Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604051D8Z: *Defense Acquistion Challenge Program (DACP)*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	26.979	28.629	24.344	0.000	24.344	30.319	29.869	28.851	29.245	Continuing	Continuing
P051: *Defense Acquisition Challenge Program*	26.979	28.629	24.344	0.000	24.344	30.319	29.869	28.851	29.245	Continuing	Continuing

A. Mission Description and Budget Item Justification

Authorized by Title 10, U.S. Code, Section 2359b, the Defense Acquisition Challenge Program (DACP) provides increased opportunities to insert innovative and cost-saving technologies into acquisition programs of the Department of Defense. DACP funds the test and evaluation of technologies and products with potential to improve performance, affordability, manufacturability, or operational capability of current acquisition programs at the subcomponent, component, or system level.

Since the program inception in FY 2003, Office of Secretary of Defense has initiated 119 projects; 60 projects have been completed to date; 45 met Service or Agency testing requirements and 35 led to procurements. To date, 30 projects have yielded technology currently in use by our warfighters in Iraq, Afghanistan, or at U.S. training facilities.

The Defense Acquisition Challenge Program (DACP) increases opportunities for domestic vendors to enter the Department of Defense (DoD) acquisition process. Although business size is not an evaluation criterion, it is noteworthy that to date approximately 60 percent of the DACP projects awarded are with technology providers at the small or mid-sized enterprise level. DACP has the additional DoD/National Security benefit of expanding the industrial base for defense acquisition.

Final selection of FY 2011 DACP new start projects will be determined in September 2010.

Congressional authority to execute Defense Acquisition Challenge Program currently ends September 30, 2012 (Title 10, U.S. Code, Section 2359b).

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B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	28.409	28.862	0.000	0.000	0.000
Current President's Budget	26.979	28.629	24.344	0.000	24.344
Total Adjustments	-1.430	-0.233	24.344	0.000	24.344
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.961	0.000			
• SBIR/STTR Transfer	-0.469	0.000			
• Other Program Adjustments	0.000	-0.233	24.344	0.000	24.344

Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P051: *Defense Acquisition Challenge Program*	26.979	28.629	24.344	0.000	24.344	30.319	29.869	28.851	29.245	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Authorized by Title 10, U.S. Code, Section 2395b, the Defense Acquisition Challenge Program (DACP) provides increased opportunities to insert innovative and cost-saving technologies into acquisition programs of the Department of Defense. DACP funds the test and evaluation of technologies and products with potential to improve performance, affordability, manufacturability, or operational capability of current acquisition programs at the subcomponent, component, or system level.

Since the program inception in FY 2003, Office of the Secretary of Defense (OSD) has initiated 119 projects; 60 projects have been completed to date: 45 met Service or Agency testing requirements; and 35 led to procurements. To date, 30 projects have yielded technology currently in use by our warfighters in Iraq, Afghanistan, or at U.S. training facilities.

The Defense Acquisition Challenge Program (DACP) increases opportunities for domestic vendors to enter the Department of Defense (DoD) acquisition process. Although business size is not an evaluation criterion, it is noteworthy that to date approximately 60 percent of the DACP projects awarded are with technology providers at the small or mid-sized enterprise level. DACP has the additional DoD/National Security benefit of expanding the industrial base for defense acquisition.

Final selection of FY 2011 DACP new starts will be determined in September 2010.

Congressional authority to execute Defense Acquisition Challenge Program currently ends September 30, 2012 (Title 10, U.S. Code, Section 2359b).

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Advanced Infrared (IR) Expendable Decoy (Air Force)	1.297	2.969	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Evaluate and qualify a small kinematic IR decoy that protects Air Force and Navy aircraft (C-130H, KC-130J, A-10, and F-16) against current generation IR-guided missiles that have the discriminatory capability to reject conventional non-kinematic flares. Following the successful completion of the demonstration the final steps necessary for the full qualification of the flare and the preparation of a technical data package for procurement will be completed. The lead service is Air Force. The primary outputs and efficiencies to be demonstrated are the protection of medium-signature aircraft against heat-seeking missiles that employ kinematic techniques to discriminate against conventional non-kinematic flares. This flare is much more compact than existing kinematic flare designs. This compact design will allow more decoys to be carried per mission. The decoy also takes advantage of new decoy design technology which provides for better performance in a compact shape when compared to existing decoys. *FY 2009 Accomplishments:* Completed draft First Article Qualification Test Plan for the Mobile Jettison Unit-17 (MJB-71)/B Flare. Procured flares for FY 2010 captive seeker flight tests with the above four aircraft. Completed preliminary Modeling and Simulation to determine dynamic effectiveness against missiles with kinematic flare rejection capability. Completed Vendor testing to establish appropriate impulse cartridge and ignition pellet composition for providing reliable ignition and enhanced flare effectiveness for the thrusted MJU-71/B flare. These efforts finalized the flare specification details. *FY 2010 Plans:* Evaluate the effectiveness of the MJU-71/B in protecting the C-130H, KC-130J, A-10, and F-16 aircraft against advanced infrared guided missiles that reject non-kinematic i.e. conventional flares. This evaluation will be accomplished with captive seekers during flight tests with the above four aircraft. Additional effectiveness evaluation will be accomplished through modeling and simulation with MJU-71/B measured IR signatures and measured trajectories. Vendor will manufacture 2500 flares and complete all qualification and safety testing. Data will be analyzed in preparation for					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
functional configuration audit. Technical orders prepared for the flare and impulse cartridge and plan for transition into the Services finalized.					
Assessment of Lightweight Weapon Mount (Navy)	1.839	0.000	0.000	0.000	0.000
A successful project will provide the Department of the Navy with a commercial off-the-shelf three-axis stabilized weapons mount superior to existing stabilized mounts. These mounts stabilize heavy cameras on turbulent moving platforms. The improved Lightweight Weapon Mount underwent a preliminary user evaluation with members of the Naval Special Forces using a 0.50 caliber machine gun mounted to the back of a High Mobility Multipurpose Wheeled Vehicle (HMMWV). Per the testimonies of the Navy Sea, Air, Land Forces (SEALS) who performed the evaluation, the technology under consideration showed promising potential. Navy Special Forces recommended that this technology be fielded to Iraq as soon as possible. The primary outputs and efficiencies to be demonstrated are as followed: (1) improved accuracy when firing vehicle mounted weapons; (2) a crew-served weapon mount that is lighter and more cost effective than legacy mounts; and (3) avoids RDT&E, Operations and Support and manufacturing costs of over $37.000 million.					
FY 2009 Accomplishments: Completed live-fire testing at Naval Surface Warfare Center (NSWC) Crane 3Q FY 2009. Completed technical down select of test mounts 4Q FY 2009.					
FY 2010 Plans: Complete testing of selected mount at Naval Air Systems Command Patuxent River, Maryland 2Q FY 2010. Attain approval from Weapon System Explosives Safety Review Board 4Q FY 2010. Develop and submit final closeout report 4Q FY 2010.					
Automated Digital Network System (ADNS) Wide Area Network (WAN) Optimization Challenge (Navy)	0.000	1.409	0.951	0.000	0.951
A successful project will provide the Department of the Navy commercial off-the-shelf solutions to address end-of-life issues with the Fleet's current WAN devices. The primary outputs and efficiencies					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
to be demonstrated are: (1) State-of-the art functions in Network monitoring; (2) Quality of Service; (3) Advanced Compression, Protocol and Application Acceleration; and (4) total cost avoidance over $106.000 million. *FY 2010 Plans:* Receive initial DAC funding and develop Test Plan 2Q FY 2010. Receive test articles during 3Q FY 2010. Conduct integration and lab testing during 4Q FY 2010. Down select at the end of 4Q FY 2010. *FY 2011 Base Plans:* Provide test report 2Q FY 2011. User evaluation and fleet integration planned for FY 2011 or FY 2012 through transition windows such as: ADNS Increment I, II, IIA, IIB, III, airborne ADNS, or subsurface ADNS. Provide closeout report and procurement decision 4Q FY 2011.					
B-2 Stores Management System (SMS) Test Program Initiative (Air Force) The B-2 is the nation's leading "knock down the door" first-strike combat delivery vehicle, possessing the ability to deliver 80 Joint Direct Attack Munitions (JDAMS) against targets with pinpoint lethality. SMS anomalies, involving a highly complex federated avionics architecture linked to individual weapons through established Military Standards (MIL-STD) 1760 interfaces, jeopardize the B-2 fleet's ability to support its primary mission: "Bombs on Target"! At any given time, there are a maximum of 16 aircraft available to support global mission taskings. The need for SMS diagnostic test capabilities to help ensure all assigned aircraft can achieve their basic mission, irrespective of geographic location is clear. An off-station SMS anomaly that cannot be corrected in a timely manner could require deploying a replacement aircraft to an alternate global location. This is an expensive/burdensome solution which fails to mitigate the core impediment: B-2 SMS maintenance support capabilities required to be in place to maintain mission integrity.	0.000	1.540	1.746	0.000	1.746

