Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*				R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*							
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	84.905	84.389	59.040	0.000	59.040	60.426	58.503	58.329	57.797	Continuing	Continuing
628: *Developmental Test Technology & Sustainment*	57.782	54.449	37.024	0.000	37.024	37.905	35.606	35.507	35.196	Continuing	Continuing
62B: *OPERATIONAL TESTING INSTRUMENTATION DEVELOPMENT*	1.993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
62C: *MODELING AND SIMULATION INSTRUMENTATION*	25.130	29.940	22.016	0.000	22.016	22.521	22.897	22.822	22.601	Continuing	Continuing

A. Mission Description and Budget Item Justification

Effective FY09, 62B and 62C were combined into one line - 62C - to accurately reflect the interwoven use of both Modeling and Simulation (M&S) and instrumentation in support of operational and developmental testing. This Program Element provides critical front-end investments for development of new test methodologies; test standards; advanced test technology concepts for long range requirements; future test capabilities; advanced development of M&S and instrumentation prototypes; and the full development of systems for the United States Army Test and Evaluation Command (ATEC), which includes the Developmental Test Command (DTC) at Aberdeen Proving Ground, Maryland and the Operational Test Command (OTC) at Ft Hood, Texas. DTC consists of seven Test Centers: Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Yuma Proving Grounds (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska and the Tropics Regions Test Center, at various locations); Redstone Test Center (RTC), Redstone Arsenal and FT Rucker, Alabama; and Dugway Proving Ground (DPG), Utah. OTC consists of four forward Test Directorates (Airborne Special Operations Test Directorate, Fort Bragg, North Carolina; Air Defense Artillery Test Directorate, Fort Bliss, Texas; Fire Support Test Directorate, Fort Sill, Oklahoma; and Intelligence Electronic Warfare Test Directorate, Fort Huachuca, Arizona) together with five other Test Directorates (Aviation; Maneuver; Battle Command and Computers; Engineer and Combat Support; and Future Force) at Ft Hood, Texas. These capabilities support the development and fielding cycle of the Army Transformation as well as Joint Vision 2020 initiatives. Sustainment funding maintains existing testing capabilities at both DTC and OTC by replacing unreliable, uneconomical, and irreparable instrumentation, as well as incremental upgrades of hardware and software for M&S and instrumentation systems to assure adequate test data collection capabilities. This data supports acquisition milestone decisions for all commodity areas throughout the Army including programs such as the Mine Resistant Ambush Protected (MRAP) vehicles, Future Combat Systems (FCS) spin offs, Terminal High Altitude Area Defense (THAAD), Patriot Advanced Capability Phase 3 (PAC 3), Mobile Gun System (MGS), Warfighter Information Network - Tactical (WIN-T), Joint Tactical Radio System (JTRS), Net Enabled Command Capability (NECC), and the Army Battle Command System (ABCS) with includes Force XXI Battle Command Brigade and Below (FBCB2)/Blue Force Tracking (BFT). This Program Element develops and sustains developmental and operational test capabilities that provide key support to the Army's Transformation. In addition this Program Element supports Overseas Contingency Operations by providing

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	**R-1 ITEM NOMENCLATURE** PE 0605602A: *Army Technical Test Instrumentation and Targets*

instrumentation to support ATEC's 24/7 mission at YTC, Arizona, WSMR, New Mexico and ATC, Maryland - supporting the Joint Improvised Explosive Device Defeat Organization (JIEDDO) - as well as efforts throughout ATEC in support of the Army's Rapid Equipping the Force (REF) initiative.

