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<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>							February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide (0400), Budget Activity 6			R-1 ITEM NOMENCLATURE 0604940D8Z/Central Test and Evaluation Investment Development (CTEIP)					
\$ in Millions	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PE 0604940D8Z	136.917	137.648	133.772	134.095	137.462	139.586	141.764	143.949

**A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION**

Since its inception in FY 1990, this program element has been, and continues to be, used to fund the development of critically needed, high priority Test and Evaluation (T&E) capabilities for joint/multi-Service requirements. The Central Test and Evaluation Investment Program (CTEIP) uses a corporate investment approach to combine Service and Defense and other government agencies, T&E needs, maximize opportunities for joint efforts, and avoid unwarranted duplication of test capabilities. CTEIP focuses investments on projects that will have high productivity returns on investment. Projects under the CTEIP Program Element (PE) support two basic tasks: investments to improve the test capabilities base (Joint Improvement and Modernization (JIM) projects) and development of near-term solutions to test capability shortfalls in support of an ongoing operational test program (Resource Enhancement Project (REP)).

The JIM funds critically needed T&E investments in the major functional areas of test mission command, control, communications and instrumentation; electronic warfare systems; threat and computational simulation test and evaluation; space systems T&E; weapons effects test capabilities; targets; and physical and environmental test capabilities. The investments include the demonstration and transition of advanced technologies into test capabilities needed to test increasingly complex and sophisticated weapon systems. Examples of project subject matter include: automated data collection, processing, display, and archiving; smart munitions testing; modeling and simulation (M&S); advanced electronic combat systems; low-observable technologies and signature measurements; targets and target control; time-space-position-information; end-game measurement; testing of advanced materials application; test design; and advanced sensors and space systems. CTEIP continues as the focal point for fostering common architectures throughout the test and training communities to enhance the sharing of resources and links between test and training ranges.

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CTEIP has provided special focus to institutionalize the use of M&S as a practical test tool; to link ranges through internetting to enhance inter-range and inter-Service cooperation and resource sharing; and, to ensure development and acquisition of common instrumentation necessary for a more efficient test infrastructure. Analyses of alternative solutions are conducted for each investment project to validate T&E requirements, to define integrated support systems, and to determine overall cost effectiveness of the proposed test investments. The use of Department of Defense (DoD)-wide criteria for requirement validation, prioritization, and risk assessment ensures an effective test resource investment program.

The REP funds development of near-term solutions for critical ongoing operational tests supporting decisions on major, high priority defense acquisition programs. These unanticipated operational test (OT) capability requirements arise from several sources such as a new threat system identified during OT planning, acquisition of foreign military assets that are critical in determining weapon system operational effectiveness, short timelines between system design maturity and scheduled OT, and emerging technologies and test requirements resulting from operational concept changes mandated by Congress or DOT&E, or system-of-systems testing. Funding these activities under the CTEIP provides the opportunity to coordinate and integrate these near-term test requirements with the total DoD test and evaluation investment planning, and ensures their availability and legacy for other programs that may have similar testing requirements.

The CTEIP program is funded within the RDT&E Management Support Budget Activity because it includes special studies, analyses, and strategic planning related to test capabilities and infrastructure, and supports the development and application of proven technologies to provide major test and evaluation capabilities required to meet DoD component weapon system test requirements.

### **Program Accomplishments and Plans:**

#### **FY 2006 Accomplishments:**

##### JIM Projects:

- Completed the development and demonstration of time-space-position information (TSPI), flight termination/safe and arm (FTSA), and telemetry functions on advanced missile platforms under the Joint Advanced Missile Instrumentation project.
- Completed the Communications, Navigation, and Identification follow-on effort under the Joint Installed Systems Test Facility Product Improvements project to provide improved installed systems capabilities needed to support next generation aircraft testing.
- Completed concept development and initiated systems development for the Test Capability Workstation / Data