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Leverage available B-2 aircraft back shop/off-aircraft support equipment, Common Organization Level Tester (COLT) by establishing two test program sets. Establish Test Package requirements along with Contracts Requirements Definition. *FY 2011 Base Plans:* Program scheduled to be complete by 4Q FY 2011. Complete B-2 Opertional Test and Evaluation and deliver two validated test program set packages, including all required COLT interface hardware (one shipset) and associated level-3 drawings for follow-on local manufacture. This system will perform SMS on-aircraft B-2 single station diagnostics and/or performance verification.					
Biological Aerosol Confidence Check Device (Army) The Bio Aerosol Confidence Check Device will provide the Joint Services with a common device to standardize test methodology, training, and provide confidence to the warfighter on the biological point detection system. The device can be used in training exercises and maintenance validation to ensure equipment is operating correctly. *FY 2010 Plans:* Anticipate to award contract in late 2Q FY2010. Government testing will be approximately three to six months after contract award. Device will be evaluated to be used in fielding plan for Joint Biological Program Detection System. *FY 2011 Base Plans:* Procurement decision will take place approximately 2Q FY 2011.	0.000	0.821	0.335	0.000	0.335
Collaborative Video Dissemination Service (Air Force) Demonstrate and document a cost-effective, wide-area video exploitation and dissemination capability that improves the analytical value of unmanned aerial systems (UAS) video. Video backhaul systems	0.831	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
provide a powerful, but manpower intensive, situational awareness capability to end users at supporting commands. The system as currently configured does not provide the end user with the ability to record, analyze, fuse or otherwise manipulate the video streams, making the ingestion of the UAS intelligence extremely cumbersome. The Collaborative Video Dissemination Service will provide these capabilities. The lead Service is Air Force. The primary outputs and efficiencies to be demonstrated are: (1) transmission of National Geospatial Intelligence Agency compliant and properly formatted UAS telemetry information along with the UAS video that is backhauled for dissemination to deployed units and analysis centers; (2) a significant reduction in the manpower required to view and exploit the video by leveraging and sharing analyst notations from any of the exploitation sites; (3) optimization of satellite bandwidth by opportunistically injecting staged content (video, imagery, intelligence) into the forward broadcast, and (4) allowing the video data streams to be digitally sized to match the deployed users' communications bandwidth limitations. *FY 2009 Accomplishments:* Completed prototype demonstration. Conducted post demonstration review. Began transition planning for field service evaluation and deployment. Delivered prototype software build. Completed closeout report. *FY 2010 Plans:* Develop Defense Enterprise Computing Center transition and integration strategy. Develop enterprise routing architecture to incorporate Quality of Service measures. Enhance existing software build and features. Test with the Defense Knowledge Online single-sign-on methodology. Begin integration strategies with other fully motion video sources (Predator/Reaper).					
Composite Segmented Reflector Antenna for Satellite Communication Systems (Air Force) Demonstrate, evaluate and qualify a light-weight, compact, durable, segmented composite antenna reflector for use in small aperture man-pack satellite communications and other systems, in the X, Ka, and Ku frequency bands. This will be accomplished through coordinated efforts between the	0.000	0.616	0.350	0.000	0.350

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
prime integration teams and the end users, United States Air Force (USAF) and United States Special Operations Command (USSOCOM). Data taken from the testing and characterization operations will provide the specification limits and the system performance criteria necessary for inclusion in the production unit(s). The lead service is Air Force. The primary outputs and efficiencies to be demonstrated are (1) significant weight reduction; (2) significant size reduction; and (3) increased portability advantages over the currently available metallic and coated composite antenna reflectors, with equal or better performance in the three frequency bands. Weight reduction threshold is a 50 percent reduction from baseline, with a goal of 70 percent reduction from baseline. Size reduction threshold is a 50 percent reduction in stored (transported) volume with a goal of 80 percent reduction. The frequency gain threshold is equivalence to the mesh dish baseline, with a goal of equivalence to the solid aluminum dish baseline. *FY 2010 Plans:* Contract preparation and award. Fabricate X-band reflector. Conduct structural, environmental and operational testing (USAF). Conduct field testing (USSOCOM). Initiate procurement (USSOCOM). Fabricate Ku-band reflector. *FY 2011 Base Plans:* Conduct structural, environmental and operational testing (USAF) of Ku-band reflector. Conduct field testing (USSOCOM). Initiate procurement (USSOCOM). Fabricate Ka-band reflector. Conduct structural, environmental and operational testing (USAF). Conduct field testing (USSOCOM). Initiate procurement (USSOCOM).					
Conformal Warfighter Wearable Battery Power Source (CWS) (Army) The conformable battery will be a wearable power source for the soldier. It could be worn on the vest or as an attachment. This unit will also meet all environmental, safety, and regulatory requirements as standard hand-held batteries. The improvement over the current battery is the flexibility to use a wearable battery pack as a power source, which is bullet safe and has high temperature performance.	0.000	1.112	0.900	0.000	0.900

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The polymer battery to be tested has the highest energy density, and the reduced weight makes this the lightest available power source. Phase Change Material (PCM) which will be tested removes heat from the battery pack. PCM has demonstrated that thermal runaway propagation can be prevented through heat absorption. Also, a flame retardant material can be used to quench any flames that may arise if a cell is punctured. The outputs and efficiencies are as follows: The conformal battery is soldier worn with benefits of less weight, less bulk, and higher run time. The battery is a polymer battery having high energy density which is lighter than existing power source. Conformal battery conforms to the shape of the soldier resulting in the product's weight not being centrally located. The battery also allows the soldiers to be more comfortable and have less weight concerns. *FY 2010 Plans:* Contract award schedule for 1Q FY 2010. Completion of preliminary design review and alpha evaluation. In 4Q FY 2010, critical design review completed. *FY 2011 Base Plans:* Beta units Development Testing/Operational Testing and Communications-Electronics Command Testing schedule for 2Q FY 2011, as well as procurement decision during 2Q-4Q FY 2011.					
Digital Solid State Combat Display (Navy) A successful project will provide the Department of the Navy with new digital solid-state displays suitable for thermal imaging systems. The new displays will provide for better discernment of targets from the Phalanx Thermal Imager (PTI) sensor thus improving the operational capability of Phalanx Close-in Weapon System (CIWS). The primary outputs and efficiencies to be demonstrated are: (1) provide significant improvement to the CIWS Total Ownership Cost due to increased reliability and supportability improvements; (2) deliver a ruggedized, lightweight, low power display that provides an extremely high quality picture that is viewable in daylight conditions; and (3) avoid RDT&E, Operations and Support and procurement costs of over $46.000 million.	0.831	0.246	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Completed contract award to Combat Displays Inc via Raytheon contract 3Q FY 2009. Prepared test plans and updated program schedule 3Q FY 2009 and 4Q FY 2009. *FY 2010 Plans:* Delivery of first test article and completion of systems integration scheduled for 3Q FY 2010. Complete systems testing and evaluation during 4Q FY 2010. Make procurement decision and develop and submit final closeout report 4Q FY 2010.					
Enhanced Smart Triple Ejector Rack (Air Force) Demonstrate and document the flight characteristics and increased operational capability of a modified Triple Ejector Rack-9A (TER-9A). This modification will incorporate the Military Standard (MIL-STD) 1760 Common Aircraft and Weapons Electrical Interface into the TER-9A, currently employed on the F-16 aircraft. This modification will increase F-16 smart weapons carriage from four Joint Direct Attack Munitions (JDAM) to six. The goal is to qualify the modified TER-9A for employment on Active and Air National Guard F-16 aircraft. The lead service is Air Force. The primary outputs and efficiencies to be demonstrated are: (1) a modification of the TER-9A to a smart weapons capability while keeping its conventional capability; (2) a resulting reduced logistics footprint in the form of less maintenance man hours to re-configure aircraft for mission changes; and (3) increased aircraft availability as more bombs per aircraft can ultimately reduce aircraft required for the mission. *FY 2009 Accomplishments:* Continued test and evaluation of item. This included wind tunnel testing of ejector rack with JDAM. Wind tunnel test results indicated that munitions release under certain flight conditions resulted in fin-to-fin contact between adjacent JDAMs. This initial observation was verified by subsequent root cause analysis and as a result, demonstration was terminated in June 2009. Completed closeout report. Took actions necessary to capture and return to Office of Secretary of Defense Comparative Testing Office all unexpended funds.	0.299	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Expeditionary Water Packaging System (EWPS) (Navy)	0.753	1.232	0.000	0.000	0.000
A successful project will provide the United States Marine Corps (USMC) with an expeditionary hydration solution that will address safety hazards associated with the distribution of unregulated bottled water to deployed forces, as well as the severe logistics burden incurred. The EWPS will supply the Warfighter with a portable water packaging system for all phases of the Marine Expeditionary Unit, Marine Expeditionary Battalion, and Marine Expeditionary Force deployments. Projected completion of all testing events is FY 2011. The primary outputs and efficiencies to be demonstrated in the project are: (1) Provide the capability to package and distribute potable water for less than $1.00 per liter; (2) increase warfighter survivability by eliminating the threat of contamination to unregulated packaged water through sabotage or indirect means; (3) increase operational flexibility of Marine forces deployed in expeditionary environments; and (4) avoids RDT&E, Procurement , and Operations and Support Life-Cycle costs of $2.000 million, $0.465 million, and $65.000 million with a return on investment (ROI) of 46:1.					
FY 2009 Accomplishments: Received initial DACP funding at the end of 1Q FY 2009. Initiated contract award preparation during 2Q FY 2009.					
FY 2010 Plans: Finalize contract award at the early 2Q FY 2010. Receive test articles by the end of 2Q FY 2010. Initiate Qualification testing at the beginning of 3Q FY 2010 and complete by the end of 4Q FY 2010. Initiate Filed User Evaluation early 4Q FY 2010.					
F-15 Digital Head Up Display (HUD) (Air Force)	2.015	0.000	0.000	0.000	0.000
Demonstrate and document the flight characteristics and increased operational utility and reliability of a digital HUD over the analog display currently employed in the F-15 C/D aircraft. The goal is to qualify the item as a preferred spare for the F-15. The F-15 digital HUD project is scheduled for completion Q3 FY 2010. The lead service is Air Force. The primary outputs and efficiencies to be demonstrated					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
are: (1) realization of significant net acquisition cost savings for item replacement; and (2) a significant decrease in downtime due to HUD maintenance resulting from the replacement of the analog HUD with the more easily maintained digital HUD. *FY 2009 Accomplishments:* Leveraged findings from F/A-18 Hornet digital HUD demonstration and qualification to facilitate the completion of software and hardware component integration and installation of the unit into aircraft. Prepared for flight demonstration and verification activities scheduled for FY 2010. *FY 2010 Plans:* Conduct flight demonstration and verification, and complete hardware and software integration and testing April 2010. Full qualification testing, led by F-15 HUD item manager, in conjunction with flight worthiness testing, led by F-15 System Program Office, to be completed Q3 FY 2010. The supplier's qualification report will be prepared and submitted when qualification testing is completed.					
Fully Integrated Fire Control Solution for Machine Guns (Special Operations Command) This comparative test project will evaluate a fully-integrated modular fire control solution for crew served weapons, comprised of a family of machine gun day optics, thermal, and night vision systems. The solution will improve efficiency of machine gun employment as it incorporates mounts for components and quickly activated switches & functions, making the machine gun more efficient for the shooter. This will be the first fully integrated machine gun fire control system developed on par with the fully integrated systems developed for carbines. Critical capability gaps in target acquisition and sighting have been identified for the M2 Heavy Barrel (M2HB) .50 Caliber Machine. The night vision augmentation system will provide the SOF warfighter with sighting and target acquisition capability in smoke, adverse weather, and extreme low light and improved detection capability for buried items such as weapons caches and improvised explosive devices. RDT&E cost avoidance is expected to be $10.00 million. Procurement cost avoidance is $1.320 million. Operational and Support cost avoidance	0.000	1.170	1.490	0.000	1.490

