OSD RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

Date: February 2007

APPROPRIATION/ BUDGET ACTIVITY	PE NUMBER AND TITLE
RDT&E/ Defense Wide BA# 3	**0603648D8Z - Joint Capability Technology Demonstrations**

Cost ($ in Millions)		FY 2006 Actual	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total Program Element (PE) Cost		33.707	36.468	194.352	207.740	213.989	207.572	210.299	213.256
P648	Joint Capability Technology Demonstration (JCTD)	33.707	36.468	194.352	207.740	213.989	207.572	210.299	213.256

A. Mission Description and Budget Item Justification: In FY 2006, the Deputy Undersecretary of Defense for Advanced Systems and Concepts (DUSD(AS&C)) initiated a new business process, building on the successful ACTD program, to support the Department's transformational reform of addressing future threats from a capabilities focus versus the classical threat based viewpoint. The revised ACTD approach is called the Joint Capability Technology Demonstration (JCTD) program, and is based on proven, positive aspects of the ACTD program with new modifications. The JCTD model specifically addresses congressional concerns and recommendations made by the General Accountability Office (GAO) regarding rapid development and transitioning of Combatant Commander (CoCom) relevant capabilities to the joint warfighter in a more cost effective, timely and efficient model. Aligning closely with the thrust of with the Joint Staff's Joint Integration and Development System (JCIDS), JCTDs take a more balanced project candidate identification approach, shifting the overall program's focus to identifying specific warfighter capabilities needs up front (requirements pull), and then finding technology or concepts to address these needs, while maintaining the historical ACTD approach, where new technology is introduced to the warfighter to solve existing operational shortfalls (technology push). FY 2006 was the first year of a three to five year transition period from the current ACTD to the improved JCTD program. However, in FY08 all ACTD funding is being transferred to the JCTD program to complete this transition more quickly than originally anticipated. Beginning in FY07 all new starts will be JCTDs (replacing ACTD new starts). This will implement a process that will more rapidly provide demonstrated solutions to joint warfighter needs, and unique transformational capabilities through the application of new operational concepts or technology from the Science and Technology (S&T) domain. The resources are aimed at carrying successful projects through the difficult transition stage ("S&T valley of death"). The remaining ongoing ACTDs that were started in previous years but not yet complete will be funded to completion in the JCTD program element and will complete in two to three years. It is anticipated that all ongoing ACTDs will be complete by FY09. Beginning in FY07 there will be only JCTD new start projects. In FY 2006, the 13 ACTD/JCTD new start projects consisted of six ACTDs and seven JCTDs. To better support the rapid transition of joint, CoCom/coalition operational capabilities, the JCTD business model includes a JCTD Transition program element. While not all ACTDs and JCTDs require transition funding, these resources provide a " transition bridge" to enable sustainment for innovative, "joint-peculiar" and Combatant Commander (CoCom)/coalition capabilities until traditional programming and budgeting can provide a permanent solution.

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 2006, DUSD(AS&C) shifted an initial allocation of resources ($40 million) from the ACTD PE 0603750D8Z into the JCTD program element (PE)s. In FY08 all remaining ACTD resources will be shifted into the JCTD BA 3 PE 0603648D8Z. This will initially establish a funding stream to support approximately five to ten new JCTDs each year. The BA-3 JCTD PE will replace the current ACTD BA-3 PE in FY08; The JCTD and ACTD projects will use the combined resources of both the JCTD and ACTD PEs in FY07. In FY08 and out ongoing ACTDs will be supported with funding from the JCTD PE until completion in two to three years. JCTDs may be funded from both the ACTD and JCTD PEs during in FY07 as the JCTD model shift reaches completion. During this period, the overall program will sometimes be referred to as the JCTD/ACTD program, to address the transitional nature of the process. JCTDs are initiated in Budget Activity three (BA-3) and are pre-acquisition demonstrations, characterized by Technology Readiness Levels 4, 5 or 6. Although not fully developed for production, new JCTDs can provide a path for transition of Science and Technology to acquisition and are low-to-moderate risk vehicles for pursuing those objectives. The

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Defense Wide RDT&E funding managed by DUSD(AS&C) will support demonstration of military utility and deployment of interim capability including a transition period to a program of record, providing the Combatant Commanders, Services, Agencies, and operators with adequate time to address transition issues of supportability, maintainability and training identified by the JCTD/ACTD. As described, the JCTD Program will pioneer a new model for Department of Defense acquisition with the addition of a transition arm through funding in the JCTD Transition BA4 which will provide a path for rapid fielding of successful, transformational capabilities that may require additional transition resources to "bridge" to a program of record.

FY 2007/2008/2009 General Program Plan: DUSD (AS&C) will maintain oversight of the JCTD/ACTD program. The FY 2007 review and validation process began in February 2006, with JROC validation in June of 2006. Congressional notification followed in December 2006 with seven "new start" JCTDs and five potential "rolling starts". Rolling start projects were selected because they represent important warfighter concerns and potential capabilities. Three of the proposals, address issues with emerging technologies that could be significant "game changers". While these projects have been 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. This year, five candidates emerged that were particularly compelling; however, due to technology or resource related issues, they are still in a developmental stage. For FY 2008, the new start selection process will be repeated beginning in March 2007. It is anticipated that new start initiatives will range from 5 to 7 JCTDs. JCTD funding will be drawn from both the ACTD and JCTD PEs in FY07. Funding available for initiating new FY 2007 JCTDs and Rolling Starts will be approximately $47 million from both the ACTD and JCTD PEs. In FY08 all ACTD funding will be shifted to the JCTD PE and it is anticipated approximately $50 million will be available for JCTD new start/rolling start initiatives. Finally, in FY09 $50 million will be available for new start/rolling start initiatives. Due to the accelerated pace of JCTD development over ACTDs (JCTDs demonstrate in 2 to 3 years), the turnover rate is faster, thus funding for new starts each year has increased to approximately $50 million per year.

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007)	34.443	35.553	35.590	35.624
Current BES/President's Budget (FY 2008/2009)	33.707	36.468	194.352	207.740
Total Adjustments	-0.736	0.915	158.762	172.116
Congressional Program Reductions				
Congressional Rescissions		-0.210		
Congressional Increases		1.125		
Reprogrammings				
SBIR/STTR Transfer	-0.736			
Other			158.762	172.116

In FY06 there were no congressional increases or decreases to the JCTD program element. Congressional rescissions and other taxes such as Section 8125 and FFRDC totaled $557 thousand that were displayed in the FY 2007 President"s Budget. The SBIR/STTR transfer totaled $735 thousand. For FY07 congressional increases if $1.125 for Computer Assisted Threat Exploitation Program (CATE). Congressional rescissions and other taxes such as Section 8023 for FFRDC totaled $214. In FY08 and FY09 all ACTD funding 0603750D8Z transfers to the JCTD BA 3 Program Element 0603648D8Z.

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C. Other Program Funding Summary: Not Applicable.

D. Acquisition Strategy: Not Applicable.

E. Performance Metrics:

FY	Strategic Goals Supported	Existing Baseline	Planned Performance Improvement / Requirement Goal	Actual Performance Improvement	Planned Performance Metric / Methods of Measurement	Actual Performance Metric / Methods of Measurement
08	Project Selection Focus					
	Spiral Technologies					
	Time to Final Demonstration					
	Adequately Shared Funding and Visibility					
	Independent Assessment Capability					
	Successful Military Utility Assessment (MUA)					

Comment: The majority of funding from this Program Element is forwarded to the Services/Defense Agencies that execute the individual ACTD projects. DUSD(AS&C) maintains and provides overall programmatic oversight for the ACTD program, to include the individual ACTD projects. The JCTD/ACTD 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 these metrics and helps compare/contrast the current ACTD program with the new JCTD business process model.
A comparison of ACTD and JCTD metrics are:
1) Project Selection Focus:
a. ACTD - Threat based: shared military service and CoCom influence.
b. JCTD - Capability Based: Greater CoCom influence looking at nearer term joint/coalition needs.
2) Sprial Technologies:
a. ACTD - No metric
b. JCTD - 25% will provide an operationally relevant product demonstration within 24 months of ID signature.
3) Final Demonstation Completed

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a. ACTD - 3 to 4 years after initiation
b. JCTD - 75% of projects complete final demonstration within three years of ID signature.
4) Shared Funding and Viability of resources:
a. ACTD - OSD provides no more than 30% of the budgeted resources. Funding provided form many different program elements.
b. JCTD - OSD provides significantly more funding, greater than 30% in some cases a majority of projected funding, especially in the first two years.

