Forces.</p> <p><i>FY 2008 Accomplishments:</i> The development of the JCTD Integrated Assessment Plan (IAP) to include: (1) providing day to day operational management through close coordination with the JCTD Technical and Transition Managers; (2) development and validate Concept of Operations (CONOPS); Concept of Employment (COE); Tactics, Techniques, and Procedures (TTPs), and associate Training Support Packets (TSPs) as needed; (3) management of the assessment activities in support of a military utility decision. Funding also includes support provided by the Operational Test Agency (OTA) to conduct assessments, the Assessment Execution Document (AED). The final demonstration is FY 2008. JCTD Completion: FY 2008</p> <p>Transition Strategy: Aggressive transition to production is demanded by a USCENTCOM urgent operational requirement in theatre. The Zephyr team is working with QinetiQ North America to transition Zephyr to a U.S. production partner.</p>	6.100	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
Suppliers: U.S. and U.K. managers will implement post-JCTD acquisition strategies for all procurements (notably two cutting-edge U.S. technologies/solar array and battery). Residuals: 2 x Zephyr high-altitude, long-endurance unmanned aircraft systems complete with payloads and ground stations. Training package will include deployment procedures and techniques, user maintenance manuals, and concept of operations/tactics.				
<p>Distributed Tactical Communications System (DTCS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the need for DTCS functionality for a rolling start for FY 2009. The DTCS JCTD utilize a Single Vehicle Multi Beam Architecture and Iridium satellite communication system to provide a tactical voice and data service to small units (Co and below) using a small handheld device. DTCS plans for 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 in FY 2011. DTCS outcome will deliver a tactical, scalable OTH/OTM/ 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.</p> <p><i>FY 2009 Plans:</i> Conduct limited functionality technology demonstrations as operational users refine specific functionality needed for mission thread assessment scenarios. Efficiencies expected include enhanced situational awareness, real- or near-real-time intelligence sharing, and more agile and effective combat force with collaborative capabilities at the "tactical edge" to and from mobile troops.</p> <p><i>FY 2010 Plans:</i> Demonstrate militarily useful functionality in operationally relevant scenarios. Conduct operational utility assessment. Finalize documentation and begin to transition functionality.</p>	0.000	5.800	5.000	

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<p>One Box One Wire (OB1)</p> <p>The Joint Requirements Oversight Council (JROC) validated the need for OB1 functionality for a JCTD rolling start for FY 2009. The OB1 JCTD outcome 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 through Unclassified from a single computer workstation. The information layers 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 access.</p> <p>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 efficiencies include significantly reduced physical infrastructure (numbers of computers and network interface cards and wires), time and manpower savings in establishing 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.</p> <p><i>FY 2009 Plans:</i> Commence assurance evaluation. Commence network systems and security engineering and implementation planning with representative operational employment venues. Commence assessment and deployment planning.</p> <p><i>FY 2010 Plans:</i> Commence certification processes leading to accreditation. Finalize military implementation and utility assessment plans. Conduct operational demonstrations of representative network environments.</p>	0.000	8.100	6.000	
Mission Assurance Decision Support System (MADSS)	0.000	2.500	1.060	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>The Joint Requirements Oversight Council (JROC) validated the need for MADSS functionality for a FY 2009 new start. The MADSS JCTD will enhance correlation of data from different data sources by combining hardware and software using web-based services, secure network and automated data transformation services to provide integrated C3 Operational and critical infrastructure understanding. MADSS plans for a final demonstration and assessment in the third quarter of FY 2011, and transition to the NCES program of record in the fourth quarter of FY 2011. 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 expected efficiencies are improved 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 course of action development. MADSS is a three year JCTD sponsored by USSTRATCOM. The Defense Information Systems Agency (DISA) is the lead agency.</p> <p><i>FY 2009 Plans:</i> 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. 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.</p> <p><i>FY 2010 Plans:</i> Demonstrate militarily useful functionality in operationally relevant scenarios. Conduct operational utility assessment. Finalize documentation and transition functionality to a program of record.</p>				
<p>Joint Recovery and Distribution System (JRaDS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the capability need for Joint Recovery and Distribution System (JRaDS) as a FY 2009 new start. The Joint Recovery and Distribution System (JRaDS) Joint Capability Technology Demonstration (JCTD) will develop and demonstrate 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</p>	0.000	5.700	4.500	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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, semi-autonomous operating capability requirements for supplementary Material Handling Equipment (MHE) and 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 objective efficiencies to be gained are: JRaDS reduces the time, vehicle and manpower requirements for Tactical Wheeled Vehicle recovery by an estimated 50 percent. JRaDS will reduce MHE requirements by an estimated 20 percent during operations in an austere environment and improve theater cargo velocity by an estimated 20 percent. By having a standardized FoS trailer fleet that has common replacement parts, in-service effectiveness will improve by an estimated 20 percent and parts inventory and costs will be reduced by an estimated 50 percent.</p> <p>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 than waiting for production of trailers. The sponsoring Combatant Command (CoCom) is the U. S. Transportation Command (USTRANSCOM). The lead service is the Army.</p> <p><i>FY 2009 Plans:</i> Develop Implementation Directive and Management Transition Plan; begin development of operational and system architecture; purchase first demonstration trailers and conduct technical demonstrations #1.</p>				