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
is $2.800 million and manufacturing cost avoidance is $6.000 million. Completion date is scheduled for September 2011. *FY 2010 Plans:* Receive funding; receipt of samples; conduct current technology evaluation, analyze vendor data and conduct analysis/study/integration; procure for test articles. *FY 2011 Base Plans:* Conduct project planning, Contract for test articles, conduct analysis/study/integration and analyze vendor data 2Q FY 2010. Prepare for initial technical testing and complete test report; procure OT test articles and perform operational testing. Complete OT test report and obtain safety confirmation.					
Handheld Total Fluid Condition Monitor (Special Operations Command) This qualification test project will evaluate an affordable, easy to use, handheld monitor that provides real-time, on demand, point-of-use, fluid condition assessment for hydraulic and lubrication oils, equal to current technologies, while simultaneously increasing readiness and significantly reducing cost of testing. Vendor will provide test articles configured specifically for the Army's Special Operations aviation fleet. The FluidScan handheld oil analysis system will be capable of meeting all oil evaluation and reporting requirements currently obtained via remote site testing. The primary outputs and efficiencies are as followed: FluidScan usable by average soldier to obtain on-the-spot fluid condition assessment in less than two minutes; system meets environmental compliance; equivalence to oil analysis in Tech Manual 38-301-2 determining contamination based on viscosity, moisture/water content, flash point, acidity, dispersancy, insolubles/total solids and particles/debris per Army Oil Analysis Program (AOAP) Technical Bulletin 43-0211. The RDT&E cost avoidance is $8.500 million. Procurement cost avoidance is $4.000 million. Operations and Support cost avoidance is $6.500 million. Completion date is October 2010.	0.727	0.567	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Conducted project planning. Procured test articles. *FY 2010 Plans:* Analyze vendor's test data. Initiate development testing and prepare technical test report. Complete Technical Test Report. Conduct Operational Testing. Prepare Operator/User Test Report. Prepare documentation for Milestone C Decision and submit project closeout report 1Q FY 2011.					
High Density Swaging Machine (Navy) When landing aboard an aircraft carrier, an aircraft is recovered by its tailhook engaging the arresting cable gear on the carrier flight deck. The arresting gear cable connects to an engine below the flight deck in order to absorb 50 million foot-pounds of energy. Both the cable and engine are Critical Safety Items where failure could likely mean loss of aircraft and life. During each cable replacement, sailors must attach a terminal to the cable aboard ship. The current process requires sailors to pour molten zinc at 1000 degrees Fahrenheit into a socket on a moving ship, exposing the sailors to toxic materials and noxious gases. The primary outputs and efficiencies to be demonstrated in the project are: (1) the High-Density Swaging Machine replaces the current process by pressing the terminal onto the cable. It will produce 2200 tons of pressing force in a foot-print small enough to be viable aboard ship, eliminating a risk of injury and long-term health to personnel; and (2) avoids RDT&E and Operations and Support costs worth over $5.600 million. *FY 2009 Accomplishments:* Successfully tested new terminal for tensile strength 1Q FY 2009. Completed hardware design of the swaging machine 2Q FY 2009. Passed Critical Design Review (CDR) 3Q FY 2009. Proved through analysis that design will withstand shock and vibration requirements. Determined that swaging machine will be compatible with shipboard requirements, including power and electro-magnetic interference, and that the spaces identified for the machine have enough structure to support the machine's weight.	0.987	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Build the swaging machine 1Q FY 2010. Conduct acceptance test at the contractor's facility and conduct accelerated service life testing to verify expected mean-time-between-failure, 2Q FY 2010. Conduct performance test at Navy Lakehurst by swaging samples and testing the swaged cable-terminal bonds on cycle testers and shipboard-representative arresting gear during 2Q FY 2010 to 4Q FY 2010. Complete logistics package, test report, and closeout report during 4Q FY 2010.					
High Mobility Multipurpose Wheeled Vehicle (HMMWV) Suspension Upgrades (HSU) (Out-of-Cycle) (Navy)	0.642	2.319	0.000	0.000	0.000
A successful project will provide the United States Marine Corps (USMC) armored HMMWV with a superior suspension system. Due to increased weight as a result of up-armoring, the HMMWV is susceptible to rolling over because of an inadequate suspension system. This two year project, under sponsorship of DAC and Marine Corps Systems Command PM Motor Transport, will provide the Marine Corps with an upgraded suspension system to fulfill this gap. Projected completion of all testing events is FY 2011. The primary outputs and efficiencies are: (1) Improved survivability and lethality of the HMMWV ; (2) Improved mission capability due to increased payload, off-road performance, and reliability; (3) avoid RDT&E cost of $10.000 million with a Return on Investment (ROI) of 30:1. *FY 2009 Accomplishments:* Received initial Out-of-Cycle DAC funding and initiated the Contract Award preparation at the end of 4Q FY 2009. *FY 2010 Plans:* Release Request for Proposal (RFP) and complete Baseline Testing during 2Q FY 2010. Initiate fabrication of Test Articles during 3Q FY 2010. Complete fabrication and delivery of test articles, and initiate Performance Testing during 3Q FY 2010.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Complete Performance testing 1Q FY 2011. Complete Technical Test Report and closeout report, and Mielstone C Decision 2Q FY 2011.					
Hostile Fire Aid for the AN/AVR-2B Laser Detecting Set (Special Operations Command) This validation project evaluates the integration and testing of a new software Operational Flight Program (OFP) for the AN/AVR-2B laser detecting set (LDS) currently fielded on Army rotary wing aircraft. With the new software OFP, the LDS will utilize the existing A/B-Kit equipment to detect hostile small arms and rocket propelled grenades (RPG) fire events, and alert the aircrew via existing on-board equipment. The primary outputs and efficiencies are as follows: the new software OFP will utilize the laser beam rider detection channel to alert the aircrew of small arms, crew served, and RPG fires. The applicability of the Hostile Fire Aid technology insertion into the AN/AVR-2B will be evaluated and demonstrated. This project will collect data, develop software declaration algorithms, and live fire test the new software algorithms against hostile fire threats. RDT&E cost avoidance is $15.000-20.000 million. Procurement cost avoidance at $18.957 million. Operational and Support cost avoidance is $12.255 million. Completion date is scheduled for May 2011. *FY 2010 Plans:* Conduct software (S/W) integration and bench testing. Conduct ground development testing and collect aircraft noise data. *FY 2011 Base Plans:* Complete data analysis and reporting. Complete S/W updates and algorithms & integration testing. Conduct live fire flight for technical/operational testing. Conduct data analysis and reporting. Complete S/W functional qualification test, prepare test report, and documentation for Milestone C Production Decision, and submit project closeout report 3Q FY 2011.	0.000	0.841	0.510	0.000	0.510
Improved Flash Hider For M2 Heavy Barrel (M2HB) .50 Cal Weapons (Special Operations Command)	0.000	0.493	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
This comparative test project evaluates an improved flash hider for .50 Caliber machine guns, a user defined requirement for which a solution does not currently exist. The flash hider will reduce an enemies' ability to detect the weapon, and prevent operator's loss of night vision capability caused by the muzzle flash. The primary outputs and efficiencies are as follows: the major categories of operational requirements for the M2HB machinegun Flash Hider are fit, function, flash suppression, SOF environment, accuracy and service life: open system architecture with no tools required for attachment or removal; diameter no less than two inches and no greater than 1.5 inches; length no more than ten inches and no less than 6.6 inches; weight no more than 32 ounces and no less than 24 ounces; capable of withstanding 25,000 rounds without system degradation, and remaining intact and attached during catastrophic failure; removal and attachment will not be hindered by wearing cold weather gloves or NOMEX flight gloves, and no tools will be required for assembly or removal. RDT&E cost avoidance is expected to be $0.900 million. Procurement cost avoidance is $0.300 million. Operational and Support cost avoidance is $12.500 million. Completion date is scheduled for December 2011. *FY 2010 Plans:* Develop and publish performance specifications and solicit test samples. Conduct safety testing as well as technical and User Assessment One to support source selection. This will result in contracting action for test items and initiation of User Assessment Two/Operational Test and Evaluation. *FY 2011 Base Plans:* Complete test reports and obtain Milestone C and Fielding and Deployment Release. Submit DAC closeout report 2Q FY 2011.					
Improved Viper Strike PGM (Special Operations Command) Viper Strike is an operationally fielded lightweight, precision-guided munition using Global Positioning Satellite (GPS) aided navigation and a semi-active laser (SAL) seeker to attack targets. This qualification test project will evaluate subsystems that reduce the cost and procurement lead times of	1.221	0.399	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
an Alternate Semi-Active Laser (ASAL), while maintaining or improving operational attack capability of the Viper Strike munitions. The primary outputs and efficiencies are as follows: demonstrate ASAL form fit and function replacement to existing SAL seeker; and validate equal or greater ASAL operational capability. The RDT&E cost avoidance is $100.000 million. Manufacturing cost avoidance is $6.000 million. Procurement cost avoidance is $0.036 million. Operations and Support cost avoidance is expected to be $0.900 million. Completion is scheduled September 2010. *FY 2009 Accomplishments:* Conducted project planning, procured/contracted for test articles. Received test articles. Conducted analysis/study/integration. Analyzed vendor data. Conducted initial technical testing. Obtained safety release. Conducted Phase I End-to-End System Test. Prepared tech test report and began performance of operator/user assessment/test. *FY 2010 Plans:* Complete operator/user assessment test and test report. Field ASAL capability. End-To-End System live fire testing will be conducted in China Lake. Complete documentation for Milestone C Decision packet and prepare project closeout report 4Q FY 2010.					
Integrated Shipboard Network System (ISNS) Storage (Navy) This project will test new commercial off-the-shelf solutions to address end-of-life issues with its current network storage product. The incumbent vendor's next-generation product will exceed the heat and power envelope for the system resulting in potentially millions of dollars of unnecessary rack redesign/ upgrades. The challenge the Navy faces is to provide the network storage while staying within the heating and power specifications for our Navy ships afloat. Aside from meeting necessary size, weight and power constraints, the primary output and efficiencies to be demonstrated in the project are: (1) interoperability with existing system (plug and play); and (2) avoiding RDT&E and procurement costs of over $7.500 million.	0.621	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Test planning commenced 1Q FY 2009. Test article contracts awarded 3Q FY 2009. Performance testing and environmental testing completed 3Q FY 2009. Request for Information (RFI) responses received from nine vendors. Seven of the nine filer types were placed in a matrix for analysis of their compliance to the RFI. Three of the seven candidates were chosen for further testing and analysis. The preliminary down selectees were three candidates; Celeros EZSANfiler XDM34, Dot Hill 2322, and the Sun ST2510. Performance analysis, final down select, and procurement of test articles completed 3Q FY 2009. *FY 2010 Plans:* The technical test report, Engineering Change Order (ECO), and project closeout report are anticipated 1Q FY 2010.					
Intelligent Power Management and Distribution System (IPMDS) (Army) This project will provide the Army with an IPMDS for the use in Tactical Operation Center mobile power grids. Additionally, it will reduce training time, fuel consumption and provide a more reliable power grid to mission critical equipment. Reports from the warfighters returning from Iraq and Afghanistan have reported issues with load balancing which leads to shutdown of power and potential harm to equipment. The Army will test non-developmental items from Custom Manufacturing & Engineering of Saint Petersburg, Florida, Lex Products, Inc. of Stamford, Conneticut and Rolls-Royce of Cheshire England. The intent is to transition to US Army Program Manager - Mobile Electric Power (PM-MEP) in FY 2011. The primary output and efficiencies will be demonstrated in the test are: (1) automatic electrical load balancing across the three phases of the generator set; (2) increased safety with indication of improper grounding and improper setup; (3) avoid RDT&E costs of $5.000 million; and (4) avoid Operations and Support costs of $10.000 million.	1.979	0.809	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Contract were awarded to Custom Manufacturing and Engineering, Lex Products and Rolls-Royce for Distributed Generation Systems on three 100A and three 40A IPMDS boxes. Travel to contractor's facilities is planned for August 2009. Test Article delivery is anticipated during the 3Q FY 2010. *FY 2010 Plans:* Test Article delivery is anticipated during the 3Q FY 2010. Initial electrical and safety testing will be completed during the 3Q FY 2010 at Fort Belvoir, Virginia. The operational testing will be conducted and completed during the 4Q FY 2010. A Milestone C Decision is anticipated at the beginning of the 1Q FY 2011. The technical test report and project closeout report are anticipated during the 1Q FY 2011.					
Joint Warfighter Biological Agent Sensor (Army) A competitive test and evaluation of an automated commercial-off-the-shelf Biological Agent identification sensor for performance and cost advantages to support the warfighter in high threat areas. The sensor will upgrade the currently fielded Joint Biological Point Detection System (JBPDS) and Joint Portal Shield (JPS) assay-based identifiers to reduce biological warfare agent exposure by identifying bacteria, viruses and toxins with one to three orders of magnitude increase in sensitivity within 15 minutes or less for the fielded sensors. The primary outputs and efficiencies to be demonstrated are as follows: (1) improved identification sensitivity performance in order to eliminate need for sensitivity waivers; (2) decreased operational and sustainment cost especially in the area of consumables; and (3) supported hardware commonality to include both JBPDS and JPS systems. RDT&E cost savings: $14.000 million based on cost analogy from the original JBPDS from 1996 to when it entered Low Rate Initial Production (LRIP) in 2001. Operation and Support Life-Cycle cost savings is estimated $4.000 - $6.000 million based on reduction of cost of consumables. Procurement cost savings is $0-0.040 million per system. Fielding reduction is two years. Procurement potential is approximately	1.376	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
580 systems or $24.000 million. Other benefits: Joint Service and supports four biological detection programs. *FY 2009 Accomplishments:* Biological warfare agent data from Edgewood Chem/Bio Center and Defense Threat Reduction Agency has been leveraged for evaluation. Expect to award contract to complete integration of candidate system into the JPS in 1Q FY 2010. Government conformance testing of candidate assay plate and approximately six months of operational testing will be conducted through FY 2010. Army Evaluation Center has been tasked to evaluate the candidate system prior to fielding. Candidate is under evaluation for insertion into JBPDS and other Joint Program Executive Office - Chemical, Biological Detection programs. Follow-on tests will include product verification testing such as hardware Military Standard (MIL STD) 810 type testing as well as user testing in 2Q-3Q FY 2010. Closeout report to be conducted in 4Q FY 2010.					
JP-8 Operated Modified Commerical Generator (Army) The US Army Communications-Electronics Research Development and Engineering Center Power Generation Team in conjunction with the Project Manager for Mobile Electric Power (PM-MEP) will test highly efficient, reliable, low noise, soldier portable power sources in the range of three kilowatts and below. The use of the current two kilowatts Military Tactical Generator or three kilowatts Tactical Quiet Generator for lower power missions result in increased fuel consumption as well as decreased generator life when compared to the use of an appropriately sized power source. Also it significantly increases the weight burden on the Warfighter. A modification of a commercial gasoline generator set, such as the Honda External Unit 1000i generator rated for one kilowatt max / 900 watt continuous by Foster-Miller, of QinetiQ North America with Fog Carburetor technology, that enables successful operation on JP-8 and other logistic fuels will be tested. This system would be the first Soldier-portable, logistic fueled, one kilowatt power source for tactical operations. The total system weight is less than 33 pounds and meets MIL-STD 1472 for a single Soldier carry. The system specifications state a 59	0.000	0.479	0.067	0.000	0.067