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- Collection Automation Tool project to develop a software suite and tools that focus on Capabilities-Based Test methodology to support operational test planning and the automation of test data collection, analysis, and reporting.
- Completed the Digital Video Laboratory project to provide digital video data analysis and reporting capability.
  - Completed the Electromagnetic Environmental Effects Generating System project to provide a multi-Service test facility capable of assessing actual performance of a full-scale, fixed, or rotary-winged aircraft completely immersed in a user-specified radio frequency environment.
  - Completed concept development and initiated systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number aerodynamic propulsion test capability at the Arnold Engineering Development Center.
  - Terminated systems development of the Enhanced Range Applications Project to provide a state-of-the-art Airborne Range Data System that supports next generation data collection requirements.
  - Continued systems development for the Joint Mobile Infrared Countermeasures Test System project to provide infrared spectrum test instrumentation for open air ranges.
  - Continued systems development of the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
  - Continued systems development of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and test fixtures required to test and evaluate current and developmental chemical/biological (CB) detector systems over the entire range of expected use conditions.
  - Continued systems development of the Directed Energy Test and Evaluation Capability project to provide improved test and evaluation capabilities for directed energy weapons.
  - Continued systems development of the Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (JC4ISR) project to develop a capability to test increasingly complex multi-discipline data fusion concepts.
  - Continued the Infrared Sensor Stimulator product improvement and continued development of the Advanced Radar Environment Stimulator, under the Joint Installed Systems Test Facility Product Improvements project, to provide improved installed systems capabilities needed to support next generation aircraft testing.
  - Continued systems development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Continued concept development for the Next Generation Range Support Aircraft provide to provide an improved airborne telemetry capability to support test and evaluation of future weapons systems requiring greater standoff

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- distances and increased telemetry transmission ranges.
- Continued concept development for the Subminiature Flight Safety System to provide a warhead compatible, universal, subminiature, low-cost flight termination system.
- Continued concept development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
- Continued systems development of the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Continued systems development of spiral 1 of the Towed Airborne Plume Simulator project to provide a capability to test airborne infrared countermeasure systems in a dynamic threat environment, to include realistic clutter background.
- Continued systems development of the Enhanced Flight Termination System project to develop a UHF digital flight termination system for DoD unmanned flight vehicles.
- Continued the Joint Gulf Range Complex Upgrade project to provide upgraded range control capabilities at the Gulf Range.
- Continued threat system simulator development efforts to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Continued the Tri-Service and CTEIP support projects.
- Continued the Test and Training Enabling Architecture Software Development Activity to promote integrated testing and simulation-based acquisition through the use of a logical range consisting of distributed live, virtual, and constructive elements tied together by a common architecture.
- Continued validation of flight test procedures and unmanned aerial vehicle (UAV) operations in the U.S. National Airspace alongside manned aircraft, under the UAV Systems Operations and Validation Program.
- Continued the Unmanned Systems Testbed project to provide capabilities for using unmanned systems in training, operational exercises, and test and evaluation.
- Continued concept development for the Joint Information Assurance Test Suite/ Web-Enabled Test project to provide a dynamic Information Assurance test tool suite with the ability to conduct extensive testing of web-based systems.
  
- Continued concept development for the Interactive Electronic Attack project to provide an interactive electronic attack radio frequency capability to test electronic warfare, communications, and avionics systems against reactive air defenses in a secure, protected ground-based environment.

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- Continued concept development for the Advanced Communications Environment—Faithful Timeslot Messaging project to adapt the current Joint Communications Simulator antenna pattern and propagation effects that will provide timeslot dependent attenuation of Link-16 terminal output.
- Initiated the Range Tactical Data Link and Relay Capability project to provide cross-range interoperability and establish a joint tactical data link test and training capability at selected ranges.
- Initiated the Re-Locatable Command, Control, and Communications (C3) for Gulf Range Support project to provide re-locatable long-haul and inter/intra-communications to support interoperability and expanded operations at selected Gulf ranges.

Resource Enhancement Project:

- Completed the Information Assurance Susceptibility Testing for Global Air Traffic Management (GATM) Avionics subproject, which expanded the Air Force Flight Test Center GATM information assurance test capability to support beyond of sight information assurance testing and ground system information assurance testing..
- Completed the development of the Decontamination Ground Truth Instrumentation subproject, which provides the capability to measure the effectiveness of decontamination materials and processes for chemical and biological warfare simulants and interferents.
- Completed the Distributed Operational Test Command Center subproject, which provides a distributed test control capability that integrates communications, data processing and test monitoring, and visual display systems into a single integrated capability.
- Completed the Test Control Communications Capability subproject, which provides an integrated communications suite of hardware, software, and firmware protocols to provide realistic command, control, and communications testing.
- Completed the Magnetic Silencing Facility subproject, which provides improved magnetic component calibration to ensure adequate operational testing of the advanced degaussing system on new ship classes.
- Completed the Portable Oceanographic Environmental Sensors Instrumentation Suite subproject, which provides an instrumentation suite for remote monitoring of environmental conditions during operational testing of amphibious weapon systems.
- Completed the Torpedo Proximity Scoring System subproject, which developed a reliable and flexible prototype instrumentation system to support torpedo defensive system testing and evaluation requirements.
  