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2010 Plans:</i> Conduct technical demonstrations #2 and #3; Complete final Joint Operational Utility Assessment (JOUA).</p>				
<p>Joint Medical Distance Support & Evacuation (JMDSE)</p> <p>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 discontinuous battlefield; improve survivability and readiness 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 for casualties in hostile areas and aerial delivery of advanced litter technologies. The efficiencies to be gained include: less costly and more timely delivery of critical medical supplies and casualty care equipment; improved battlefield care of casualties; reduced risk to medical personnel on the battlefield or in manned aircraft delivering medical supplies. The transition strategy includes identification of precision small medical delivery systems, inclusion of telemedicine capability in theater-based programs of record, and battlefield casualty care advanced litter capabilities. The sponsoring combatant command is the Joint Forces Command with the executive agent being OSD Health Affairs.</p> <p><i>FY 2009 Plans:</i> Implementation Directive, Management and Transition Plan, CONOPs, Integrated Assessment Plan, system and architecture design. First Operational demonstration</p> <p><i>FY 2010 Plans:</i> CONOP refinement and operational demonstrations #1 and #2.</p>	0.000	4.800	1.140	
Cooperative Security Engagement (CSE)	0.000	3.500	3.020	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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 improved inter-agency adaptive planning process, regional/event based information sharing, integrated event assessment framework. The JCTD is a three year project under sponsorship of SOUTHCOM with EUCOM as a cosponsor. CSE will involve other U.S. Government agencies such as U.S. AID and Dept. of State, as well as non-governmental organizations and selected coalition countries. Transition strategy will incorporate CSE capabilities into cocom and stability operations conops and policy. The primary outputs and efficiencies to be demonstrated in the JCTD Operational Utility Assessment are (1) interagency adaptive planning, (2) regional and inter-agency assessment.</p> <p><i>FY 2009 Plans:</i> Complete implementation directive, integrate assessment plan; identification of planning, information sharing and assessment tools, initial operational concepts. Initial demonstration.</p> <p><i>FY 2010 Plans:</i> Demonstration in operational context of tools and operational concepts with cooperative security community of interest in selected regions within SOUTHCOM and EUCOM areas of operations.</p>				
<p>Daily Watch</p> <p>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. NRO is the lead agency.</p> <p><i>FY 2009 Plans:</i> Classified content only</p> <p><i>FY 2010 Plans:</i> Classified content only</p>	0.000	2.800	4.500	
Precision Acquisition Weaponized System (PAWS)	0.000	4.400	4.500	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>The Joint Requirements Oversight Council (JROC) validated the capability need for PAWS as an FY 2009 new start. 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 technology can solve current and significant shortfalls of organic ISR platforms for SOF that lack a kill mechanism with which to prosecute targets. These platforms can only 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. PAWS 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 and the Lead Service/Agency is the U.S. Special Operations Command.</p> <p><i>FY 2009 Plans:</i> CONOP / TTP Development, Weapon Link Development, Safety Assessments, and Arming/Firing Development .</p> <p><i>FY 2010 Plans:</i> Low Collateral Damage Testing, Certification, Integration with Host UAV, End-to-End Testing, and Demonstration #1 and Demonstration #2. Transition planning.</p>				
<p>Counter-Electronics High Powered Microwave System Advanced Missile Project (CHAMP)</p> <p>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 12-17. The lead service is Air Force. The</p>	0.000	5.800	5.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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.</p> <p><i>FY 2009 Plans:</i> Develop Implementation Directive and Management and Transition Plan. Conduct a Broad Area Announcement to identify potential industrial partners. Review analysis and solution alternatives. Conduct 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.</p> <p><i>FY 2010 Plans:</i> Develop Concepts of Operations (CONOPs) and Tactics, Techniques, and Procedures (TTPs). USPACOM is the Operational Manager. Develop or refine training, test and security plans. Begin component systems integration and operator training. Conduct ground testing.</p>				
<p>Joint Multi-Effects Warhead System (JMEWS)</p> <p>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</p>	0.000	0.000	3.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>targets held at risk and reduces cost; Increased flexibility in access denied environments; provides a long range, survivable, high-lethality weapon. The User Sponsor USSOCOM, USSTRATCOM and the Lead Service is the US Navy.</p> <p><i>FY 2009 Plans:</i> Systems engineering, integration, & testing.</p> <p><i>FY 2010 Plans:</i> Multiple targets demonstration, Validation, JMUA.</p>				
<p>Riverine & Intercoastal Operations (RIO)</p> <p>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 both 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 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-420) 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</p>	0.000	2.800	2.000	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	
<p>environment and will be held outside CONUS (OCONUS) with Colombia in FY 2011. It will feature both a technical and operational demonstration OCONUS culminating with an Operational Utility Assessment.</p> <p><i>FY 2008 Accomplishments:</i></p> <p>.</p> <p><i>FY 2009 Plans:</i></p> <p>Begin RIO as a 'rolling start'. Define requirements and conceptual operations for both the US Navy and Colombia. Select and technically demonstrate baseline technology solution set (sensors, communications and COP). Draft and sign Master Information Exchange Agreement (MIEA) and other supporting agreements between U.S. and Colombia. Begin technical and system integration discussions with Colombia</p> <p><i>FY 2010 Plans:</i></p> <p>Integrate the unattended sensors, communications and common operational picture aboard a maritime mobile operating base. Technically and operationally test RIO in the Intercoastal environment. Formally test and document spiral capability through limited operational utility assessment. Spiral capability to both the U.S. Navy and DHS.</p>					
<p>Future Immersive Training Environment (FITE)</p> <p>The Joint Requirements Oversight Council (JROC) validated the requirements for the capabilities needed from FITE JCTD as an FY08 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.</p> <p>This two-year effort has been divided into two spiral demonstrations. The first spiral will demonstrate an individual worn Virtual Reality based on the hardware platform selected by the U.S. Army's Dismounted Soldier 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</p>	0.300	0.250	4.500		