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RDT&E/ Defense Wide BA# 3	**0603648D8Z - Joint Capability Technology Demonstrations**	**P648**

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B. Accomplishments/Planned Program:

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Counter Intelligence - Human Intelligence Architesture Modernization Program, Intelligence Operations Now (CHAMPION)	6.800	1.200	1.200	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for CHAMPION as a FY06 new start Joint Capability Technology Demonstration. 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/SOF collection, mission planning and asset management information. The capabilities include technologies for integration of biometrics and geospatial information. The primary outputs to be 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/SOF source management tools with federated search capability and data replication/access across multiple networks; and 4) integrated language translation collection, CIHUMINT source vetting tool and 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) Biometric and geo-spatially enabled mission and asst management tools. The transition strategy is to incorporate CHAMPION capabilities into the Distributed Common Ground Station program of record (POR). 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, Counter-Intelligence Field Activity, Defense Intelligence Agency, National Geospatial Agency, and the National Security Agency. The lead service is the Army.

• FY2006 Output - Identification and documentation of Counter-Intelligence, Human-Intelligence and special operations forces functional requirements. Analysis of alternative technologies for the solution set. Plan Spiral 1 demonstration to assess critical operational issues. Prepare transition plan. Coordinate planned POM funding of the deliverable by the program of record.

• FY2007 Planned Output - Complete Spiral 1 limited assessment report and Spiral 2 assessment plan. Execute the Spiral 2 demonstration and assessment of Spiral 2 deliverables. Prepare final assessment plan. Complete approval of transition plan. Secure funding for fielding of spiral deliverables and interim capabilities found to have military utility by operational sponsor.

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• FY2008 Planned Output - Execute final military utility assessment and finalize CONPs and TTPs. Continue efforts to field spiral deliverables and interim capabilities found to have military utility by operational sponsor. In FY2009 the project will transition to Program of Record and project completion.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Comprehensive Maritime Awareness (CMA)	6.720	1.100	5.600	0.000

The Joint Requirements Oversight Council validated the capability need for CMA as an FY-06 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 will be demonstrated and operated in CY-06, with advanced capability spirals in FY07 and FY08, and transition support in FY09. 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.

• CY 2006 Output - Capability for around-the-clock machine-to-machine data sharing with Republic of Singapore, including sharing the releasable U.S. Pacific Command common operational picture and Singapore interagency maritime data; and capability for machine-to-machine collaboration between maritime intelligence analysts in the U.S. and Singapore. An initial Concept of Operations is drafted. Service oriented architecture planning, and other data management planning has been conducted in workshops. Strong partnerships are developed with US Coast Guard and DoD Maritime Intelligence communities, and partnership is building with U.S Customs and Border Protection. Spiral Output -- operational data exchange and collaboration with Republic of Singapore.

• FY 2007 Planned Output - Continue operating FY 2006 spiral capability. Integrate capabilities of the U.S. Coast Guard Vessel Tracking Program, and automated anomaly and threat assessment, at key regional sites determined by architecture decisions. Conduct interim military utility assessment. Complete planning for network services and architecture implementation for FY 2008 for interagency sharing.

• FY 2008 Planned Output - Implement network services and service oriented architecture for interagency information exchange. Conduct final military utility assessment. Continue operating and improving FY 2006 and FY 2007 capabilities. In FY 2009 the project will continue operating delivered capabilities. Complete transition of network services to Program Executive Office C4I&Space, and complete transition of operating capabilities to operations and maintenance budgets. CMA JCTD scheduled completion date is September 2009.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Joint Modular Intermodal Distribution System (JMIDS)	7.350	2.930	0.000	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for JMIDS as an FY06 new start. The outcome of JMIDS is to demonstrate, analyze and transition joint service, all-mode containers and platforms that are equipped with Automatic Identification Technology (AIT). JMIDS will permit efficient, seamless, and visible movement of supplies through the distribution system from CONUS-based depots and vendor locations to tactical end users. This includes movement through the Seabase to support forward operating expeditionary and task force units. JMIDS technologies will enhance the ability to source load supplies that can move from origin to destination without the current intensive and inefficient handling and re-packing caused by: 1) incompatible air and ground cargo systems; and, 2) sorting, storing, and/or reconfiguring cargo. The goal of this JCTD is to improve the agility, flexibility, efficiency, effectiveness, responsiveness, and interoperability of the Joint Distribution System.

JMIDS is a three-year project under sponsorship of US Transportation Command, with JCTD completion by the end of FY 2008, and transition to selected Program Manager(s) / Program of Record(s) [Joint Modular Intermodal Platform (JMIP) and Joint Modular Intermodal Container (JMIC)] by FY 2009. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the JCTD Limited and Capstone Military Utility Assessments are: (1) Timeliness of JMIDS technologies to deliver supplies to operating forces as compared to present distribution system; (2) Capability to support

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transportability across different modes by reducing re-handling/ packing time; (3) Improved supply flow through the available technologies- Tonnage processed per hour, Time per load-out of platform Wait times per load-out; and, (4) Capability to support Command Level Situational Awareness-Accuracy of AIT tracking technology (contents, position), percent of JMICs tracked correctly, overall improvement of situational awareness upon use of AIT.

• FY 2006 Output - Developed Military Utility Assessment Plan (MUAP). Completed development and testing of prototype JMIDS hardware. Evaluated and selected Automatic Identification Technologies (AIT). Established Transition IPT - with 5 key functional areas, Transition Manager, assigned to Armament Research, Development and Engineering Center (ARDEC). Development of initial acquisition strategy - including an identification of prospective Program Managers. Commenced development of JCIDS documentation.

• FY 2007 Planned output - Complete acquisition of JMIC, JMIP and AIT demonstration hardware. Conduct two Limited MUA Military Utility Assessments (MUAs) and a Capstone MUA. Conduct cost, weight, producibility trade studies for the JMIP and JMIC prototypes. Complete three Capability Development Documents (CDD) spirals, including Business Case Analysis and Integrated Logistics Support planning drafts. Commence CDD staffing through Joint Staff and Services. Final demonstration date is September 2007. Deliver hardware, conduct engineering tests, and plans for a Coalition Warfare Demonstration of the JMIDS hardware with the United Kingdom. Activities in FY 2008 will be to complete final MUA Report. Commence transition to formal acquisition program(s). Complete Final CDD document and submit to JROC; Execute Milestone B Decision; Transition to Identified PM; Conduct Residual evaluations and follow-on engineering development. JMIDS JCTD scheduled completion date is December 2008. Identify three spiral technologies that enhance JMIDS output. Exploit JMIDS success through a Coalition Warfare Demonstration of the JMIDS hardware with the United Kingdom that determines the value of JMIDS to coalition warfare logistics.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Epidemic Outbreak Surveillance (EOS)	0.000	0.000	2.500	2.500

The Joint Requirements Oversight Council (JROC) validated the capability need for EOS as an FY 2005 start. The outcome of EOS is to demonstrate and transition solutions that are transformational dual use for operational and clinical medicine as well as bio-defense. EOS will incorporate as series of technologies to rapidly detect and identify a wide range of respiratory pathogens that are frequently and easily confuse in clinical encounters. It is intended to overcome two diagnostic challenges: 1) discrimination between diverse pathogens that present similar (i.e. fever & flu-like) symptoms; and 2) screening rapidly, accurately and simultaneously across multiple (20 - 30+) candidate pathogens. Clinically, a practitioner, if faced with 100 cases of flu will assume you also have the flu if you exhibit the same symptoms. EOS will ensure a correct diagnosis more quickly while running a series of pathogen tests in the background to look for biological attack. The overall goal is to develop a business case that makes the technology affordable for and integrated into the command structure for both routine and wartime scenarios. EOS will leverage sophisticated, advanced molecular biology procedures, bio-informatics, micro array and/or RT-PCR - based technologies integrating into medical command channels to provide all leadership levels key information needed to make time-critical decisions. Ultimately this situational awareness provides a high likelihood that correct diagnostic decisions will be made, potentially even prior to the onset of symptoms in some scenarios. In detect-to-warn and detect-to-treat applications, the EOS diagnostic supports sustainment of warfighter capabilities in biologically active domains by promoting earlier and targeted diagnosis, intervention, minimizing casualty losses, and reducing mission degradation. The first spiral of EOS has begun with the initiation of an avian flu (H5N1) warning network to established at 22 USAF sites worldwide. This system should be operational by the Fall, CY-2006, in time for the next flu season. DUSD/AS&C, USJFCOM (warfighter), AF/SG (technical manager), and JPEO/CBD (transition manager) are the principals for this ACTD. The ACTD will end in FY2008. Outputs and Efficiencies: Viral/Bacterial Agents per Chip Assay - 100 vice 20; Total Cycle Time per Individual Assay - 2 hours vice 8; Approximate Cost per Assay - $40 vice $500; Portability of Fully Capable System - 40 pounds vice 500; Rapid ID of Bio Agents vs. Backgrounds - 2 hours vice 1 day; Forensic Attribution of Agent Strains - days vice months; contain Outbreak and Reconstitute Forces - 2 days vice weeks.