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
decibel noise signature at seven meters and it provides two times the power density compared to the two kilowatts MTG at 17 percent efficiency. The significant reduction in noise (59 decibel compared to 79 decibel of the two kilowatts or 70 decibel of the three kilowatts) is equivalent to conversational speech at one meter. In addition, this provides a lower cost option that is an appropriately sized power source. *FY 2010 Plans:* Contract for test article scheduled for 2Q FY 2010. The safety release will follow in 3Q FY 2010. *FY 2011 Base Plans:* Procurement decision will take place approximately 2Q FY 2011.					
Lightweight, Reliable, Increased Capacity Magazine for SOF Combat Assault Rifle (Special Operations Command) This comparative testing project will evaluate advanced, more reliable, lightweight polymer or heat-treated hard anodized magazines for the Special Operations Forces Combat Assault Rifle (SCAR) MK 16 (light), and MK 17 (heavy). The candidate magazines will provide an advanced magazine design that is injection molded of state-of-the-art plastic resin or heat-treated hard anodize metal, and once inserted in the weapon, prevents outside contaminants from entering from either the magazine itself or the magazine well. The new magazine will provide additional ammo capacity for MK 17. The magazines will be unaffected by rust or corrosion and can be molded in color. The magazines must be lightweight yet stronger than legacy magazines. They must be easily cleaned in the field, requiring no time consuming disassembly/reassembly. The magazines will be functional in both maritime and desert warfare operations. Prototype magazines are available that provide a full 25 round capacity versus the 20 round original equipment manufacturer magazine. RDT&E cost avoidance is $0.500 million and operational and Support cost avoidance is $1.200 million. Completion date is secheduled for September 2011.	0.000	0.413	0.645	0.000	0.645