- Completed software development and initiated validation efforts for the Air and Missile Defense Operational Test Suite subproject, which will provide data collection, transfer, and analyses capabilities required to conduct Combatant Commanders' Integrated Command and Control System and Ground-Based Midcourse Defense operational and interoperability testing.

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- Completed requirements analysis and hardware procurement and initiated software development for the Shootable Remote Threat Ground Targets subproject, which will provide an operational representative environment with controllable and flexible scenarios to be used for the Laser Joint Direct Attack Munition Operational Test.
- Continued software development, hardware procurement and system integration for the Advanced System Endgame Methodology for Actual Threat Systems subproject, which will provide enhanced measurement capabilities of an aircraft's capability to evade/counter an XM-43A threat system through all phases of engagement.
- Continued software development and system integration of the Advanced Capability Mobile Flight Mission Simulator subproject, which will provide more realistic Tactical Ballistic Missile threat scenario simulations to allow for battalion level testing during the PATRIOT Limited User Test.
- Continued system engineering and software development efforts for the Probability of Raid Annihilation Testbed Common Threat and Environment Capability subproject, which is developing a common set of threat and natural environment representations for consistent assessment of ship self defense systems across ship classes.
- Initiated the Infrared Man-Portable Air Defense System (MANPADS) Real Time Casualty Assessment Simulator subproject to provide added realism to assess tactics, techniques, and procedures to test the survivability of the Armed Reconnaissance Helicopter against MANPADS.
- Initiated the Portable Underwater Tracking System subproject to provide real-time time space position information during operational testing of systems under test operating in a shallow water minefield with various in-volume and bottom mines or in littoral regions.
- Initiated the Intelligence Broadcast Operational Test Suite subproject to provide a semi-automated test capability in static, flyaway, and distributed network configurations critical to operational testing of the Integrated Broadcast Service.
- Initiated the Radio Frequency Monitoring and Data Analysis System subproject to provide a modular, high-performance receiving system for monitoring all RF signals on an electronic warfare range in order to satisfy the need for definitive ground truth of target signals and interfering signals during operational tests.
- Initiated the development of the AGM-88E Anti Radiation Missile Air Defense Array subproject to provide the capability to mimic enemy Air Defense Units to test the effectiveness of the Advanced Anti-Radiation Guided Missile (AARGM) to suppress and destroy enemy air defense systems.
- Initiated the development of the Command and Control Data Analysis Capability subproject to provide the capability to stimulate the Air and Space Operations Center Battle Control System and to collect data to determine its effectiveness in an operationally realistic environment.
- Initiated the Chemical Agent Plume Tracking Capability subproject to provide a field referee capability to assess the Joint Service Lightweight Standoff Chemical Agent Detector's ability to accurately track and predict chemical agent stimulant plume transport and dispersion.

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- Initiated the Digital Signal Environment Verification Tool subproject to provide the capability to assess the Prophet System's and future U.S. Electronic Warfare Systems' ability to detect the presence of modern threat RF digital communications signals in a realistically simulated battlespace.
- Initiated the development of the Fluorescence Aerosol Particle Sensor subproject to provide enhanced real-time referee capabilities for detection and collection of new and existing biological warfare threat agent simulants in the presence of naturally occurring background particles in realistic field environments.

**FY 2007 Plans:**

**JIM Projects:**

- Complete the Land and Sea Vulnerability Test Capability project to provide an instrumented land-sea interface test capability at the Aberdeen Test Center.
- Complete the Joint Gulf Range Complex Upgrade project to provide upgraded range control capabilities at the Gulf Range.
- Complete development of the Infrared Sensor Stimulator product improvement and the Advanced Radar Environment Stimulator, under the Joint Installed Systems Test Facility Product Improvements project, to provide improved installed systems capabilities needed to support next generation aircraft testing.
- Complete concept development for the Next Generation Range Support Aircraft provide to provide an improved airborne telemetry capability to support test and evaluation of future weapons systems requiring greater standoff distances and increased telemetry transmission ranges.
- Complete concept development and initiate demonstration phase for the Subminiature Flight Safety System to provide a warhead compatible, universal, subminiature, low-cost flight termination system.
- Complete concept development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
- Complete the Advanced Instrumentation Data & Control System project to develop state-of-the-art instrumentation and control systems to meet DoD T&E requirements for propulsion systems, aerodynamic systems and space systems.
- Complete spiral 1 of the Towed Airborne Plume Simulator project to provide a capability to test airborne infrared countermeasure systems in a dynamic threat environment, to include realistic clutter background.
- Complete the Enhanced Flight Termination System project to develop a UHF digital flight termination system for DoD unmanned flight vehicles.
- Complete the Unmanned Systems Testbed project to provide capabilities for using unmanned systems in training, operational exercises, and test and evaluation.
- Continue validation of flight test procedures and unmanned aerial vehicle (UAV) operations in the U.S. National