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p>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.</p> <p><i>FY 2008 Accomplishments:</i> Requirements Analysis began, Draft Implementation Directive created.</p> <p><i>FY 2009 Plans:</i> Integrate FITE JCTD components into an individual worn squad level Immersive Virtual Environment. Operational Demonstration scheduled at Fort Benning, GA and Camp Lejeune, NC. Begin development of Spiral 2 demonstrations.</p> <p><i>FY 2010 Plans:</i> 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 Programs of Record.</p>				
<p>National Senior Leadership Decision Support Service (NSLDSS)</p> <p>The Joint Requirements Oversight Council (JROC) validated the need for NSLDSS functionality for a FY 2008 new start. NSLDSS provides senior decision-makers a method for developing rapid situation awareness (SA) 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 user sponsor is the Joint Staff J3/NMCC and the Lead Agency is DISA.</p>	0.600	2.000	2.500	

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B. Accomplishments/Planned Program (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011
<p><i>FY 2008 Accomplishments:</i> Initial Proof of Concept</p> <p><i>FY 2009 Plans:</i> Spiral I – Improve Global Situational Awareness. Leverage existing tools to enhance Situational Awareness; JIEDDO (COIC); STRATCOM (NDMI); DIA (DIOCC); NORTHCOM (EMF); NCES (Collaboration, M2M, Security, Discovery; Search, etc); Identify and expose data sources supporting Mission Threads (C2BMC, ESSA, METOC, etc) . Mission Threads: Ballistic Missile Defense; Hurricane Threat; Mall of America; Hijacking of Airline; National Convention; Space Event. Technical Demonstration fourth quarter of FY 2009.</p> <p><i>FY 2010 Plans:</i> Spiral 2 – Improve Course of Action Options and Decision Making; Demonstrations and Limited Operational Utility Assessment (LOUA)</p>				

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C. Other Program Funding Summary (\$ in Millions)										
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	Cost To Complete	Total Cost
Line Item #48/ PE 0603750D8Z/ACTD	1.552								Continuing	Continuing
Line Item #96/ PE 0604648D8Z/JCTD Transition	2.866	13.487	18.816						Continuing	Continuing
D. Acquisition Strategy										
<p>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:</p> <ul style="list-style-type: none"> - 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? <p>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:</p> <ul style="list-style-type: none"> - Capability Based: Greater CoCom influence looking at nearer term joint/coalition needs. 										

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<ul style="list-style-type: none">- 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.		
E. Performance Metrics		
Strategic Goals Supported FY 2008: <ul style="list-style-type: none">- Project Selection Focus- Spiral Technologies- Time to Final Demonstration- Adequately Shared Funding and Visibility- Independent Assessment Capability- Successful Military Utility Assessment (MUA)		
<p>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.</p>		
<ol style="list-style-type: none">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 3 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.		

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