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Prepare and issue solicitation and obtain test article samples. Perform technical, go/no-go testing in support of source selection. *FY 2011 Base Plans:* Complete source selection and award contract for 5.56 and 7.62 magazine test articles. Receive test articles and complete first article testing. Based on test results obtain procurement decision and prepare delivery order for production. Complete DAC project closeout report 4Q FY 2011.					
Low Cost SQS-53 Improved Sonar Acoustic Window (ISAW) (Navy)	0.000	1.257	1.470	0.000	1.470
A successful project will provide the Department of Navy with an improved sonar acoustic window for the SQS-53 sonar system. This new sonar dome cover is manufactured using composite material which will enable Navy personnel to perform maintenance without requiring the dome to be pressurized. The primary outputs and efficiencies to be demonstrated in this project are: (1) reduced maintenance costs and improved personnel safety due to the elimination of dome pressurization while in dry dock and (2) replacement of the current marine anti-fouling agent due to environmental hazards. This project avoids Operations & Support, manufacturing and procurement costs of over $5.950 million. *FY 2010 Plans:* Receive initial DACP funding 2Q FY 2010. Complete sonar system check out/integration, sonar system light off/testing, and sonar system lay-up during 3Q FY 2010 through 4Q FY 2010. Begin cable and transducer procurement during 4Q FY 2010. *FY 2011 Base Plans:* Conduct cable and transducer procurement through 4Q FY 2011. Sonar Dome Rubber Window (SDRW) removal/storage 1Q FY 2012. Replacement of transducers/cables 2Q FY 2012. ISAW installation 2Q FY 2012. Sonar system light off and at-sea testing 2Q and 3Q FY 2012. Procurement decision and close-out report 3Q FY 2012.					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
M1A1 Sniper Detection System (SDS) (Navy)	0.727	0.216	0.000	0.000	0.000
The M1A1 Sniper Detection System, a two-year project under sponsorship of DAC and Marine Corps Systems Command PM Tank Systems, will provide the M1A1 with the capability to instantaneously detect and accurately locate enemy sniper fire. This new M1A1 capability will significantly improve the safety of tank crews and dismounted infantry. A two-year project under sponsorship of the DACP and Marine Corps Systems Command, Program Manager Tank Systems. Projected completion of all testing events is FY 2010. The primary outputs and efficiencies are: (1) drastically improve survivability and lethality of the M1A1 Tank; (2) increase survivability and situational awareness of dismounted infantry; (3) fulfill a crucial capability gap of the M1A1 Tank; and (4) avoids RDT&E cost of $4.500 million with a return on investment (ROI) of 13:1. *FY 2009 Accomplishments:* Received initial DACP funding and initiated contract award preparation at the end of 1Q FY 2009. Initiated technical test planning during 2Q FY 2009. Completed contract award at the end of 3Q FY 2009. Initiated test articles fabrication early 4Q FY 2009. *FY 2010 Plans:* Receive test articles and initiate M1A1 integration & user interface/lab testing by end of 1Q FY 2010. Complete M1A1 integration & user interface/lab testing and initiate tactical testing during 2Q FY 2010. Complete tactical testing and M1A1 operational testing by the end of 3Q FY 2010. Finalize technical test report, closeout report and Milestone C Decision by the end of 4Q FY 2010.					
Mobile IP Interface to Tactical Data Links (TDL) (Navy)	0.727	0.000	0.000	0.000	0.000
This project is to demonstrate dynamic integration of TDLs via the US Fleet's tactical Internet Protocol (IP) backbone, which is provided by the Automated Digital Network System (ADNS). The lead service is the Navy. A two year project sponsored by Office Secretary of Defense with completion date 1Q FY 2010. The primary outputs and efficiencies to be demonstrated are: (1) capability for TDL platforms to automatically maintain communications with other TDL platforms when one platform migrates to a					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
different TDL net; (2) a Commercial Off-The-Shelf (COTS) based system and network design for this purpose that is compatible with ADNS; (3) increased access for IP users to COMMS with TDL users; (4) reduced communications down time as TDL platforms change nets; (5) reduced management burden for TDL nets used in tactical operations; and (6) avoiding RDT&E and Operations and Support costs of over $9.500 million. *FY 2009 Accomplishments:* Conducted Phase II of lab integration testing 3Q FY 2009. Phase II delivery order for integration awarded in June 2009. Finalized configuration and concept of operations documentation based on test results. System design was based on COTS hardware, Cisco Routers, servers, Mobile IP Software that can be integrated with the ADNS system. *FY 2010 Plans:* Conduct live testing between TDL lab and live aircraft and complete transition to ADNS and documents for integration into the ADNS configuration. Prepare technical test report and closeout report 1Q FY 2010. TDL Internet Protocol Integration (TIPI) date is 1Q FY 2011.					
Next Generation Night Vision Imaging Technology (Special Operations Command) This comparative test project will evaluate cutting edge low-light camera technology for applications in next generation Special Operations Forces Ground Mobility Visual Augmentation Systems. These image fusion components will be integrated into handheld, headworn and weapon-mounted visual-augmentation systems. The technology will exploit next generation systems electronic images that will be processed for image enhancement, target identification and image fusion, which cannot be performed with analog image tubes. The primary outputs and efficiencies are as follows: Demonstrate improvement in resolution from the current state of 40 line pairs/ millimeter (lp/mm) to a minimum of 50 lp/mm; reduce power consumption from three watts to 1.5 watts or less; increase low light sensitivity; increase the detection and identification ranges; and provide better security. The RDT&E	0.727	0.462	0.241	0.000	0.241