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- Airspace alongside manned aircraft, under the UAV Systems Operations and Validation Program.
- Continue systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number aerodynamic propulsion test capability at the Arnold Engineering Development Center.
- Complete concept development and initiate systems development for the Joint Information Assurance Test Suite / Web-Enabled Test project to provide a dynamic Information Assurance test tool suite with the ability to conduct extensive testing of web-based systems.
- Complete concept development and initiate systems development for the Interactive Electronic Attack project to provide an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Complete concept development and initiate systems development for the Advanced Communications Environment – Faithful Timeslot Messaging project to adapt the current Joint Communications Simulator antenna pattern and propagation effects to provide timeslot dependent attenuation of Link-16 terminal output.
- Complete the Range Tactical Data Link and Relay Capability project to provide cross-range interoperability and establish a joint tactical data link test and training capability at selected ranges.
- Complete the Re-Locatable Command, Control, and Communications (C3) for Gulf Range Support project to provide re-locatable long-haul and inter/intra-communications to support interoperability and expanded operations at selected Gulf ranges.
- Complete systems development of the Joint Mobile Infrared Countermeasures Test System project to provide infrared spectrum test instrumentation for open air ranges.
- Continue systems development of the Test Capability Workstation / Data Collection Automation Tool project to develop a software suite and tools that focus on Capabilities-Based Test methodology to support operational test planning and the automation of test data collection, analysis, and reporting.
- Continue systems development of the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and test fixtures required to test and evaluate current and developmental CB detector systems over the entire range of expected use conditions.
- Continue systems development of the Directed Energy Test and Evaluation Capability project to provide improved test and evaluation capabilities for directed energy weapons.
- Continue systems development of the Joint C4ISR project to develop a capability to test increasingly complex multi-discipline data fusion concepts.
- Continue systems development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Continue threat system simulator development to improve integration, reduce potential duplication in threat and target

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- development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Continue the Tri-Service and CTEIP support projects.
- Continue the Test and Training Enabling Architecture Software Development Activity to promote integrated testing and simulation-based acquisition through the use of a logical range consisting of distributed live, virtual, and constructive elements tied together by a common architecture.
- Initiate concept development and risk reduction for the Common Range Integrated Instrumentation System project to develop a common range instrumentation system to address next generation range data requirements. This effort includes a Rapid Prototype Initiative to address near term testing requirements for the Future Combat System.
- Initiate and complete the Pacific Range Interoperability Test and Evaluation Capability project to enhance interoperability between test and training assets in the Pacific and other DoD ranges and facilities.

Resource Enhancement Project:

- Complete the development, integration, and testing of the Advanced Capability Mobile Flight Mission Simulator to allow for battalion level testing during the PATRIOT Limited User Test.
- Complete the testing and validation efforts for the Advanced System Endgame Methodology for Actual Threat Systems subproject.
- Complete the integration and acceptance testing of the Infrared Man-Portable Air Defense System Real Time Casualty Assessment Simulator to be used in the Armed Reconnaissance Helicopter's Initial Operational Test.
- Complete the testing and validation of the Portable Underwater Tracking System to be used in the Operational Evaluation of the Virginia Class Submarines.
- Complete the Integrated Broadcast Operational Test Suite subproject to provide a DoD-wide intelligence broadcast operational test capability to test the Integrated Broadcast Service (IBS).
- Complete the validation and testing of the Air and Missile Defense Operational Test Suite to be used for Ground-Course Missile Defense operational and interoperability testing.
- Complete integration, verification, and validation efforts for the Shootable Remote Threat Ground Target subproject.
- Complete system integration and test of the Radio Frequency Monitoring and Data Analysis System subproject.
- Complete the integration, verification, validation, and training for the Command and Control Data Analysis Capability subproject.
- Continue system integration, testing, and validation efforts for the Probability of Raid Annihilation Common Threat and Environment Capability subproject.
- Continue and systems engineering and development efforts for the Chemical Agent Plume Tracking Capability subproject.