• FY 2006 Output- Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output-Continue to monitor trainees for outbreaks and refine CONOP'S and TTP's. Conduct operational exercises with US Navy. Continue to monitor for avian flu outbreaks and institute warning as necessary. Transition products to active duty locations for use. Begin spiral two assessment of follow-on technologies in FY 2008 and 2009. The ACTD completes in FY 2009.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009

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Joint Coordinated Real-time Engagement (JCRE)	0.000	0.000	1.200	1.000

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: % of relevant data that is properly synchronized; % of global operation centers that have Synchronization awareness; % of synchronization problems that go undetected for > 10 minutes; Average time to detect a synchronization problem; Average time to determine impact of synchronization problems on effects; time to assemble and organize global effects; workload to assemble and organize global effects; time to synchronize global actions, capabilities, and resources; workload to synchronize global actions, capabilities, and resources; number of resynchronizations / number of original synchronizations (synchronization robustness); time to create a globally synchronized operational plan. The lead service is the Navy and the lead CoComs are U.S. Strategic Command and U.S. Special Operations Commands.

- FY 2006 Output - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008 Demonstration #3 (Fall 2007). Output: Demonstration of Joint Force Global Situational Awareness Tools, Joint Force Engagement Packages, and Joint Force Synchronization Tools in a battle staff exercise. A Joint MUA will be performed in conjunction with the final demonstration. Demonstration goals may be changed based on Operational Manager's direction.

Extended User Evaluation (EUE) Phase

- FY 2008-FY2009 Output: Prepare JCRE capability for primary transition to Net Enabled Command Capability (NECC). The EUE Package will consist of the JCRE System Prototype (all hardware and software required to host JCRE capabilities, in full or presentation server configuration), to be 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 will transition relevant capabilities as web services into GCCS-M/NECC.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Sea Eagle	0.000	0.000	0.800	0.000

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 warfighter 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: 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. Quantitative metrics are classified. USSOCOM is the COCOM/User Sponsor; Navy is the Lead Service.

- FY 2006 Output - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008: Conduct final Military Utility Assessment of the entire Sea Eagle network. In FY 2009 the Extended User Evaluation (EUE) will complete and the ACTD will complete.

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Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Agile Rapid Global Combat Support (ARGCS)	0.000	0.000	0.900	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for ARGCS as an FY-04 start which is using advanced technologies to demonstrate a family of testers for electronic 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 and test accuracy, interoperability between Services, reduced logistics and weapon system support costs, and reduced proliferation of automatic test systems in the future. (100% interoperability, Time to field - one year or less, 40% reduced time to diagnose and repair, proliferation of systems - reduce footprint by 50%, Scalability of systems - 100%). 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.

•FY 2006 Output - Refer to the ACTD R2a.

•FY 2007 Planned Output - Refer to the ACTD R2a.

•FY 2008 Planned Output: Complete the ACTD and continue to evaluate ARGCS military utility through the EUE. Support transition of ARGCS technologies and products into Service programs of record.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Joint Unmanned SyS Common Control (JUSC-2)	0.000	0.000	0.300	0.000

The JROC validated the capability need for JUSC2 as an FY-04 new start. The desired outcome of JUSC2 is to provide a reconfigurable and scaleable common control architecture, capable of concurrently managing large numbers of unmanned systems of all types, leveraging interoperability afforded by existing joint and coalition interfaces and message sets for unmanned systems. The primary outputs and efficiencies to be demonstrated by this project include more efficient management and improved overall operational effect through: (1) the ability to concurrently manage (in some cases, control) all unmanned systems deployed with Littoral Combat Ship (LCS) mission packages; (2) demonstration of NATO STANAG 4586 (UAV Control Standard) Level 3/4 control handoff of STANAG enabled unmanned aircraft between Army and Navy control stations; and (3) demonstrate the ability to hand-off control of unmanned surface vehicles (USVs) and unmanned ground vehicles (UGVs) to other services' Joint Architecture for Unmanned Systems (JAUS)-compliant control stations. Current transition plans include: JUSC2's Unmanned Vehicle Common Control (UVCC) software product - an integral component of the Navy's Littoral Combat Ship Flight 0. JUSC2 Common Unmanned Aerial Vehicle (UAV) Interface Segment (STANAG 4586 compliant ground station) - now a transition product that the Army's UAV Project Office will insert into the One System Acquisition Program. The user sponsor is U.S. Joint Forces Command and the lead service is the Navy.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Plans - Complete residual final MUA activities. Complete reporting efforts; provide final engineering packages, software, and evaluation results to LCS program. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Special Operations Forces (SOF) Long Endurance Demonstrator (SLED)	0.000	0.000	5.000	0.000

The JROC validated the capability need for SLED as an FY-05 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 evaluate 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.

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U.S. Special Operations Command is the user sponsor and lead agency.

- FY 2006 Outputs - Refer to the ACTD R2a.
- FY 2007 Planned Outputs - Refer to the ACTD R2a.
- FY 2008 Planned Outputs - Complete final MUA activities and reports. Update CONOPs. Perform Extended User Evaluation. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Small UAV (SUAV)	0.000	0.000	3.700	1.700

The JROC approved the capability need for SUAS as an FY-06 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 capabilities will be evaluated and no less than once per year. Transition strategy: FY2009/2010 is the transition period. The capabilities will be integrated into USSOCOM systems, and available for integration into all SUAS customers assets (spiraled out of the ACTD into the field as they become available). The User Sponsor and Lead agency is U.S. Special Operations Command (USSOCOM).

- FY 2006 Outcome - Refer to the ACTD R2a.
- FY 2007 Planned Outcome - Refer to the ACTD R2a.
- FY 2008 Planned Outcome - Continue technology definition and cut in (spiral fielding). Continue TTP development and refinement. Continue CONOP refinement. Perform one limited assessment, one Interim Military Utility Assessment to support fielding of capabilities. Perform the final (culminating) assessment, capturing overall improvement to operational capabilities. In FY 2009 the extended User Evaluation (EUE) will begin and support of fielded technology and training packages. The ACTD will complete.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Counter Bomb/Counter Bomber (CB2)	0.000	0.000	3.700	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for CB2 as a FY03 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.

- FY 2006 Outcome - Refer to the ACTD R2a.
- FY 2007 Planned Outcome - Refer to the ACTD R2a.
- FY 2008 Planned Outcome - Continue EUE and transition activities for all Spirals. Planned completion date is in FY 2009.

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Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
FLM Small Diameter Bomb	2.000	4.000	6.200	1.300

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 Combat Air Force aircraft the ability to prosecute high-value targets in a collateral damage sensitive environment. 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 SDBI but to complement it. FLM's sub-four meter accuracy will result in pin-point focused lethality with minimal collateral damage concerns. FLM is a four-year project under sponsorship of United States Central Command (USCENTCOM), with completion of development and demonstration by the mid-CY 2008, and fielding of approximately fifty (50) residual FLMs with continued contractor sustainability provided through mid-CY 2010. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are (1) successful integration of the carbon fiber warhead and MBX onto the existing SDB I airframe with a fully functioning weapon and kill mechanism, (2) safe carriage and separation from F-15E, (3) to demonstrate FLM's sub-four meter accuracy, (4) the elimination of fragmentation as kill mechanisms in the FLM weapon integration design, (5) a full and complete characterization of FLM's capability against defined target set for USCENTCOM. The planned transition strategy is: upon Military Utility demonstration, enter into formal acquisition process at Milestone C for Low Rate Initial Production buys; Extended User Evaluation (EUE) of residuals by USCENTCOM; Follow-on system development and demonstration, production, and fielding through service Program Executive Office/Program Managers (PEOs/PMs); Submit funding for Low Rate Initial Production in FY09 with the targeted Program of Record: Small Diameter Bomb Program. The User Sponsor is USCENTCOM and the Lead Service/Agency is the U.S. Air Force.

- FY 2006 Output Year - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008 Planned Output - Final operational demonstration of FLM. Deliver approximately 50 residual FLMs to CENTCOM. Initiate 2-years of operational logistical field support. Begin FLM insensitive munition and hazard classification certification. Initiate preparation for formal acquisition program transition. Transition manager is 918th Armament Systems Group.
- FY 2009 Planned Output - Continue FLM residual weapon fielding support. Complete FLM insensitive munition and hazard classification certification. FLM JCTD scheduled completion is second quarter CY 2010.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Night Vision Cave/Urban Assault (NVCUA)	0.000	0.000	0.600	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for NVCUA as an FY-03 new start. 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 FY08. 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%; STTW Detection Range -- 10m, 20m. TheTransition 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). There are also classified capabilities that are being considered for transition. In addition, efforts are underway to provide selected items (e.g., Combat Periscope, ENV Goggles) for operational use on a rapid-equipping basis.