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
cost avoidance is $1.000 million and procurement cost avoidance is $0.500 million. Completion date is August 2011. *FY 2009 Accomplishments:* Conducted project planning with established Integrated Project Team (IPT). Coordinate with contracting official to complete contract for test articles by February 2010. *FY 2010 Plans:* Manufacture and receive test articles and prepare for initial technical testing. *FY 2011 Base Plans:* Analyze vendor data. Conduct combined developmental and operational testing. Prepare test report, prepare documentation for Milestone C Decision and submit project closeout report 4Q FY 2011.					
Omni-Directional Antenna for M156 Magneto Inductive Remote Activation Munition System (MI-RAMS) (Army) This project will dramatically reduce time on target (mission survivability) and increase mission effectiveness through higher operational reliability in challenging target environments (underwater, urban, littoral, night operations, constrained target sets). This improvement in functionality of the MI-RAMS would result in the reduced numbers of receivers that would be procured and deployed. The estimated total RDT&E, manufacturing and procurement cost avoidance of $20.000 million will be realized with the proposed enhanced capability. The activities conducted in FY 2009 were the delivery of the Omni directional antennas test quantities, and performance/environmental testing which included user assessment.	0.779	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: The analysis of test data which culminated in a close-out report and subsequent production decision. The Omni directional antenna will potentially dovetail into future (FY 2010 and beyond) production of the MI-RAMS receivers through an engineering change to the existing configuration.					
Package on Package Technology for ARC-210 Radio (Navy) Package on Package (POP) technology is three dimensional stacking of two or more Ball Grid Array (BGA) microelectronic packages that enables increased capabilities and functionalities in limited space. This technology will allow continued growth in tactical communication capabilities for vehicles while reducing weight and power consumption. Improving the expandability of the ARC-210 radio within its current configuration will additionally eliminate the need for expensive aircraft system integration efforts. The primary outputs and efficiencies to be demonstrated in the project are: (1) increased interoperability and mission flexibility; and (2) avoids RDT&E and Operations and Support costs worth almost $4.500 million. *FY 2010 Plans:* Procure test articles 2Q FY 2010. Perform development testing during 3Q and 4Q FY 2010. *FY 2011 Base Plans:* Complete Reliability Testing during 2Q through 3Q FY 2011. Introduction of POP technology to the product is planned for 4Q FY 2011.	0.000	0.674	0.245	0.000	0.245
Personal Aircrew Cooling for Enhanced Endurance (PACE2) Program (Navy) An Urgent Universal Needs Statement (UUNS) issued by U.S. Marine Corps Forces Command (MARFORCOM) addresses heat stress – a major health risk on rotorcraft missions, especially in current hot operational environments. PACE2 system provides a man-mounted personal, portable cooling unit to improve mission endurance, address health concerns and improve health readiness. The	1.056	0.530	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
primary outputs and efficiencies to be demonstrated in the project are: (1) provide an effective portable cooling unit that will improve health readiness, mitigate heat stress injuries and reduce dehydration; (2) increase warfighter mobility and egress safety as well as enhance mission endurance and duration; (3) require no airframe modifications; and (4) avoids RDT&E and Operations and Support costs worth $6.700 million and Procurement costs worth $15.500 million. *FY 2009 Accomplishments:* This was an out-of-cycle New Start that received funding in September 2009. Initiated contract preparation during 4Q FY 2009 *FY 2010 Plans:* Award contract for procurement of test articles 2Q FY2010. Conduct flight and qualification tests during 2Q FY 2010. Examine human factors and integration factors 3Q FY 2010. Conduct safety assessment 4Q FY 2010. Procurement decision is planned for 4QFY 2010.					
Personnel Transport Module (PTM) for Landing Craft Air Cushion (Navy) A successful project will provide the Department of the Navy a personnel transport module (PTM) for use aboard the Landing Craft Air Cushion (LCAC). The PTM, constructed of a light weight yet durable composite material, will enable the Navy to deploy up to 180 seated combat-ready Marines or 54 litter-borne medical evacuees in a single LCAC sortie. The primary outputs and efficiencies to be demonstrated are: (1) resolution of the severe deficiencies of the current design, including reduced assembly time and improved ventilation to increase habitability and usage; (2) delivery of a PTM that provides increased durability and reduced corrosion to reduce maintenance and life cycle costs; and (3) avoids RDT&E, Operations and Support, manufacturing and procurement costs of over $14.085 million. *FY 2010 Plans:* Receive initial DACP funding 2Q FY 2010.Complete contract award 3Q FY 2010. Begin preparation of test plan 4Q FY 2010.	0.000	1.031	0.837	0.000	0.837

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Finalize test plan and receive test articles 2Q FY 2011. Complete technical test 2Q FY 2011. Conduct operational tests 2Q FY 2011 through 4Q FY 2011. Make procurement decision and write closeout report 4Q FY 2011.					
Portable Electrical Power Supply for Aeromedical Evacuation (PEPSAE) (Air Force)	1.229	0.000	0.000	0.000	0.000
Critical Care Air Transport Teams (CCATT), as a part of the Aeromedical Evacuation (AE) system, operate in USAF aircraft that require a large, cumbersome avionics frequency converter (~80 pounds) and electrical extension cord system (~64 pounds) in order to provide power from the aircraft to medical equipment during patient transport. Patients are “tethered” to the aircraft power system with no simple method for patient transfer. Internal batteries within medical equipment also do not have enough energy to provide power alone for sustainment requirements in both transport and transfer processes. The objective of the PEPSAE project is to develop a dependable alternative (hydrogen fuel cell technology) for portable power, thereby decoupling the patient from the aircraft, and enabling extended use of medical equipment during CCATT missions. The lead Service is Air Force. The primary outputs and efficiencies to be demonstrated are (1) the incorporation of a multi-functional power manager which will provide fully regulated direct current (DC) power for use by CCATT equipment and the powering of other applications as required; (2) the provision of alternating current (AC) inputs, allowing CCATT to operate equipment from grid power when available and make uninterrupted transition to hydrogen power when the grid power is no longer available; (3) the incorporation of a full-power rechargeable battery backup for up to 15 minutes; (4) hydrogen safely stored in the form of a stable metal hydride; and (5) the realization of its portability, virtually no weight increase, and reduced logistics footprint. *FY 2009 Accomplishments:* Delivered: (1) prototypes for preliminary testing and user evaluation; (2) PEPSAE soft-case design enabling the user mounting flexibility; (3) initial system test results to ensure requirements were met; (4) design modifications and updates as needed based upon preliminary tests; (4) storage case design					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
for additional N-Stor (metal hydride) cartridges; and (5) assembled final units for official Air Worthiness Testing (AWT) and qualification, and additional Air Force Research Laboratory (AFRL) testing. *FY 2010 Plans:* The DAC-sponsored portion of the program is scheduled to be completed by end 1Q FY 2010 with AWT to continue during FY 2010. Additional funds will be sought from other sources to support integrating user defined modifications identified during AWT and Operational Test and Evaluation (OT&E). Future plans are for the production of 1000 PEPSAE units based on these modified systems.					
Sensor Fusion Clip-On Night Vision Device for SOF Combat Assault Rifle (Special Operations Command) This competitive test project will evaluate a Sensor Fusion Clip-on Night Vision Device (CNVD) for the Special Operations Forces (SOF) Combat Assault Rifle (SCAR) that integrates the technologies of both thermal and image intensification into one sight. This will provide the SOF warfighter a greater advantage when operating in austere environments. The primary outputs and efficiencies are as follows: (1) demonstrate significant improvement in target acquisition in rain, mist, smoke, vegetation, fog, dust, and low light; (2) the RDT&E cost avoidance is $7.000 million; (3) manufacturing cost avoidance is $13.000 million; (4) procurement cost avoidance is $48.000 million; and (5) Operations and support cost avoidance is $2.800 million. Completion date is scheduled for September 2010. *FY 2009 Accomplishments:* Developed performance specifications. *FY 2010 Plans:* Conduct solicitation and down select. Receive oral presentations and product samples. Conduct technical evaluation; user operational assessment; finalize technical and operational test report. Obtain Low Rate Initial Production (LRIP) decision and complete LRIP procurement contract for first article test items.	0.000	0.561	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Receive delivery of Low Rate Initial Production units, conduct first article testing, and obtain final safety confirmation. Obtain Milestone C Full Rate Production Decision and Fielding and Deployment Release. Complete DAC Project closeout report 4Q FY 2011.					
Shock Profile of SOF Combat Assault Rifle (Special Operations Command) This qualification test project will evaluate upgrades to shock profile equipment for Special Operations Combat Assault Rifle (SCAR) weapons that have exhibited shock values higher than currently fielded Special Operations Peculiar Modification/Miniature Day Night Sights (SOPMOD/MDNS) equipment is designed to withstand. This effort will procure test hardware and support development of inter-mounts for MDNS and SCAR integration. Net results will ensure all MDNS sub-systems are forward compatible with SCAR. The primary outputs and efficiencies are as follows: demonstrate solution to problems which resulted from original SOPMOD/MDNS kit integration for the M4A1 Carbine, which when compared to SCAR, had a significantly reduced shock profile. This project makes shock dampening of MDNS equipment quicker, saves millions in replacement equipment for SCAR and expedites the fielding of SOPMOD/MDNS sights and accessories along with imminent fielding of SCAR. The shock profile system will realize an RDT&E cost avoidance savings of $3.000 million and procurement cost avoidance savings of $14.000 million. Project completion is anticipated October 2010. *FY 2009 Accomplishments:* Conducted project planning meetings. Incorporated engineering changes to upgraded Shock Simulator to mimic SCAR shock values. Began contract negotiation for shock mitigation test articles. *FY 2010 Plans:* Complete contract action and receive shock mitigation test articles and SCAR aftermarket solution samples. Analyze vendor data. Conduct technical testing and prepare technical test report.	0.911	0.585	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: Prepare production decision package and DAC closeout report 1Q FY 2011.					
Shockwave Therapy for Traumatic Wounds and Burns of the Extremity (Army) To evaluate shockwave therapy to determine if it meets combat casualty care requirements for complex wound treatment. Non-healing wounds are a major medical problem, impairing the quality of life to soldiers with acute traumatic wounds. In order to access the feasibility and safety of shockwave therapy and determine if shockwave therapy significantly improves wound healing over current standards of care, we will conduct definitive field testing of the extracorporeal shock wave therapy device from Tissue Regeneration Technologies, Woodstock, Georgia. The primary outputs and efficiencies to be demonstrated in the field testing are: (1) accelerate tissue repair in wounds; (2) reduce infection-related amputations and deformity; (3) minimize number of surgical interventions; (4) reduce hospital time and cost; (5) facilitate early rehabilitation. The key benefit to the warfighter is a non-invasive, painless treatment method to reduce bacterial load in wounds and facilitate blood vessel in-growth and soft tissue healing. RDT&E cost avoidance of $3.300 million; estimated Return on Investment of $10.100 million. *FY 2009 Accomplishments:* Conducted pre-study visit for initial study sites. Obtained study site Review Board approvals. Procured shockwave therapy device. Conducted study personnel training on study procedures and equipment. Began Phase III clinical trial field testing. *FY 2010 Plans:* Phase III clinical trial field testing and user evaluation will continue at study sites. Continue data safety monitoring and data collection on study subjects participating in Phase III clinical trial field testing. Interim data analysis will be conducted during the 2Q FY 2010. A Milestone C Decision is anticipated at the end of the 3Q FY 2010. The technical test report and final report are anticipated during the 4Q FY 2010. Final procurement of test article (DermaGold 180 MultiWave device) is anticipated during	2.305	1.235	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the 4Q FY 2010 and 1Q FY 2011, if field tests prove successful in order to support multi-specialty utilization throughout DoD Military Treatment Facilities.					
Sinuous Spiral Antenna for ANA/ALQ211 (SIRFC) EW System (Special Operations Command This validation project will test and evaluate a new detection antenna for the ALQ-211 Suite of Integrated Radio Frequency Countermeasures (SIRFC) currently being fielded on the MH-47G and CV-22. The primary outputs and efficiencies are as follows: the new antenna provides polarization sensitivity allowing SIRFC to better correlate the received signal with its order of battle database, which leads to quicker identification and jamming. Simulation and lab testing will be performed to validate that sinuous antenna face conforms to the spiral antenna located within the AN/ALQ-211 Quadrature Antenna Assembly. Prototype antennas will be measured and analyzed for performance against defined polarizations. In addition the prototype antennas will be measured, analyzed, and evaluated for performance against legacy spiral antennas. RDT&E cost avoidance was projected to be $10.000 million, and procurement cost avoidance was valued at $3.000 million. Project completion is scheduled for August 2010. *FY 2009 Accomplishments:* Contract was awarded to ITT Electronics Systems for test articles and technical support. Because of contract negotiation delay $0.720 million FY 2009 project funding was reallocated, to be re-funded in FY 2010. *FY 2010 Plans:* Take delivery of test articles. Conduct a concept demonstration and publish demonstration report. Conduct validation testing and complete test reports. Obtain production decision and prepare DAC closeout report.	0.000	0.887	0.000	0.000	0.000
Source One Tactical Infrared Resistant Uniform Repair Patch Kit (Army)	0.518	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
This project has provided the Army with a means of increasing the reliability and durability of the Fire Resistant Army Combat Uniform (FR ACU) and other Army uniform ensembles. Since the Department of Defense has put emphasis on durability and reliability of uniforms, the product office has made considerable advancements in extending the wear life of uniforms, but rips and tears will occur with consumable uniform products. The materials solution has provided abrasion resistance, strength, and durability to achieve a 120 day threshold operational durability. The Integrated Patch kit (IPK) has been developed to meet the key performance parameters (KPP) of Reliability and Durability for combat uniforms. The IPK is designed to be fire resistant and infrared compatible with the base uniform. The patch has been tailored to size and the pressure-sensitive adhesive is designed to be easily applied to the uniform with little effort while extending the wear life up to an objective of 180 days. The primary outputs and efficiencies: Increased durability and wear life of the combat uniform, integration into other combat uniforms, maintaining the integrity of the fire resistant ensemble. RDT&E cost avoidance is estimated at $ 1.300 million. The current cost of the FR ACU is $162.00 dollars per uniform set; the IPK has extended the wear life of a uniform by 33-50 percent. *FY 2009 Accomplishments:* A Commercial Off-The-Shelf (COTS) technology has been identified. COTS system has undergone extensive validation and safety testing to include system level burn testing and durability testing. Testing has been completed items have been procured for a limited user evaluation in a simulated operational environment. Items have also been tested in two prototype uniforms in Operation Enduring Freedom (OEF). We expect user feedback 4Q FY 2009. *FY 2010 Plans:* Submit a closeout report in 2Q-3Q FY 2010.					
Special Operations Forces (SOF) Forward Trauma Management Set (Special Operations Command) This comparative test project will evaluate a deployable Level III surgical care and trauma life support that will stabilize and sustain casualties with life saving trauma care for SOF operating in remote	0.933	0.557	0.460	0.000	0.460