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	80.705	72.911	59.326	0.000	59.326
Current President's Budget	84.905	84.389	59.040	0.000	59.040
Total Adjustments	4.200	11.478	-0.286	0.000	-0.286
• Congressional General Reductions		-0.442			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		11.920			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-2.139	0.000			
• Adjustments to Budget Years	6.339	0.000	-0.286	0.000	-0.286

Change Summary Explanation

FY10 Congressionally directed increases.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*	

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
628: *Developmental Test Technology & Sustainment*	57.782	54.449	37.024	0.000	37.024	37.905	35.606	35.507	35.196	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This program provides critical front-end investments for development of new test methodologies, test standards, advanced test technology concepts for long range requirements, future test capabilities, and advanced instrumentation prototypes for the United States Army Developmental Test Command (DTC), a subordinate command of the Army Test and Evaluation Command (ATEC), which includes: Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; White Sands Missile Range (WSMR), New Mexico; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; Yuma Proving Ground (YPG), Arizona (including the Cold Regions Test Center (CRTC), Fort Greely, Alaska and the Tropic Regions Test Center (TRTC), (at various locations); Redstone Test Center (RTC), Redstone Arsenal and Ft Rucker, Alabama; and Dugway Proving Ground (DPG), Utah. These capabilities are required to support developmental testing requirements of high priority Army systems being rapidly fielded to Iraq and Afghanistan, and those systems supporting Army Transformation.A key element is sustaining aging instrumentation which maintains existing capabilities at test facilities by replacing unreliable, uneconomical and irreparable instrumentation, as well as incremental upgrades of instrumentation and software, reducing their average age to assure adequate testing capabilities. This project develops and sustains developmental test instrumentation and capabilities that provide the data necessary to support acquisition milestone decisions for all commodity areas throughout the Army and in direct support of all Army Transformation Elements. A series of projects refurbishes and improves Kineto Tracking Mounts and Range Radars at multiple test ranges used for aircraft, missile and air drop tests. In addition, a common field data collection instrument will be customized to collect a wide variety of performance data for various test commodities.Another key element within this program is building the Army's network-centric test capability. This capability recognizes advances in network-centric warfare and enabling technologies for Mobile Ad Hoc Networking (MANET). In addition, DoD guidance (CJCSI 6212) mandates the certification of joint C4ISR-equipped systems as net-ready in accordance with the four pillars of Net-Ready Key Performance Parameters (NR-KPP) to enhance Interoperability and Information Assurance from a networked, system of system perspective. This capability will ensure that platforms are tested as nodes on the network while executing critical mission threads from end-to-end according to the Army's network model (platforms and sensors, applications, services, transport, and standards). A network of Distributed Test Control Centers (DTCCs), each connected to the Defense Research and Engineering Network (DREN), has been installed at each Army test range to bring all of the Army's test capabilities to bear on the complex challenge of system-of-systems testing. This technology investment follows Office of Secretary of Defense guidance for Test and Evaluation test architectures and test and training range interoperability.

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	6.012	4.478	4.957	0.000	4.957
Provides command-level oversight, management and technical support for the DTC test technology and instrumentation investment accounts. Provides support to ATEC Capstone efforts in coordinating development of common instrumentation and technology needs for developmental and operational testing. Provides management and support costs for direct interface with the T&E Executive Agent, management of needs and solutions calls for T&E Reliance oversight, management of the Small Business Innovation Research (SBIR), and support of the Army principal of the Test Resource Advisory Group (TRAG). *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #2	49.370	37.156	28.815	0.000	28.815
Develops, acquires and sustains critical test technology and instrumentation: Provides the necessary test instrumentation, computer and communications systems, data collection, analysis and reporting equipment and other test capabilities to successfully develop and test the Army weapons and equipment. Provides the necessary live, virtual and constructive environment, hardware-in-the-loop capabilities and models and simulations needed for testing the Army materiel. Acquires instrumentation for reliability, availability and maintainability data collection on tracked and wheeled vehicles; ballistic transducers for measuring chamber pressures during ammunition tests; supports development of common data collection instrumentation used in testing across all test					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
commodity areas; acquires instrumentation for electromagnetic environment effects on ground and air systems; continues replacement and upgrade of range control instrumentation, radar, optics and telemetry equipment used in missile testing; acquires data recorders, signal conditioning equipment, data processing equipment and other instrumentation for various aircraft tests; upgrades natural environments test instrumentation used for testing weapon systems, vehicles, munitions and support equipment in extreme hot desert environments as well as extreme cold conditions; continues upgrade of survivability/vulnerability test capabilities in support of live fire and active protection systems; upgrades and replaces mobile range communications equipment and digital end devices; and develops advanced test technologies and instrumentation for testing next generation materiel such as advanced armor protection, multi-spectral sensors, and advanced soldier systems. Updates the frequency surveillance capability at YPG to ensure a clean radio frequency (RF) environment for testing. Recapitalizes the Antenna test range to continue measuring communication equipment performance. Upgrades Kineto Tracking Mounts at WSMR and YPG. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #3 Automotive Technology Evaluation Facility (ATEF) Test Track Upgrades - An automated traffic control system will be installed to monitor vehicle positions on the course and control accesses to and from the	0.000	0.000	2.600	0.000	2.600