- FY 2006 Output - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008 Planned Output - Complete interim capability/residual support. Complete transition to designated Programs of Record. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009

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Extended Space Sensors Arch (ESSA)	0.000	0.000	1.600	1.700

The Joint Requirements Oversight Council (JROC) validated the capability need for ESSA as a FY06 new start. The ESSA ACTD focuses on 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). ESSA is planned for a final demonstration in mid FY 2009 and transition to a Programs of Record (PORs) will occur by the end of FY 2009. The lead service is the U.S. Air Force. The expected outputs and efficiencies of the ESSA ACTD is to develop and demonstrate 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 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.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - The second ESSA demonstration is scheduled for March 08. The second demonstration will add sensor sidecars to two sites: ALTAIR radar and Millimeter Wave Radar at the Reagan Test Site and the Ground Based Electro-Optical Deep Space Surveillance (GEODSS) site in Maui, HI. A fusion node at Massachusetts Institute of Technology Lincoln Laboratory (MIT/LL) will provide a web-based service for change detection alerts. The objective of this demonstration is to provide SSA-relevant alerts to interested users. These alerts will allow a user to define their operational picture by having the ability to identify the satellite, country of interest, type of change and / or the basis for the change detection.

• FY 2009 Planned Output - The final ESSA demonstration is scheduled for February 09. Immediately after a successful operational utility demonstration, an Extended User Evaluation (EUE) will begin and the ESSA products (sidecars) will transition to the appropriate PORs. The final demonstration will provide situational awareness during the course of a New Foreign Launch (NFL). The objective is to expose operations-related information and situation status in a net-centric manner with regards to tracking, identifying and cataloging components of an NFL. The demonstration will include timely pre-event operational information, real-time sensor data, and real-time operational information via a web log-type of collaboration tool. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Actionable Situational Awareness Pull (ASAP)	0.000	0.000	0.600	0.000

The JROC approved the capability need for ASAP as an FY-05 new start. The ASAP output will develop, integrate, demonstrate and transition 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), a "Smart Pull" service will be operationally demonstrated and transitioned into NECC and the Integrated Broadcast System (IBS). ASAP's outputs and efficiencies include (1) increased percentage of useable data available to the user, (2) increased performance through decreased latency of data, (3) percentage of increase in data obtained via "pull" vice "push" procedures, and (4) increased interoperability with coalition forces by use of XML Common Message Format Standards. Expected efficiencies (to be measured and verified) will include response time performance on the return of data as a web service. Planned Transition: Software tools and documentation will transition to Net-Enabled Command Capability (NECC) and the Integrated Broadcast System (IBS) starting in FY 2007. The ASAP User Sponsor is the U. S. Pacific Command (PACOM) and the lead service/agency is the Defense Information Systems Agency (DISA).

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Finalize CONOPs / TTPs, training package and recommendations for DOTMLPF. Complete transition ASAP ACTD products to programs of record / programs pending results of JMUA. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Regional Maritime Awareness Capability (RMAC)	1.000	2.234	2.200	0.000

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The JROC approved the capability need for RMAC as an FY-06 new start. RMAC is a coordinated DoD and Department of State project. The outcome of RMAC will demonstrate and transition a regional maritime awareness solution set consisting of sensors and their indigenous processors, communications systems, and software. 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), radar, 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, radar, 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.

• FY 2006 Output - Developed preliminary Concept of Operations (CONOPS), requirements definition and architecture. Conducted site surveys for twoone nations. Initiated procurement of sensors systems. Developed preliminary sensors-to-software interfaces.

• FY 2007 Planned Output - Complete definition of requirements. Conduct additional site surveys in participation host nations, and develop coordinated installation plans with host nations. Finalize procurement of RMAC capability. Initiate development of training package. Continue development of CONOPS, Tactics, Techniques, and Procedures (TTP) and architecture. Conduct technical testing and demonstrations. Install baseline operational capability (BOC) equipment and software systems, and conduct initial checkout tests.

• FY 2008 Planned Output - Finalize requirements definition and architecture. Complete installation of RMAC capability. Continue development of CONOPS, TTP, and training package. Conduct operational demonstrations and Coalition Utility Assessment (CUA) of RMAC capability including local harbors / ports, National Operational Centers (NOC), Regional Coordination Center (RCC) and external users. In FY 2009 RMAC will sustain operational capabilities, complete transition planning and complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Coalition Secure Management and Operations System (COSMOS)	0.000	0.000	1.900	1.900

The Joint Requirements Oversight Council (JROC) validated the capability need for COSMOS as a FY05 new start. The COSMOS ACTD output will 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 Information Exchange Mechanism (IEM)) in the Combined Enterprise Regional Information Exchange System (CENTRIXS) coalition network environment. COSMOS is planned for a final demonstration in the second quarter of FY08, with sustainment of the demonstrated capabilities by DISA through FY09. The expected output is identifying necessary and sufficient conditions for implementing the MIP specifications, leading 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 expected efficiency is substantial reduction of textual message exchange required to establish and maintain 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) for two-way information exchange, when approved cross domain solutions are available. Transition to programs of record is planned for FY09, targeted at the emerging Multinational Information Sharing (MNIS) initiative. A policy enforcement capability for discrete rapid information sharing will be implemented in enterprise and theater-level coalition networks (i.e., CENTRIXS migrating to an emerging program based on the Joint Requirements Oversight Council (JROC) approved Multinational Information Sharing (MNIS) Initial Capabilities Document (ICD)). The use of Open Source Code for software-based capabilities will enable improved capabilities to be inserted into programs of record for coalition information sharing, network services, and next generation command and control, including those of Allies and Coalition partners. COSMOS is a three year ACTD co-sponsored by U. S. Pacific Command (PACOM) and U. S. European Command (EUCOM). The Defense Information Systems Agency (DISA) is the lead agency.

• FY 2006 output - Refer to the ACTD R2a.

• FY 2007 Planned output - Refer to the ACTD R2a.

• FY 2008 Planned Output: The final demonstration for Military Utility Assessment (MUA) in a USEUCOM venue is planned for the fourth quarter of FY08. Use of the foundational MIP specification based C2 information exchange between coalition partners able to implement the necessary and sufficient conditions and security solutions in stabilization and recovery operations will provide increased political confidence, technical experience and collaborative abilities. Programmatic focus in FY08 is FY10 budget documentation to successfully transition sustainment of the demonstrated capability to programs of record. DISA will sustain the demonstrated militarily useful functionality until transitions to programs of record in FY09.

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• FY 2009 Planned Output: The primary focus of activities in FY09 is final documentation and transition of functionality to programs of record. The ACTD completes in FY09.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Node Mgt and Deployable Depot (NoMaDD)	0.000	0.000	1.900	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for NoMaDD as a FY-06 new start which is demonstrating technologies to 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 container demurrage costs and repeat requisitions. The planned transition for NoMaDD: Node Management will transition to the Army's Battle Command Sustainment Support System. The Deployable Depot will become a program of record and be managed by DLA. The Combatant Command/User Sponsor is the U.S. Transportation Command (TRANSCOM) and the lead service/agency is Defense Logistics Agency (DLA).

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Complete spiral development of Node Management capabilities and development of Deployable Depot. Perform Joint Military Utility Assessments of both capabilities. Continue transition of Node Management capabilities into the Army's Battle Command Sustainment Support System. In FY 2009 capabilities developed will continue to be assessed during Extended User Evaluations. Life-cycle management Node Management will transition to the Army's Battle Command Sustainment Support System. Life-cycle management of Deployable Depot will transition to a program of record established in the Defense Logistics Agency. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Joint Enable Theater Access (JETA-SPOD)	0.000	0.000	3.700	1.900

The Joint Requirements Oversight Council (JROC) validated the need for JETA-SPOD capabilities as a FY-06 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; 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 by FY2009. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the ACTD Military Utility Assessment (MUA) are: 1) the LMCS will reduce weight, volume, and deployment time compared to existing military causeway and bridging systems; 2) the operational parameters for evaluating the military utility of the LMCS are based on a quantitative and qualitative comparison to the capability provided by the existing Modular Causeway System (MCS); 3) LMCS will result in a reduction in weight and volume by 50% over the MCS; a reduction in deployment time by 50% 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% 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;

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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 Manager, Army Watercraft Systems (PdM AWS) and USTRANSCOM, respectively.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Develop final Management Plan and CONOPS, finalize extended user evaluation and transition plan, complete system integration and incorporate lessons learned, fabricate LMCS, delivery final version of Decision Support Tool; complete MUA/Final Demonstration in Sep 2008; develop final MUA and ACTD report; and transition LMCS and Decision Support Tool to Programs of Record.

• FY 2009 Planned Output - Conduct pre-transition and interim capability; JETA-SPOD ACTD scheduled completion date is September 2010.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Coalition Joint Spectrum Management and Planning Tool (CJSMPT)	1.166	0.919	0.500	0.000

The Joint Requirements Oversight Council (JROC) validated the capabilities needed from CJSMPT as an FY06 new start. The outcome of CJSMPT is a force structure driven database of basic friendly communications and counter-Improvised Explosive Devices jammers with an associated software based spectrum management tool to enable the Warfighters to coordinate electromagnetic spectrum resources usage in a timely way. CJSMPT is a three year project under the sponsorship of US European Command with direct engagement by US Central Command, with phased software deliveries and demonstrations in FY07 and FY08. The US Army is the technical lead Service for the JCTD and has agreed to sustain the delivered capability in the USEUCOM and USCENTCOM theaters until transition of the initial capabilities into the Defense Information Systems Agency (DISA) as the lead Agency for Global Electromagnetic Spectrum Information System program. The primary output and efficiencies to be demonstrated in the JCTD Military Utility Assessment 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.