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
areas where casualty evacuation is not available. The forward trauma management set is a modular, resuscitative surgical intervention that is operationally adaptable vice operationally specific. User assessment testing will be completed in three worldwide operational areas: Central Command, Africa Command, and Pacific Command. The primary outputs and efficiencies are as follows: resuscitative surgical care and trauma life support equal to tactical combat casualty care guidelines; within capability of assigned SOF medical and non-medical personnel; self contained rapidly deployable by C-130/ C-17 aircraft; sustainable in remote harsh environments. RDT&E cost avoidance is $2.100 million. Procurement cost avoidance at $3.100 million. Operational and Support cost avoidance is $71.460 million. Completion date is scheduled for September 2011. *FY 2009 Accomplishments:* Conducted project planning through three Integrated Product Team Meetings. Initiated development of the project's concept for operations, identified and procured test articles for trauma kits. *FY 2010 Plans:* Receive test articles. Evaluate Form, Fit and Function, and conduct initial user evaluations. *FY 2011 Base Plans:* Prepare technical test report. Perform operator user assessment test, prepare test report, prepare documentation for Milestone C Production Decision and submit project closeout report 4Q FY 2011. Prepare report on user evaluation, conduct user assessment/validation (exercise), prepare validation report, complete documentation for Milestone C Production Decision and submit project closeout report 4Q FY 2011.					
Stand Alone Patient Simulator (Army) This project will test a rugged field medical training capability that is applicable from point of injury to theater evacuation. The proposed system tests will prove the efficiency of using Stand Alone Patient Simulator (SAPS) technologies in various medical training scenarios including care under fire, tactical	0.156	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
field care, Casualty Evacuation (CASEVAC)/ Medical Evacuation (MEDEVAC), forward surgical teams, hospital care, and Air Force Critical Care Air Transport (CCAT) training. The primary outputs and efficiencies to be demonstrated in the project test are: (1) ruggedness in field training exercises; (2) clinical accuracy at various levels of care; (3) flight safety certification for rotary wing aircraft for care in the air training; (4) documentation to support the establishment of a wireless patient simulator acquisition program; and (5) avoiding RDT&E costs of $3.000 million. *FY 2009 Accomplishments:* Reconfigured the test articles with the new "bones" and "skins". Delivered to the long term test sites at the Defense Medical Readiness Training Institute (DMRTI), Camps Lejeune and Pendleton. Received rotary wing safe to fly certification. Started fixed wing flight safety testing with the United States Air Force. Conducted user tests at DMRTI, Fort Lewis, and Camp Lejeune. Conducted long term tests (more than two weeks) at Camps Lejeune, Pendleton, and Bullis. Delivering a test unit to the tenth Combat Support Hospital, Baghdad in October 2009.					
Tactical Beyond-Line-of-Sight Communications Extension System (Special Operations Command) This validation project tests and evaluates a tactical, man-portable, beyond line-of-sight (BLOS) troposcatter terminal that will significantly increase the existing range of the tactical network data throughput for 16 Megabites per second (Mbps) links from 22 Kilometers (km) line of sight to 44 km, while reducing or eliminating vulnerable relay sites. Tactical network range extension currently relies on limited data transfers through expensive Ku-band and Ka-band satellite communications (SATCOM) for BLOS connectivity. Use of troposcatter terminals will reduce the dependency and reliance on SATCOM to provide a transport path for short range line of sight and BLOS requirements. The primary outputs and efficiencies are as follows: (1) data throughput of 10 Mbps or greater at 40 km; *(2) two person transportable (86 pounds) system; and (3) set up in 30 minutes and ready to acquire distant end. RDT&E cost avoidance is $10.000 million. Operations and support cost avoidance is $1.500 million and procurement cost avoidance is $2.000 million Completion date is scheduled for November 2010.	0.000	2.337	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Contract and acquire test articles. Obtain safety release to conduct technical testing. Perform technical and user assessment/operational testing. Attain Joint Interoperability Test Command certification. Complete all test reporting. *FY 2011 Base Plans:* Prepare documentation for Milestone C Production Decision and complete project closeout report 1Q FY 2011.					
Tactical Vehicle Battery – Replacement (TVB-R) (Navy) A successful project will provide the United States Marine Corps (USMC) with a higher energy density, comparable power capability, and greater deep-discharge cycle life compared to the current 6T lead acid battery. A two-year project under sponsorship of the DAC and Marine Corps Systems Command Program Manager Expeditionary Power System. Projected completion of all testing events is FY 2011. The primary outputs and efficiencies are as follows: (1) drop in replacement for lead acid batteries; (2) Increase energy density ranging from three to five times over lead acid; (3) ten times more deep discharge cycles than lead acid; and (4) avoids RDT&E cost of $10.000 - $20.000 million with a Return on Investment (ROI) of 82:1. *FY 2010 Plans:* Receive DAC funding and initiated the Contract Award preparation at the end of 2Q FY 2010. Receive Phase I test articles and initiate comparative test 3Q FY 2010. Initiate Data Analysis/Evaluation/ Downselect of Phase I test articles 4Q FY 2010. *FY 2011 Base Plans:* Complete Phase I down selection 1Q FY 2011. Exercise Contract Option and receive test articles for Phase II test efforts 2Q FY 2011. Initiate Phase II Performance test and Field User Evaluation 3Q FY	0.000	0.862	0.500	0.000	0.500