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- Continue target fabrication and target signature collection for the AGM-88E Anti-Radiation Missile Air Defense Array subproject.
- Complete system integration, acceptance testing, and training for the Digital Signal Environment Verification Test Tool subproject.
- Complete development, acceptance testing, verification, and validation of the Fluorescence Aerosol Particle Sensor subproject.
- Initiate the development of the Volumetric Influence Processor subproject to provide the ability to determine submarine and ship susceptibility to underwater electrical potential influence mines.

**FY 2008 Plans:**

JIM Projects:

- Complete the Contamination Avoidance Detector Test Suite project to provide test methodology, instrumentation, and test fixtures required to test and evaluate current and developmental CB detector systems over the entire range of expected use conditions.
- Complete systems development of the Soft Impact Location Capability project to provide the necessary instrumentation, signal processing, communication, and data processing capabilities to detect and locate the point and angle of impact of projectile and missile weapons within an 800m by 800m impact area.
- Complete the Advanced Communications Environment –Faithful Timeslot Messaging project to adapt the current Joint Communications Simulator antenna pattern and propagation effects to provide timeslot dependent attenuation of Link-16 terminal output.
- Complete the Test Capability Workstation / Data Collection Automation Tool project to develop a software suite and tools that focus on Capabilities-Based Test methodology to support operational test planning and the automation of test data collection, analysis, and reporting.
  
- Continue systems development for Directed Energy Test and Evaluation Capability project to provide improved test and evaluation capabilities for directed energy weapons.
- Continue systems development of the Joint C4ISR project to develop a capability to test increasingly complex multi-discipline data fusion concepts.
- Continue the demonstration phase for the Subminiature Flight Safety System to provide a warhead compatible, universal, subminiature, low-cost flight termination system.
- Continue the Test and Training Enabling Architecture Software Development Activity to promote integrated testing and simulation-based acquisition through the use of a logical range consisting of distributed live, virtual, and constructive elements tied together by a common architecture.

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- Continue systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number aerodynamic propulsion test capability at the Arnold Engineering Development Center.
- Continue systems development for the Joint Information Assurance Test Suite / Web-Enabled Test project to provide a dynamic Information Assurance test tool suite with the ability to conduct extensive testing of web-based systems.
- Continue systems development for the Interactive Electronic Attack project to provide an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Continue concept development and risk reduction for the Common Range Integrated Instrumentation System project to develop a common range instrumentation system to address next generation range data requirements. Complete the Rapid Prototype Initiative to address near term testing requirements for the Future Combat System.
- Continue validation of flight test procedures and unmanned aerial vehicle (UAV) operations in the U.S. National Airspace alongside manned aircraft, under the UAV Systems Operations and Validation Program.
- Continue the Tri-Service and CTEIP support projects.
- Continue threat system simulator development to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Initiate systems development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
- Initiate and complete concept development and initiate systems development of capabilities to test and evaluate advanced infrared countermeasures systems.
- Initiate concept development for the Objective Helicopter Icing Spray System project to provide a roll-on / roll-off capability to perform in-flight icing and rain testing for low-speed air vehicles.
- Initiate concept development for the Horizontal Fast Rise Electromagnetic Pulse (EMP) Pulser project to provide the required EMP testing environment for large aircraft under test.

### Resource Enhancement Project:

- Complete the fabrication, range integration, and validation of the AGM-88E Anti-Radiation Missile Air Defense Array Test Tool to support the OT of the AGM-88E Advanced Anti-Radiation Guided Missile (AARGM).
- Complete the integration, system testing, and validation of the Chemical Agent Plume Tracking Capability test tool to support the Joint Services Lightweight Standoff Chemical Agent Detector System's OT.
- Complete system integration and test of the Radio Monitoring and Data Analysis System subproject to provide the capability to assess the Prophet Ground Systems' operational effectiveness in detecting, identifying, and copying direction finding line of bearing low probability of intercept signals during the Prophet Ground System Initial Operational Test.

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- Continue the development and complete component and system testing for the Volumetric Influence Processor subproject.
- Initiate developments to address near term OT capability shortfalls in range interoperability and knowledge management.
- Initiate developments to address near term OT capability shortfalls in realistic test environments, to include open air test environments, tunnels, and chambers.
- Initiate developments to address near term OT capability shortfalls in the realistic representation of enemy threats and targets.
- Initiate developments to address near term OT capability shortfalls in installed systems and hardware-in-the-loop T&E facilities.