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
facility. Continuous vehicle monitoring is required for range safety and automatic collision avoidance while simultaneously conducting sustained speed endurance, vehicle dynamics and stability, robotic/autonomous vehicle control and traction control testing. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #4 Army Test and Evaluation Command (ATEC) Common Test Technology for Developmental Testing, Operational Testing, and Evaluation. Provides support for development of the Versatile Information System Integrated, On-line (VISION) Digital Library to enable a centrally accessible repository for test data; accreditation of ATEC Test Integration Network (ATIN) infrastructure to allow distributed, systems-of-systems testing; development of a Test and Evaluation Enterprise Architecture to facilitate use of common tools and standards; support for critical Test Technology Domain Focus Areas of Instrumentation, Modeling and Simulation, Threats, Data Management, and Networks; and support, implementation of ATEC Regulation 70-15 ("Acquisition and Management of Test Technology Assets") for development and implementation of common platforms, interfaces, and processes *FY 2009 Accomplishments:* FY 2009	0.000	0.638	0.652	0.000	0.652

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 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 2010 Plans: FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #5 Congressional Adds: The current Light Detection and Ranging (LIDAR) systems do not provide the full range of aerosol cloud characterization capability necessary to address the Chemical/Biological test requirements. Dugway M&S software is being developed to provide an understanding of how threat clouds affect systems under test such as detectors and shelters as they evolve on the battlefield and in urban environments driven by meteorology and terrain. The purpose of this project is to build one or more LIDAR referee systems to develop elastic backscatter LIDAR calibration procedures and models, and to merge multiple LIDAR and other referee system data with atmospheric dispersion and LIDAR models, to generate the best possible aerosol cloud characterization and tracking, and to extrapolate test results to realistic battlefield scenarios *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base	2.400	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 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 OCO Plans: FY 2011 OCO					
Program #6 Congressional Adds: WSMR $1.6M Define Renewable Energy Sources for Base Energy Independence provides seed funding to lay out plans for energy generation and storage considering Solar, Small Nuclear Power plants, geothermal and DoE powerstorage concepts. WSMR $3.76 Phase II, Regional Partnership - Ft Bliss, WSMR, Holloman develops tools to schedule, deconflict and coordinate real-time test and training missions at the White Sands Missile Range, Ft. Bliss and Holloman Air Force Base. These tools will coordinate use of regional assets such as air space, land usage and radio/radar frequencies. DPG $3.6M Dugway Field Test Improvements will upgrade field testing capabilities to monitor and analyzing chemical aerosol simulant releases in the air and their deposition on surfaces. DPG $2.0M Multiple Source Data Fusion for Dugway PG improves the capability to address the rapidly evolving CB aerosol threats including development ofa new standoff referee instrumentation and data fusion methods for combining data from referee instrumentation with simulations and models. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	0.000	10.960	0.000	0.000	0.000
Program #7	0.000	1.217	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 628: *Developmental Test Technology & Sustainment*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Funding for the Small Business Innovative Research/Small Business Technology Transfer Programs *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	57.782	54.449	37.024	0.000	37.024