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
2011. Complete Phase II test events, technical test report and make Milestone C Decision 4Q FY 2011.					
Upgraded External Auxiliary Power Unit (U-EAPU) (Navy)	0.493	0.000	0.000	0.000	0.000
This project will evaluate an U-EAPU that is capable of providing a sufficient secondary power source, effectively eliminating the reliance on using a vehicles primary engine or power system. The upgrades will increase operational effectiveness, lethality, survivability, and prevent incidents of fratricide. A two year project under sponsorship of the DAC and Marine Corps Systems Command, Program Manager Expeditionary Power Systems. Projected completion of all testing events is FY 2010. The primary outputs and efficiencies are as followed: (1) Supplemental power to a wide range of tactical vehicles to operate vehicle systems including communication suites, Improvised Explosive Device (IED) defeat equipment, fire control systems, M1A1 turret drive and Chemical, Biological, Radiological and Nuclear protective systems; (2) 50 percent reduction in noise intensity (acoustic signature), increased reliability and increased power output in similar sized units; (3) RDT&E, Operations and Support Life-Cycle cost avoidances of $8.000 million and $20.000 million with a Return on Investment (ROI) of 37:1.					
FY 2009 Accomplishments: Contract Awarded and Source Selection completed in 1Q FY 2009. Phase I test articles received and comparative testing initiated in 2Q FY 2009. Completion of Phase I comparative testing and data analysis/down selection at end of 3Q FY 2009. Completed Phase II contract award and received Phase II test articles at beginning of 4Q FY 2009. Initiated and completed procurement testing and field user evaluation (FUE) at the end of 4Q FY 2009.					
FY 2010 Plans: Finalize technical test report, closeout report and Milestone C Decision by the end of 1Q FY 2010.					
FY 2011 Plans	0.000	0.000	13.597	0.000	13.597

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
The Defense Acquisition Challenge Program (DACP) will continue to fund testing activities on an estimated 15 continuing projects executing $10.747 million. Remaining funding of $13.597 will be used to initiate new start DACP projects selected from the FY 2011 DACP proposal process. The FY 2011 final proposal selection process is scheduled for 4Q FY 2010. *FY 2011 Base Plans:* Initiate new start projects.					
Microelectronics Technology Development and Support (Defense Microelectronics Activity) Defense Microelectronics Activity (DMEA) was established in 1966 by the Office of the Secretary of Defense to act as the joint DoD Center for microelectronics acquisition, transformation, and support. The DMEA mission is to develop, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to provide a pathway to extend the life of weapon systems and to solve operations problems (e.g. reliability, maintainability, performance, and assured supply). DMEA's capabilities make it a key tool in the intelligent and rapid development and application of advanced technologies to identified military needs. This includes implementation of advanced microelectronics research technologies providing for the development and long-term support structure necessary to ensure rapid design, fabrication, test, insertion, and support of microelectronics technologies. The DMEA provides an in-house capability to support these strategically important technologies within the DOD. DMEA has been singled out as a unique national resource by the warfighters, industry and foreign governments. Funds are required for investments and expenses for personnel, technical and analytical support, facilities, equipment, supplies, travel, publications. *FY 2009 Accomplishments:* Implementated an advanced microelectronics research technologies providing for the development and long-term support structure necessary to ensure rapid design, fabrication, test, insertion, and support of microelectronics technologies.	1.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	26.979	28.629	24.344	0.000	24.344

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Acquisition Strategy for Defense Acquisition Challenge Program (DACP) is as outlined in Title 10. DACP is to provide opportunities for the increased introduction of innovative and cost-saving technology in acquisition programs of the Department of Defense. DACP funding is used to fund testing of commercial and non-developmental items that could result in improvements in performance, affordability, manufacturability, or operational capability of an existing acquisition program. It is expected that, should testing be successful, the respective current acquisition program will procure.

E. Performance Metrics

From program inception in 2003 until 2009, the Office of Secretary of Defense has initiated 119 projects; 60 projects have been completed to date; 45 met Service or Agency testing requirements and 35 led to procurements. To date, 30 projects have yielded technology currently in use by our warfighters in Iraq, Afghanistan, or at U.S. training facilities. In FY 2009 DACP had a transition rate of 77 percent for completed projects, exceeding the objective of 30 percent for demonstration programs (Strategic Objective 4-3, Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD (AT&L)). In FY 2009, 57 percent of the projects were awarded to small or mid-sized businesses and 50 percent were awarded to companies indicating "first-time" participation with the Department of Defense.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Office of Secretary Of Defense			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604051D8Z: *Defense Acquistion Challenge Program (DACP)*	PROJECT P051: *Defense Acquisition Challenge Program*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various Projects under Defense Acquisition Challeng Program	SS/Various	Various DC, District of Columbia	26.979	28.629	Oct 2009	24.344	Oct 2009	0.000		24.344	0.000	79.952	Continuing
		Subtotal	26.979	28.629		24.344		0.000		24.344	0.000	79.952	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.979	28.629		24.344		0.000		24.344	0.000	79.952	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Office of Secretary Of Defense			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604051D8Z: *Defense Acquistion Challenge Program (DACP)*	PROJECT P051: *Defense Acquisition Challenge Program*	

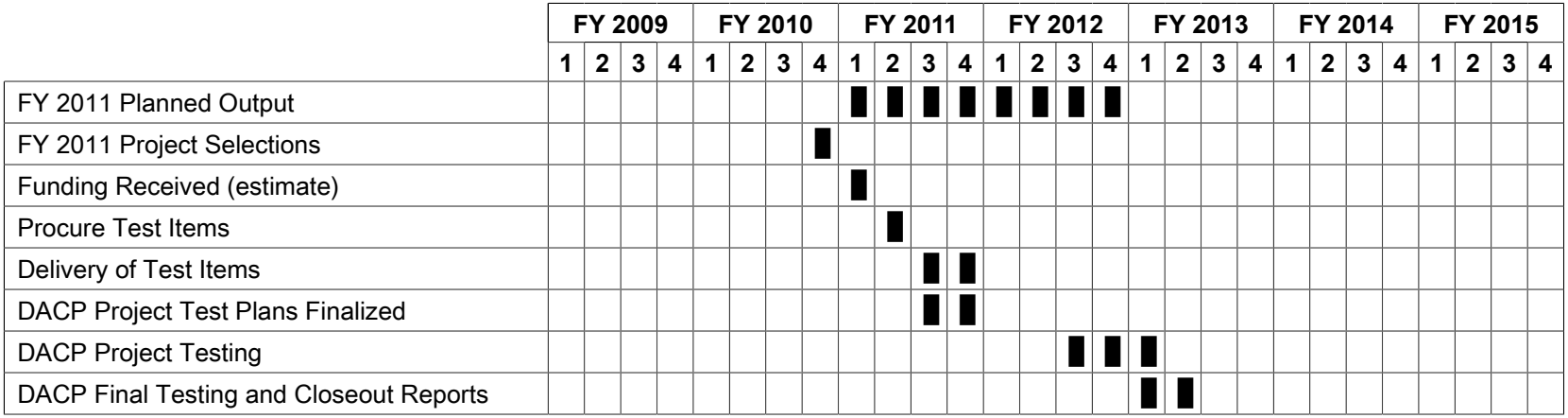

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Office of Secretary Of Defense		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604051D8Z: *Defense Acquistion Challenge Program (DACP)*	**PROJECT** P051: *Defense Acquisition Challenge Program*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
FY 2011 Planned Output	1	2011	4	2012
FY 2011 Project Selections	4	2010	4	2010
Funding Received (estimate)	1	2011	1	2011
Procure Test Items	2	2011	2	2011
Delivery of Test Items	3	2011	4	2011
DACP Project Test Plans Finalized	3	2011	4	2011
DACP Project Testing	3	2012	1	2013
DACP Final Testing and Closeout Reports	1	2013	2	2013