• FY 2006 Output - Established the integration framework, first instantiation of the force driven spectrum knowledge repository, established interfaces to legacy databases, and conducted user workshops to clearly articulate requirements, current business processes and concepts for usage of the tools. Affirmed the need for both fully networked and intermittently connected software capability.

• FY 2007 Planned Output - Initial demonstration of basic counter-IED, friendly communications coordination and visualization tools applied to priority Warfighter scenarios. Establish and conduct operator training. Integrate CJSMPT software capability into USCENTCOM pre-deployment training for spectrum managers and electronic warfare officers.

• FY 2008 Planned Output - Refine phase one software capability and expand to additional friendly force spectrum usage. Expand mobile training, classroom instruction and doctrine for spectrum coordination with operational scenarios. Conduct Joint Military Utility Assessment of capabilities delivered. Coordinate sustainment activities within US Army and transition documentation with DISA. Complete the development of CJSMPT software capability and demonstrations by December 2008. Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Event Management Framework (EMF)	0.000	0.000	2.500	1.300

The outcome 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

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(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).

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Spiral 3: Adapt ontology, data models, and smart agents for selected Communities of Interest. Increase partner base. Conduct JMUA. Harden software. • FY 2009 Planned Output - Assuming a successful JMUA, transition is planned for FY09. Transition paths are to be determined. One possibility is transition to a DISA Program of Record such as NECC or NCES. The EMF ACTD is scheduled to complete in September 2009.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Theater Effects Based Operations (TEBO)	0.000	0.000	4.400	2.700

The Joint Requirements Oversight Council (JROC) validated the capability need for the TEBO ACTD as a new start in FY 04. The outcome of the TEBO ACTD is to provide Combatant Commanders with enhanced capabilities to analyze, plan, execute, and assess Effects-Based Operations (EBO) at the strategic and operational levels by integrating computer-aided decision support tools, Concept of Operations (CONOPS), and Tactics, Techniques and Procedures (TTPs) into the command's Mission Architectures. The TEBO ACTD is a six-year project under the sponsorship of Pacific Command and Combined Forces Command/U.S. Forces Korea (CFC/USFK) as the Operational User. Completion of development and demonstration is planned for by the end of CY 2009 with transition to the Net Enabled Command Capability (NECC) System of Record in 2010. The lead service is Army. The primary outputs and efficiencies to be demonstrated in the TEBO ACTD Military Utility Assessments are (1) Exploit existing knowledge base(s) of strategic, operational and tactical environments (e.g. Operational Net Assessments [ONA] - critical capabilities and vulnerabilities, centers gravity [COG] and nodal analysis, (2) Facilitate collaborative effects-based campaign planning within a combined/Joint environment, (3) Support execution with prioritization of strategic and operational levels of effort, synchronization of actions, and battle tracking, (4) Comprehensively assess and forecast progress toward the desired end state by analyzing observed direct and indirect effects.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Conduct Operational Demonstration 5 (RSOI 08 and UFL 08) Final enhancement and integration of COA planning capabilities through the use of modeling and simulation; final military utilitary assessment; Begin transition of TEBO Knowledge Management Services into Army Battle Command Systems (ABCS) Program of Record.

• FY 2009 Planned Output - Begin transition to Net Enabled Command Capability (NECC) Program. Complete the ACTD by September 2009.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Smart Threads Integrated Radiation Sensors (STIRS)	0.000	0.750	6.100	3.800

The Joint Requirements Oversight Council (JROC) validated the capability need for SMART Threads (STIRS) JCTD as an FY-07 new start. The outcome of STIRS is to demonstrate a set of technologies and CONOPS to provide an integrated, ruggedized, manned and unmanned "system-of systems" radiation sensor capability for force protection and counter-proliferation missions on land, sea, and air and be integrated within current/future joint architecture for sensor network & data fusion. STIRS includes Next generation gamma and neutron detector glass fibers doped with Li (Lithium 6) "woven" into unique form factors and detector platforms and will comprise of a system of detectors that work together to provide real-time situational awareness to detect, locate, identify and respond nuclear materials. STIRS is a joint integrated sensor network for information and data fusion. The outputs and efficiencies in STIRS will be to provide a tangible improvement in the state-of-the-art of land, sea, and air-based nuclear/radiological reconnaissance. The primary outputs and efficiencies to be demonstrated in the Military Utility Assessment (MUA) are: (1) percent increase in the ability to collect information against radiological/nuclear (R/N) material/threats,(2) percent increase in the ability to develop understanding and accurately ID R/N material, (3) percent increase in the ability to operate across the spectrum of battlefield environments, (4) percent increase rate of ship track generation per-day over current manual process, (5) percent increase in the ability to network and insure flow of STIRS-based information. STIRS is a three-year JCTD under the Sponsorship of Northern Command (NORTHCOM); DTRA is Lead Agency and Joint Program Executive Office for Chemical and Biological Defense (JPEO CBD) is

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Transition Manager. STIRS demonstration phase will complete in FY 2009 and transition to the user community will begin in FY 2009.

• FY 2007 Planned Output - Begin development of STIRS technology into a man-portable system to confirm presence of R/N materials while being worn as a 'vest'-like garment. Begin development of a required over-the-horizon C4I network to send STIRS data to required users in a near real-time timeline.

• FY 2008 Planned Output - Integrate STIRS technology into a vehicle mounted panel system which can be employed along border (land/maritime) areas for random searches/portal-type operations. Man-pack systems developed in FY 07 will also be employed in follow-on search of targeted vehicles. Info provided over line-of-site C4I network.

• FY 2009 Planned Output - Continue development of STIRS as a Post-event mapping/detection capability utilizing a UAV with a STIRS pod or payload to assist in contamination area identification and R/N mapping. Individual and vehicle systems to be used to avoid "hot" areas. Information will be provided over tactical & strategic-level C4I network. The STIRS Residuals assets will provide limited initial operational capability to joint warfighter's. The STIRS JCTD Residuals notionally include: 35 Radiation Detection Backpacks; 35 Radiation Detection Vests; 3 Airborne Radiological Detection & ID Mounted Systems; 3 Boat/Ship Mounted Detection Systems (3-4 gross counting panels and 1-2 identification panels) 3 Vehicle Mounted Detection Systems (1-2 gross counting panels and/or 1-2 identification panels).

Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Mapping the Human Terrain (MAP-HT)	0.000	0.500	2.700	1.300

The Joint Requirements Oversight Council (JROC) validated the capability need of MAP-HT JCTD as an FY-07 new start. The outcome of MAP-HT is to develop an integrated, open source, spatially/relationally/temporally referenced human terrain data collection and visualization toolkit to support BCT/RCTs in understanding human terrain. The objective is to deploy MAP-HT toolkit to Joint, Interagency, Intergovernmental, and Multinational (JIMM) elements (e.g. USAID, DEA, Coalition Partners). MAP-HT will provide a joint common relevant picture of the human terrain for use by tactical elements, operational commanders, theater planners, interagency organizations, and coalition partners. The fundamental problem addressed by the MAP-HT JCTD is to provide an integrated capability (organization, methods, tools) to the Joint, Service, or Inter-agencies that will effectively collect/consolidate, visualize, and understand open source socio-cultural ("green data") information that will assist Commanders in understanding the "human terrain" in which they operate. This basic understanding will help to reduced IED incidents via improved situational awareness of the human terrain by using "green layer data/unclassified" information to understand key population points to win the "will and legitimacy" fights and surface the insurgent IED networks. This will also increase the socio-cultural knowledge base for operational units and will increase the dissemination of current information to trainers and the intelligence community. The overall project context for MAP-HT is development and deployment "by, through, and with" deployed units in contact. MAP-HT will directly support joint and combined operations. In addition to Army support, the US Marine Corps sees substantial merit in an institutionalized human terrain capability. The key to success in this endeavor is to stop the loss of human terrain data during unit rotations. To do so, a capability (people, process, and tools) must be further developed to provide a means for commanders and their supporting operations sections to collect data on human terrain, create, store, and disseminate information from this data, and use the resulting understanding as an element of combat power. While information and SME support are the primary MAP-HT thrusts, development and integration work will also be performed to allow commanders to visualize cultural information in geospatial and social network contexts. Compliant with the Joint Force Generation cycle, MAP-HT will also support training commands that prepare warfighters for deployment. USEUCOM has included this in their Roadmap, and is also included in the DOD Irregular Warfare Roadmap.

• Lead Service: US Army
• User Sponsor and OM: USCENTCOM
• USSOCOM, USEUCOM, USJFCOM
• Technical Manager: US Army ERDC-TEC
• Technical Agents: US Army TRADOC-DCSINT, USMC TECOM, USSOCOM
• Transition Mgr: DCGS-A; DCGS-MC; DCGS-SOF;SOCOM SOAL PEO IIS
• Industry: MITRE, Aptima

• FY 2007 Planned Output: Spiral .5 and Spiral 1 - Develop baseline for MAP-HT Toolkit, Develop ID and MP. Focus on continued evolution of the prototype MAP-HT Tool, enhancement of relevant data collection and analysis/visualization tools, and development of doctrine and TTPs.