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62B: *OPERATIONAL TESTING INSTRUMENTATION DEVELOPMENT*	

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
62B: *OPERATIONAL TESTING INSTRUMENTATION DEVELOPMENT*	1.993	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides for the technical development, enhancement, upgrade and maintenance of essential non-major instrumentation related technology programs. The various projects will achieve cost effective data collection, data reduction, data analysis, telemetry, and processing capability in support of robust and credible operational tests as required by the Department of Defense (DOD) and Congress. The increased sophistication of the Army's new weapons as well as communication and control systems demands new instrumentation's ability to capture test data non-intrusively. The data must be collected at high rates and in massive volumes. After the essential data is collected, it must be reduced to the essential elements necessary for effective evaluation. As the Army's digitization and transformation of the battlefield continues, this development effort allows Army Test and Evaluation Command's Operational Test Command (OTC) to modernize and develop its non-major instrumentation to be more robust, reliable and less intrusive in terms of integrating automated instrumentation during operational tests. The goal is to expand data collection, reduction, and analysis of the collected data and test control capability, while reducing future operational test costs. This project supports multiple instrumentation development efforts leading to improved command and control, increased mobility, expanded remote data collection from various tactical sites. In many instances instrumentation must have a transmission capability to central receiving, control, and evaluation stations at various test directorates, and the capability to support Real-Time Casualty Assessments which measures simulated attrition of forces during simulated battlefield engagements. OTC's test directorates are located at Fort Hood, TX, Fort Bragg, NC, Fort Bliss, TX, Fort Huachuca, AZ, and Fort Sill, OK. These programs support Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and the Current to Future transition path of the Transformation Campaign Plan. Beginning FY 2008 funding from PE Number 0605602A Project 62B for modeling, simulation, and instrumentation development and the subsequent sustainment of all systems are identified under the PE line 0605602A Project 62C.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.077	0.000	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62B: *OPERATIONAL TESTING INSTRUMENTATION DEVELOPMENT*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #2 FY09 Planned Program: ExCIS, Performance Instrumentation Systems, Time Space Position Information (TSPI) and Telemetry Systems, Network Control Systems and Data Management, and Imaging System technology categories: Network Instrumentation Test Systems, Family of Digital Data Collectors Test Bed, IEW Test Operations Capability, Mobile Surveillance & Target Acquisition Radar, Multimedia Data Transfer System, Alternative Power Source for Future Combat System (FCS), ExCIS FSA, GPS Modernization, High Speed Data Recording System, Command Audio/Video Modernization, OT-TES Support, Quick Look Instrumentation Workstation, Secure Wide Band Satellite Common Link, and Digital Asset Management System. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010	1.916	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	1.993	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *MODELING AND SIMULATION INSTRUMENTATION*	