**FY 2009 Plans:**

**JIM Projects:**

- Complete the Directed Energy Test and Evaluation Capability project to provide improved test and evaluation capabilities for directed energy weapons.
  - Complete the Joint C4ISR project to develop a capability to test increasingly complex multi-discipline data fusion concepts.
  - Complete concept development and risk reduction and initiate systems development for the Common Range Integrated Instrumentation System project to develop a common range instrumentation system to address next generation range data requirements.
  - Complete concept development and initiate systems development for the Objective Helicopter Icing Spray System project to provide a roll-on / roll-off capability to perform in-flight icing and rain testing for low-speed air vehicles.
  - Complete concept development and initiate systems development for the Horizontal Fast Rise Electromagnetic Pulse (EMP) Pulser project to provide the required EMP testing environment for large aircraft under test.
  - Complete validation of flight test procedures and unmanned aerial vehicle (UAV) operations in the U.S. National Airspace alongside manned aircraft, under the UAV Systems Operations and Validation Program.
  - Continue demonstration phase for the Subminiature Flight Safety System to provide a warhead compatible, universal, subminiature, low-cost flight termination system.
  - Continue systems development for the Integrated Network Enhanced Telemetry project to develop a network-enhanced telemetry capability for T&E ranges and facilities.
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- Continue the Test and Training Enabling Architecture Software Development Activity to promote integrated testing

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and simulation-based acquisition through the use of a logical range consisting of distributed live, virtual, and constructive elements tied together by a common architecture.

- Continue systems development of capabilities to test and evaluate advanced infrared countermeasures systems.
- Continue systems development for the Hypersonic Propulsion Test Capability project to provide a variable Mach number aerodynamic propulsion test capability at the Arnold Engineering Development Center.
- Continue systems development for the Joint Information Assurance Test Suite / Web-Enabled Test project to provide a dynamic Information Assurance test tool suite with the ability to conduct extensive testing of web-based systems.
- Continue systems development for the Interactive Electronic Attack project to provide an interactive electronic attack radio frequency capability to test electronic warfare and avionics systems against reactive air defenses in a secure, protected ground-based environment.
- Continue the Tri-Service and CTEIP support projects.
- Continue threat system simulator development efforts to improve integration, reduce potential duplication in threat and target development, and ensure that accurate, cost-effective representations of threat systems are available to support testing.
- Initiate concept development for the Free Space Optical Telemetry project to develop and demonstrate the utilization of laser-based free space optics as an alternative to RF telemetry.
- Initiate concept development for an urban environment test capability.
- Initiate concept development for the Space Threat Assessment Testbed project to provide a capability to conduct subsystem and system level combined natural and man-made space environmental effects testing of critical space assets.

### Resource Enhancement Project:

- Complete verification, validation and accreditation efforts for the Volumetric Influence Processor subproject.
- Complete developments to address near term OT capability shortfalls in range interoperability and knowledge management.
- Complete developments to address near term OT capability shortfalls in realistic test environments, to include open air test environments, tunnels, and chambers.

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- Complete developments to address near term OT capability shortfalls in the realistic representation of enemy threats and targets.
- Complete developments to address near term OT capability shortfalls in installed systems and hardware-in-the-loop T&E facilities.
- Initiate development of instrumented facilities to evaluate our next generation of sensors, weapons, platforms, and C4ISR systems in a realistic urban environment.
- Initiate development of hardware simulators to test missile warning systems of new generation EW suites in a dynamic environment.
- Initiate improvements to existing Real Time Casualty Assessment instrumentation.

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**B. (U) PROGRAM CHANGE SUMMARY**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Previous President's Budget:	138.918	130.290	138.236	137.771
Current President's Budget:	136.917	137.648	133.772	134.095
Total Adjustments:	(2.001)	7.358	(4.464)	(3.676)
Congressional Program Adjustments:				
Congressional Rescissions:				
Congressional Increases:		8.150		
Other Program Adjustments:	(2.001)	(0.792)	(4.464)	(3.676)

**C. (U) OTHER PROGRAM FUNDING NA**

**D. (U) ACQUISITION STRATEGY NA**

**E. (U) PERFORMANCE METRICS**

Percentage of CTEIP projects that were developed and delivered to the DoD test community over the past five years.