• FY08 Planned Output: Spiral 2 will refine the doctrinal implications of Spiral 1, advance the core knowledge management tools, add capabilities in knowledge discovery and advanced

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visualization and modeling, and test the integrated prototypes at Service labs, battle labs, and military exercises. Also, finalized prototypes and software, as well as developing Concept of Operations including Tactics, Techniques and Procedures (TTPs). The Military Utility Assessment (MUA) will evaluate the effectiveness of prototypes, provide an operationally relevant scenario with red and blue forces, and compare existing pre-deployment cultural training tools/methods with proposed MAP-HT training tools.

•FY 2009 Planned Output: The transition phase will involve final demonstration & assessments of all MAP-HT products, CONOPS, & TTPs. Transition is planned to the following Program of Records (PORs): DCGS-A, DCGS-MC, DCGS-SOF, USSOCOM PEO IIS/SOJICC, as well as US Marine Corps Training and Education Command, and the US Army TRADOC - DCSINT. Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Joint Multi-Mission Electro-Optic Sys. (JMMES)	0.000	2.400	5.000	5.100

The Joint Requirements Oversight Council validated the capability need for JMMES as an FY-07 new start. The outcome of JMMES is demonstration and transition of airborne sensors and automated processing for automatic detection of itemstargets 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. The project will develop and demonstrate automatic processing and automated operator cueing for targets such as submarines, mines, targets under trees, illicit crops, and search-and-rescue targets at sea. The primary outputs and efficiencies to be demonstrated in JMMES Military Utility Assessments are (1) ability of JMMES to recognize targets of interest, in terms of (a) percent of auto detections and auto cues that are relevant, (b) distance error of auto detect and auto cue reports, (c) timeliness of reports (seconds) to decision makers; and (2) ability of JMMES to defeat denial and deception efforts, in terms of (a) percent of denial and deception efforts defeated, (b) where and when JMMES applies (operating environments, seasons, time of day, range, etc.), (c) percent of time operable during missions, and (d) reliability and logistic support requirements. JMMES is a 3-year project sponsored by U.S. Pacific Command and U.S. Southern Command. Initial capabilities will be demonstrated and operated in FY07, with demonstrations against additional targets with additional aircraft types in FY08 and FY09. Transition activities will begin in FY07, leading to firm transition to programs of record in Program Objective Memorandum 2010. The lead Service is U.S. Navy.

• FY 2007 Planned Output - Upgrade existing sensor suites for JMMES applications, integrate sensor and processing systems aboard selected aircraft. Conduct data collection and assessments for anti-submarine warfare missions, and begin algorithm development for other targets. Begin Concept of Operations and system architecture documentation. Support transition of initial capabilities required in Navy POM 08 for Littoral Combat Ship.

• FY 2008 Planned Output - Complete JMMES integration into additional aircraft types for mine detection missions, search and rescue missions, counter concealment and deception (land targets) missions, illicit crop detection, and other missions. Complete initial algorithm development for the additional missions and conduct data collection and assessment trials, including interagency and coalition partner participation. Submit documentation for Navy programming for Navy aircraft programs.

• FY 2009 Planned Output - Complete multi-aircraft/multi-mission assessment trials and draft Military Utility Assessment. Complete Concept of Operations, Tactics/Techniques/Procedures, and System Architecture documentation. Support ongoing transition activities into programs of record. Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Maritime Auto Super Track enhance Reporting (MASTER)	0.000	2.000	5.600	3.100

The Joint Requirements Oversight Council (JROC) validated the capability need for MASTER (Maritime Automated Super Track Enhanced) as an FY-07 new start. The outcome of MASTER is to demonstrate a set of technologies and CONOPS to provide automatic tracking of ship traffic using unclassified methods, classified methods and National Technical Means which will provide a tangible improvement of United States maritime domain awareness on a global-basis. The MASTER JCTD will also provide Tactics, Techniques and Procedures (TTPs) to the Intelligence Community (IC) which will allow the IC the ability to use MASTER in Agency-specific environments. The primary outputs and efficiencies to be demonstrated in the Military Utility Assessment (MUA) are to develop and deploy an initial 24/7 operational capability to provide: (1) percent increase in an analysts ability to create a fully vetted, high quality ship tracks using additional information sources from SCI/Secret/Unclassified-levels and disseminate these "Super Tracks" including associated metadata, alerts, and notifications to operational users at all security levels using a standardized MDA report format, (2) percent decrease in the time required for an intelligence analyst to assemble a fully vetted, high quality coherent and thorough file of information of the ship(s) being tracked together with a time history and track of the vessel between any desired points between the departure point and arrival point and points in between, (3) percent increase in the ability of an analyst to determine ship threat profile (friend or foe) based on ship metadata and

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track history, (4) percent increase rate of automatic ship track generation per-day over current manual process, (5) percent increase in number of ship tracks per analyst in a given time period and a relative decrease in cost to create and assess a given number of tracks over a specific time frame. The JCTD Residuals include: 1) Multi-INT generation algorithm for worldwide MDA tracks and their metadata; 2) MLS Guards and accreditation (SCI, Secret. SBU); 3)Draft USMTF-type MDA message format for Super Track dissemination through MLS Guards; 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 Northern Command (NORTHCOM) and ONI, NRO (proposed), USCG (proposed) with completion of development and demonstration by the end of FY 2009 and transition to the IC through PEO-ISR/Space beginning in FY 2009. The lead service is Navy.

•FY 2007 Planned Output - Integrate technologies & demonstrate initial automatic capability in a single AOR/AOI.

•FY 2008 Planned Output - Expand system into a global 24/7 operational prototype; develop MLS dissemination capability with standard USMTF-type message reports.

•FY 2009 Planned Output - Final operational demonstration of MASTER and begin the Transition to operational users. Transition Manager is the Office of Naval Intelligence (ONI). Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Internet Protocol Router in Space (IRIS)	0.000	2.000	5.000	5.100

The Joint Requirements Oversight Council (JROC) validated the need for capability from IRIS as a FY07 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. 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 which commercial SATCOM users should leverage the IRIS capability. USSTRATCOM is assigned responsibility for global network operations, and as the operational user sponsor seeks to improve network reliability and endurability 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 Defense Information System Agency (DISA) is the lead Service and will transition the demonstrated commercial capability into contracting language for future services subscription in support of operations, including integration of IRIS services into existing network architectures beyond the IRIS JCTD.

• FY 2007 Planned Output - Develop the draft CONOP and conduct a scenario-based limited military utility assessment that will simulate the use of the IRIS capability.

• FY 2008 Planned Output - Validate and verify draft CONOP and demonstration architectures to enable a limited military utility assessment of an emulated IRIS capability. Participate in the industry led end-to-end IRIS technical capabilities demonstration with representative hardware prior to IS 14 launch.

• FY 2008/2009 Planned Output - Launch of the IS 14 spacecraft is projected for the 1st quarter FY2009. Conduct a live scenario and capability based demonstrations culminating in a final military utility assessment of the IRIS JCTD. The IRIS JCTD will leave behind the 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.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Coalition Mobility System (CMS)	0.000	2.000	0.000	0.000

The Joint Requirements Oversight Council validated the capability need for CMS as an FY-07 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. 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 and sealift (military & commercial) supporting coalition activities. CMS is a 3-year project sponsored by U.S. Pacific Command. Key participants include the Quadrilateral Logistics Forum consisting of Australia, Canada, United Kingdom, and the United States. Initial capabilities will be demonstrated and operated in FY07, with full-scale demonstrations on coalition networks in FY08 and FY09. USTRANSCOM is the Transition Manager and transition activities will begin in FY07, leading to firm transition to Command andControl Information Exchange Data Model (C2IEDM) and multiple coalition networks by 2010.