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
62C: *MODELING AND SIMULATION INSTRUMENTATION*	25.130	29.940	22.016	0.000	22.016	22.521	22.897	22.822	22.601	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Funding in this program element develops, enhances, and sustains the Army Test and Evaluation Command's (ATEC) on- going and future technology projects related to all Modeling, Simulation and Instrumentation (MS&I) systems necessary to test Future Combat System (FCS) spin-offs and Future Force technology areas as outlined in Acquisition and Management of Test Technology Assets per ATEC Regulation 70-15, Table 1, 22 Mar 06, in the Domains and Contents of Instrumentation, Networks and Test Control, Simulation and Stimulation, and Data Management Systems. Execution of Major Programs will consist of Operational Test Tactical Engagements System (OT-TES); Test Technology Execution Center (TTEC) for M&S capability sustainment, enhancement, and integration capability; Intelligence Modeling and Simulation for Evaluation (IMASE) sustainment and development; Extensible C4I Instrumentation Systems-Fire Support Application (ExCIS-FSA) sustainment and development; Battle Command Network Integration and Simulation (BCNIS) [formerly OneSAF/CES - STORM Integration (Battle Command Systems Environment)]; Fuel Cell Systems; Operational Test Command (OTC) Analytic, Simulation and Instrumentation Suite (OASIS) Integration and Management; and execution of many non-major instrumentation projects such as GPS Modernization, Automated Rigging Kits, High Speed Data Recording systems, but not limited to, that support T&E five domains. Some systems consist of modeling and simulation to enhance the realistic operational environments by simulating supporting units and threat. The non-intrusive systems collect data from the Systems Under Test (SUT) in harsh field conditions while platforms are moving and operating without impacting the SUT. All OT Technology Systems must be mobile, to the extent possible, to be used at all test locations. The systems are required for systems of systems level operational testing such as Mine Resistant Ambush Protective (MRAP) vehicles, Future Combat Systems (FCS) spin-offs, Army Battle Command System (ABCS), Terminal High Altitude Area Defense (THAAD), Patriot Advanced Capability Phase 3 (PAC3), Warfight Information Network-Tactical (WIN-T), Joint Tactical Radio System (JTRS), Net Enhanced Command Capability (NECC), and others.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	23.930	0.000	0.000	0.000	0.000
FY09 Accomplished Programs: The individual accomplished technology projects within all the domains as described in ATEC Regulation 70-15, Table 1, 22 Mar 06, include but are not limited to: Sustainment					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and Operations of all OTC Technology, Modeling and Simulation Systems, OT-TES, ExCIS FSA, GPS Modernization, IMASE, Airborne Position Location System Paratrooper Unit Production, Secure Wide-Band Satellite Common Link, Intelligence Electronic Warfare (IEW) Test Operation Capability, Next Generation Command Control Communications & Intelligent Engineering & Evaluation System (NG CEES), TTEC for M&S Capability,Sustainment, Enhancement, and Integration, OASIS Integration, Family of Digital Collection Test Bed, and STORM (Simulation Test Operational Rehearsal Model). OTC Technology Base Support, etc. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #2 Funds development of the Command, Control and Communication Driver (C3 Driver), Test and Evaluation Enterprise Architecture (TEEA), and ATEC Technology Tools. The C3 Driver supports the Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), ABCS 6.3, 6.4, Brigade Combat Team, JTRS, and WIN-T development and integration at the Central Technical Support Facility (CTSF) Fort Hood, TX and contractor locations as the Army's single DT C3 simulator/stimulator, etc. *FY 2009 Accomplishments:* FY 2009	0.000	3.235	2.144	0.000	2.144

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *MODELING AND SIMULATION INSTRUMENTATION*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #3 Small Business Innovative Research/Small Business Technology Transfer Programs. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	0.000	0.030	0.000	0.000	0.000
Program #4 Congressional increases for HQ Operational Test Command ADATD to developMobile Optical Tracking System (MOTS). MOTS is a tracking system that willprovide the Time Space Position Information (TSPI) required to analyze theend game of engagements by systems such as Counter Rocket Artillery MortarSystems.	1.200	0.960	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *MODELING AND SIMULATION INSTRUMENTATION*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #5 FY10 and FY11 Planned Programs: Funds will be utilized for the sustainment, development, and upgrade of OTC's high priority modeling, simulation, and instrumentation systems identified under the POM submission FY10-15. The programs to be executed that will fall under the ATEC's domain categories shown above but are not limited to: OT-TES sustainment and minor upgrades, TTEC Operations for M&S sustainment, upgrade, and integration of system of systems, OTC Technology Base Support, ExCIS FSA, IMASE ISSS & ISGT, BCNIS, Geometric Advanced Video Enhanced Locations System (GAVELS), Mobile Optical Tracking Systems, Automated Rigging Kit Tool, GPS Modernization, High-speed Digital Recording System, OASIS Integration, etc. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010	0.000	25.715	19.872	0.000	19.872

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 6: *RDT&E Management Support*	R-1 ITEM NOMENCLATURE PE 0605602A: *Army Technical Test Instrumentation and Targets*	PROJECT 62C: *MODELING AND SIMULATION INSTRUMENTATION*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	25.130	29.940	22.016	0.000	22.016

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.