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• FY 2007 Planned Output - Identify the existing US SMS data elements to be made available in CMS; Identify appropriate queries for use by CMS users ; Adjust the coalition data format as required to ensure operational efficiency; Address the issue of replicating SMS data in a CMS data server; Define report formats for CMS users and identify existing SMS functionalities to be made available in the CMS tool. In FY08 the following activities will occur: Operationally harden the Phase I prototype; Deliver network integration; Design and implement an electronic data interface (EDI) which allows for the acceptance of properly formatted coalition partner information into the CMS database; Determine, design and deliver CMS reports in coalition-preferred format; Operationally test the ability of CMS to provide coalition data to SMS or a suitable US feeder system; Operationally test the ability of CMS to export data for coalition partners (to include commercial partners); Integrate CMS into the Coalition Theater Logistics (CTL) portal; Conduct an appropriate MUA utilizing an agency not affiliated with product development; Complete an MUA employing the certified and accredited network in an operational or exercise setting.
In FY 2009 the following activities will occur: Finalize CONOPS documentation and complete DOTMLPF Change Recommendation; Transition is planned to C2IEDM and multiple coalition networks; Complete the JCTD remaining Program Management actions.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Multi-Sensor Aerospace-ground Joint ISR IC (MAJIIC)	0.000	0.000	3.100	0.000

The JROC approved the capability need for MAJIIC as an FY-04 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, 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 Power—Europe (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.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Participate in the annual MAJIIC coalition exercise with possible NATO Allied Command transformation with NATO Air Group IV ISR capability. Validate CONOPs and conduct MUA. Transition capability into the DCGS Integration Backbone spiral baseline. Complete the ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
MASINT Tactical Intelligence Fusion (MASTIF)	0.000	0.000	3.700	2.500

The Joint Requirements Oversight Council (JROC) validated the capability need for MASTIF renamed MASTIF as an FY-06 new start. The outcome of MASTIF is to provide the warfighter with a set of Network Centric Intelligence, Surveillance and Reconnaissance (ISR) collection systems and management applications to employ traditional and non-traditional, distributed sensing against concealed/obscured targets, with the goal of enhancing detection, classification, characterization, and tracking of these targets. This five-year project is under the sponsorship of the United States Special Operations Command (USSOCOM) and United States Southern Command (USSOUTHCOM). The lead DOD agency is the Defense Intelligence Agency (DIA). The primary outputs and efficiencies to be demonstrated are: 1) exploit Measurement and Signatures Intelligence (MASINT) technologies and develop new sources and methods to counter adversary concealment and deception techniques, 2) develop new methodologies for

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sensor-to-sensor communications to enable tipping and cueing, and 3) seek new fusion processing systems to make maximum use of the data to solve the difficult problem of concealed/obscured targets.

• FY 2006 Output - Drafted, coordinated and completed a fully signed Implementation Directive (ID). Drafted, coordinated and refined specific user requirements that are used to identify useful applications and technology. ACTD Management IPT moved forward in understanding the intelligence operational concept and the system CONOPS. Worked with COCOMs and other government agencies to research and leverage ongoing fusion studies, intelligence initiatives/products that could bear on MASTIF ACTD capability leaning toward harmonization of fielded capabilities and a successful transition. Reached tentative agreement with NGA for future MASTIF participation in an Empire Challenge exercise during the Extended User Evaluation Period (EUEP). Began transition planning by examining interoperability requirements. Finalized critical operational issues for operational assessment. Began military utility assessment planning.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Mature fusion capability. Complete Demo 1 with sensor integration in a laboratory environment. Conduct final demonstration on airborne test platform and complete JMUA. Plan for spiral capabilities to field during transition and identify opportunities for integration of other on or off board sensor information.

• FY 2009 Planned Output - Begin EUE. Spiral initial ACTD capability for COCOM field application. Support required documentation modification needs, and supply required documentation as appropriate for transition. Continue development of CONOPs and TTPs, based on user feedback. Support technology transition. In FY 2010 Complete EUE and ACTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Computer Assisted Threat Exploitation Program	0.000	1.125	0.000	0.000

FY 2007 Plan: Funding will be used solely for the purposes of exploiting the capability of the CATE System for use with coalition partners. Working with staff of Commander, U.S. Naval Forces Europe, and staff of the North Atlantic Treaty Organization Component Commander Maritime, this funding will embed CATE capability into existing NATO CCMAR maritime awareness systems, and provide associated support for integrating the capability into ongoing NATO CCMAR operations.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
CoCom Direct Support, Pre-Transition and Classifiec Programs	0.000	0.000	23.000	23.000

FY 2008/2009 Plan: 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; (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).

Unified Combatant Commander (UCC) Direct Support: The UCC's play an essential role in the selection, validation, demonstration, and transition of JCTDs. Many JCTDs have funding allocated for the UCCs 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 UCCs, based on the number of JCTD projects being sponsored and the intensity of effort required. The Department also envisions that the UCCs will play a greater role in the development, support and coordination of JCTDs that are coalition oriented (within their specific AOR). UCC direct program funding is estimated at $5.0 million per year.

•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. Funding for pre-transition initiatives will be approximately $3.0 million per year.

•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. Funding for this direct program support is estimated at $12.0 million each year.

•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

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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.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
FY 2007 Rolling Starts	0.000	10.365	19.152	24.080

In FY 2007 JCTD selection process five JCTDs were identified by the Department as potential "rolling starts." These projects were selected because they represent important warfighter concerns and capabilities. Three of the proposals, address issues with emerging technologies that could be significant "game changers". While these projects have been 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. This year, five candidates emerged that were particularly compelling; however, due to technology or resource related issues, they are still in a developmental stage. These projects show such great promise that, we are including them in this report as part of our official congressional notification requirement. This helps meet the new JCTD goal of being a more agile process to meet urgent warfighter needs faster. The five projects are: 1)Airborne Weapons Surveillance System (AWSS)- ability to detect and identify enemy fires, pass enemy target locations to Counter Fire Task Force within seconds; 2) Classification - Stateless, Trusted Environment (CSTE)- a "clean slate approach" to information assurance providing the ability to screen "licensed" users so they can communicate, share/access information (data), and access/control net-centric enabled (NCE) services, applications, systems, and actionable elements (NCE objects); 3) Global Observer (GO)- demonstrate a liquid hydrogen (LH2) powered unmanned aerial vehicle, using a modified, off-the-shelf internal combustion engine, capable of flying extremely long endurance (objective of 7 days on station) with a moderately sized payload capacity (380 lbs) at an altitude of 55-65,000 ft. mean sea level (MSL); 4) Joint Surface Warfare (JSUW) - network technologies to integrate multiple Intelligence, Surveillance, and Reconnaissance (ISR) and launch platforms with existing stand-off weapons, allowing interchangeable ISR assets to provide initial targeting data as well as in-flight target updates for multiple weapons; and 5) Zephyr - demonstrate and transition a solar-powered unmanned aerial vehicle into service to meet urgent operational requirements providing low-cost persistent surveillance and communications relay, flying continuous operations for periods of months at a time using solar power.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
FY 2008 JCTD New Starts	0.000	0.000	51.800	58.660

Funding for FY 2008 JCTD new starts and the resulting from the JCTD selection process that will begin in March 2007. New start selections will be finalized in August/September of 2007, just prior to the year of execution. These funds will start six to ten new starts in FY08. Although the specific projects are unknown at this time, the 2007 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.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
FY 2009 JCTD New Starts	0.000	0.000	0.000	61.300

Funding for FY 2009 JCTD new starts that will result from the JCTD selection process in March 2008. New start selections will be finalized in August/September of 2007, just prior to the year of execution. These funds will start six to ten new starts in FY08. Although the specific projects are unknown at this time, the 2007 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.

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Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Medical Situational Awareness in Theatre (MSAT)	0.000	0.000	2.500	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for MSAT as a FY05 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 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 Global Combat Support System and Theater Medical Information Program programs of record. 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; Joint Staff Surgeon and the Defense Information Systems Agency. The executive agent is the Joint Staff, Logistics Directorate, Health Services.

• FY 2006 Output - Refer to the ACTD R2a.

• FY 2007 Planned Output - Refer to the ACTD R2a.

• FY 2008 Planned Output - Conduct final spiral demonstration and assessment with inclusion of medical unit readiness, adaptive planning capabilities and decision support tools, with integration of mapping tools into the GCSS and Theater Medical Information Program web services environment. In FY 2009 transition to the Theater Medical Information Program and GCSS programs of record and ACTD completion.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Tactical Service Provider (TSP)	0.000	1.200	3.700	3.800

The Joint Requirements Oversight Council (JROC) validated the capability need for TSP as a FY07 new start. The TSP ACTD focuses on taking full advantage of emerging commercial technologies to significantly enhance and improve C2 and Net-Centric capabilities to meet critical present and near-term requirements until DoD's next generation communication systems (JTRS, TSAT, GBS, IP SATCOM) are at Full Operational Capability (FOC). TSP is planned for a final demonstration in the fourth quarter of FY08, with sustainment of the demonstrated capabilities by DISA through FY09 until transition to programs of record in FY10. TSP outcome will enable broadband communications between strategic information sources and tactical users as well as between tactical users. The expected output is wideband communications supporting two-way, high-bandwidth services for tactical users using a hybrid architecture of emerging, standards-based SATCOM and wireless technologies by delivering robust lightweight commercially available applications, DoD tactical applications, and emerging Net Centric Enterprise Services (NCES) applications through demonstration and testing in a simulated, mobile tactical environment. 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 two year ACTD co-sponsored by USCENTCOM and USJFCOM. The Defense Information Systems Agency (DISA) is the lead agency.

• FY 2007 Planned Output: The technical focus for TSP in FY07 will be on implementing emerging digital broadcast protocol standards for forward SATCOM link, using emerging Joint Internet Protocol (IP) Modem standard and a new satellite protocol standard for return SATCOM link, achieving two-way Bandwidth on Demand, and the addition of a Global Broadcast Service (GBS) terminal appliqué using IEEE standard 802.16 for two-way wireless communications extension. TSP expected efficiencies include a 38% improved bandwidth efficiency over existing digital broadcast standard in use today, decreased size and weight of equipment required by mobile tactical sources to send and receive relevant information, and measurable real- or near-real-time transmission of intelligence collection products from deployed forces back to operational and strategic users. Two demonstrations are planned for the fourth quarter of FY07: the first two-way IP SATCOM communications over the improved GBS terminal prototype; the second a "WiMax" (802.16) wireless extension of communications connectivity from the improved GBS terminal. From an operational viewpoint, these demonstrations will establish the new baseline for bi-directional high bandwidth satellite communications, and provide early limited military utility assessment of the technologies. Programmatically, the operational and technical teams will be obtaining approval of the Implementation Directive and developing the Concept of Operations (CONOPS) and the integrated assessment plan.

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• FY 2008 Planned Output: There are two additional demonstrations are planned for FY08: the first showing the use of "lightweight" commercial applications of tactical utility over the SATCOM-wireless extension; the second and final demonstration will show Defense Information System Network (DISN) tactical Net Centric Enterprise Services (NCES) over the SATCOM-wireless extension. Operationally, TSP will ratify the planned migration to services architecture in tactical implementation by providing wirelessly extended broadband communications to the mobile, dismounted Warfighter. The efficiencies expected include enhanced situational awareness, real- or near-real-time intelligence sharing, a more agile and effective combat force with collaborative capabilities at the "tactical edge" to and from mobile troops. Measurable reduction in the weight and volume of equipment required to provide the improved situational awareness is expected.

• FY 2009 Planned Output: DISA will sustain the demonstrated and militarily useful capabilities while finalizing the documentation and transition of functionality to programs of record. The ACTD concludes at the end of FY09.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Large Data	8.671	1.745	9.100	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for the Large Data (LD) Joint Capability Technology Demonstration (JCTD) as an FY-06 new start. The outcome of Large Data is to demonstrate the military utility of a highly scalable, rapid, and secure integrated capability to retrieve, store and share massive amounts of information effectively between global users. It will provide increased situational awareness by displaying large, fused sets of geospatially-referenced data in a Joint Warfighting context using intuitive navigation techniques. Large Data is a three-year project under the sponsorship of the United States Strategic Command. The primary outputs and efficiencies to be demonstrated in the JCTD Military Utility Assessment are: 1) Synchronized 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 way for users to navigate large data sets (petabytes to exabytes); 4) Ability to easily visualize huge amounts of data that is being generated; 5) Capability to perform "trackback" or change analysis on an unprecedented scale.
The user sponsor is the U. S. Strategic Command and the lead agencies are the National Geospatial Agency (NGA) and Defense Systems Agency (DISA). Transition is planned for FY 09 after successful JMUA to National Geospatial Agency (NGA) and Defense Systems Agency (DISA). Both agencies are participating in the JCTD as Co-Transition Managers. The Large Data JCTD is scheduled to complete in December 2008.

• FY 2006 Output - Spiral 1: Develop a large data fast file system, high performance search engine & distributed cache coherent database. Spiral 1: Design and demonstrate the Large Data 3 CONUS node prototype. Begin OC192 network certification of Enterprise Storage Network. Procure touch-based visualization and collaboration tool suite, develop CONOPS.

• FY 2007 Planned Output - Spiral 2: Develop holistic target characterization prototypes and deploy to USFK mini node. Add 4th CONUS node. Install Trans-PAC link. Develop capability for geo-temporally indexed multi-agency data, with security, identity management, and Continuity of Operations features. Perform multi-node testing on classified and unclassified networks. Provide large geospatial visualization displays and advanced data integration. Refine CONOPs and TTPs. Plan JMUA. Conduct demonstration in USFK and JEFX.

• FY 2008 Planned Output - Spiral 3: Provide capability to the edge -- from COCOMs to low bandwidth users. Refine software with advanced geospatial and temporal search capabilities. Add a Zoomable User interface. Apply for JWICS accreditation. Add metadata tagging enhancements. Provide large data capacity to xESSA, JCRE ACTD and other net-centric capabilities. Conduct JMUA. Complete the JCTD.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Joint Precision Air Drop System (JPADS)	0.000	0.000	1.200	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for JPADS as an FY-04 new start. The outcome of JPADS is to demonstrate a fast, flexible, direct projection-based distribution 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, providing materiel resupply capabilities to meet the dynamic operational requirements of the CoComs worldwide no later than 24 hours from the request. JPADS is a four-year project with completion of development and demonstration by end of FY 2008 transitioning to United States Army Program Manager Force Sustainment Systems (FSS) and U.S. Air Force Mobility Systems Wing systems by FY 2008. Transition accomplished to date: Ongoing integration of U.S. Air Force (USAF) Mission Planner (MP) into

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the Marine Corps C130J and into USSOCOM navigational aid for Military Free Fall (MFF).

Planned Transition: Transition high-altitude, aircraft deployable, autonomous, airdrop systems, and in-flight mission planning with wireless communication to guidance, navigation, and control systems to Army Product Manager - Force Sustainment Systems and Air Mobility Command's Combat Operations. The user sponsor is U.S. Joint Forces Command. The lead Service is U.S Army.

- FY 2006 Output - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008 Planned Output - Continue to execute interim transition with users in conjunction with PORs to include training and numerous weeks of airdrops. JPADS scheduled completion date is September 2008.

Accomplishment/Planned Program Title	FY 2006	FY 2007	FY 2008	FY 2009
Chemical Unmanned Ground Reconnaissance (CUGR)	0.000	0.000	1.700	0.000

The Joint Requirements Oversight Council (JROC) validated the capability need for CUGR as an FY05 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. Since the DWSS can only be used when the vehicle is moving at a fast walk, replacing it with the RAMAN detector, 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 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 07. 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.

- FY 2006 Output - Refer to the ACTD R2a.
- FY 2007 Planned Output - Refer to the ACTD R2a.
- FY 2008 Planned Output - Provide two JCSD equipped CBRN Reconnaissance platforms and 2 CUGR's for residual phase support to the 95th Chemical Company (CMLCO) and initiate Extended User Evaluation. Complete mounted CUGV system design and integration on the third JSLNBCRS. Conduct mounted CUGV early user assessment. Complete CUGV test methodology development as well as the technical manual and user training plan. Conduct mounted CUGV technical and operational demonstrations. Receive integrated system and complete the ACTD.

C. Other Program Funding Summary	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
ACTD PE 0603750D8Z (RDT&E/DW BA-3/Line #44)	168.755	158.471	0.000	0.000	0.000	0.000	0.000	0.000	0.000	327.226
JCTD Transition PE 0604648D8Z (RDT&E/DW BA-4/Line #83)	2.778	4.084	2.960	4.970	8.996	8.974	10.013	10.055	0.000	52.830

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Comment: In FY08 all ACTD funding transfers to the JCTD program. This will complete the transtion to the JCTD model that began in the FY06 President"s Budget. The new JCTD Program provides a "cradle to grave" path for transformational joint capabilities. The initial funding lines (program elements (PE)) are outlined in the table below. The PEs in the table (with the exception of the ACTD BA3 PE which will fully transfer to the JCTD BA3 PE in FY08) represent the JCTD model. The model contains a BA3 development arm as well as BA4 transition arm. Under the new JCTD process, the pace of development will be accelerated to two to three years. Only the ACTD/JCTDs that demonstrate the highest military utility will be considered for the transition funding in the JCTD BA4 Transition PE. Not all JCTDs require transition funding, many projects have a very clear transition path, however, some projects that demonstrate significant military utilitly require transition funds to "bridge" them to a program of record. Promising ACTDs may receive transition funding during the transition period to the JCTD program. Beginning in FY07 all new starts will be JCTD only. Refer to the specific Budget Exhibit for more details on each funding line.

D. Acquisition Strategy The strategy for ACTDs has always been to focus on developing a transition path into a program of record or to establish a new program for those projects that show significant military utility in the demonstration phase. Under the new JCTD program, only the ACTD/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 ACTD program completes. All ACTD funding will transfer to the JCTD program element in FY08. Beginning in FY07 all new starts will be JCTD only. Some initiatives that are successful but are having smaller problems transitioning to an identified program of record may receive "pre-transition" funding from the JCTD BA3 PE.

- Capability Based: Greater CoCom influence looking at nearer term joint/coalition needs
- Provide Spiral Technologies - 25% will provide an operationally relevant product demonstration within 24 months of ID signature.
- Agile Demonstration - 75% complete final demonstration within three years of ID signature.
- OSD provide significantly more funding (often greater than 30%). In some exceptional cases a majority of project funding, especially during the first two years
- JCTDs not necessarily tied to an exercise. Greater flexibility to establish military utility via operational "real-world" demonstration or specifically designed test/venue
- 80% of JCTDs transition at least 50% of their products to sustainment.

E. Major Performers Not Applicable.