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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 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605100D8Z: Joint Mission Environment Test Capability (JMETC)							
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	8.286	9.379	10.287	0.000	10.287	10.494	10.763	10.920	11.070	Continuing	Continuing
100: Joint Mission Environment Test Capability (JMETC)	8.286	9.379	10.287	0.000	10.287	10.494	10.763	10.920	11.070	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Mission Environment Test Capability (JMETC) Program provides the infrastructure for distributed testing and evaluation (T&E) of systems during development. The JMETC program implements the infrastructure capabilities defined in the DoD’s “Testing in a Joint Environment Roadmap” to provide acquisition program managers a robust nation-wide capability to “test like we fight.” JMETC provides a persistent distributed T&E capability that otherwise would not be readily available to Service/Component acquisition programs. This program is funded within the RDT&E Management Support Budget Activity because it is intended to provide test capability in support of RDT&E programs.

JMETC creates a common corporate capability to link live systems with virtual and constructive representations to generate a realistic joint mission test environment for the system(s) being tested. JMETC is a widely applicable, persistent, service provider for Department acquisition and net-centric programs. Key JMETC products include readily available connectivity over existing Department networks, standard data transport solutions, tools and utilities for planning and conducting distributed integrations, and a reuse repository. This common integration capability, through the use of the Test and Training Enabling Architecture (TENA), provides compatibility between JMETC and the Joint National Training Capability (JNTC), streamlining reuse of technical resources across test and training communities. In turn, this enables combined test and training exercises. JMETC capabilities will migrate, along with other RDT&E capabilities, to a mature Global Information Grid (GIG) Defense Information Systems Network (DISN) Core.

By linking distributed facilities, JMETC allows customers to efficiently evaluate their warfighting capability in a realistic joint environment. This enables a customer-defined joint mission test environment for systems engineering and testing, extensible to training and experimentation, in a timely and cost effective manner.

JMETC’s institutional funding builds, maintains, and operates the JMETC, and pays for persistent availability of national connectivity for testing; data communications middleware; identification of interface standards; common software tools and components; and a data archive and reuse repository. It also funds JMETC program management, facilities, equipment, operating costs, and special studies and analysis related to test capabilities and infrastructure. Key attributes of the JMETC include: persistency; interoperability; reuse; various combinations of distributed capabilities (reconfigurable infrastructure to meet customer requirements); modeling and simulation (M&S) linkage; Live-Virtual-Constructive (LVC) test resource integration; and common support to both Service and Joint needs. System engineering, training, and experimentation all benefit from a corporate JMETC developed for T&E.

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The Test Resource Management Center (TRMC) is the Department's lead for the JMETC program, and oversees both its development and its operations.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	8.616	9.455	0.000	0.000	0.000
Current President's Budget	8.286	9.379	10.287	0.000	10.287
Total Adjustments	-0.330	-0.076	10.287	0.000	10.287
• 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	-0.330	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Program Adjustments	0.000	-0.076	10.287	0.000	10.287

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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
100: <i>Joint Mission Environment Test Capability (JMETC)</i>	8.286	9.379	10.287	0.000	10.287	10.494	10.763	10.920	11.070	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Joint Mission Environment Test Capability (JMETC) Program provides the infrastructure for distributed testing of systems during development. The JMETC program implements the infrastructure capabilities defined in the Testing in a Joint Environment Roadmap to provide Acquisition Program Managers a robust nation-wide capability to "Test Like We Fight." JMETC provides a persistent distributed test and evaluation (T&E) capability that otherwise would not be readily available to Service/Component development programs. This program is funded within the RDT&E Management Support Budget Activity because it is intended to provide test capability in support of RDT&E programs.

JMETC creates a common corporate capability to link live systems with virtual and constructive representations to generate a realistic joint mission test environment for the system(s) being tested. JMETC is a widely applicable, persistent, service provider for Department acquisition and net-centric programs. Key JMETC products include readily available connectivity over existing Department networks, standard data transport solutions, tools and utilities for planning and conducting distributed integrations, and a reuse repository. This common integration capability, through the use of the Test and Training Enabling Architecture (TENA), provides compatibility between JMETC and the Joint National Training Capability (JNTC), streamlining reuse of technical resources across test and training communities. In turn, this enables combined test and training exercises. JMETC capabilities will migrate, along with other RDT&E capabilities, to a mature Global Information Grid (GIG) Defense Information Systems Network (DISN) Core.

By linking distributed facilities, JMETC allows customers to efficiently evaluate their warfighting capability in a realistic joint environment. This enables a customer-defined joint mission test environment for systems engineering and testing, extensible to training and experimentation, in a timely and cost effective manner.

JMETC's institutional funding builds, maintains, and operates the JMETC, and pays for persistent availability of national connectivity for testing; data communications middleware; identification of interface standards; common software tools and components; and a data archive and reuse repository. It also funds JMETC program management, facilities, equipment, operating costs, and special studies and analysis related to test capabilities and infrastructure. Key attributes of the JMETC include: persistency; interoperability; reuse; various combinations of distributed capabilities (reconfigurable infrastructure to meet customer requirements); modeling and simulation (M&S) linkage; Live-Virtual-Constructive (LVC) test resource integration; and common support to both Service and Joint needs. System engineering, training, and experimentation all benefit from a corporate JMETC developed for T&E.

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The Test Resource Management Center (TRMC) is the Department's lead for the JMETC program, and oversees both its development and its operations.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Joint Mission Environment Test Capability <i>FY 2009 Accomplishments:</i> - Completed initial development and began upgrade of the Reuse Repository to provide general program information; provided lessons learned from previous events; stored software interfaces, tools, utilities, and test metadata; provided capabilities of each site on the JMETC VPN; provided all help desk functions; hosted the portal for the "best of breed" tools process; and provided opportunity for collaboration, making all available to the DoD T&E Community for reuse. - Completed a capabilities based assessment on Joint distributed test infrastructure for implementation of IPv6 at test facilities and laboratories, applicability of Service Oriented Architectures (SOA) to support distributed testing, and the test infrastructure needed for GIG-enabled systems. - Continued to provide support to acquisition programs and events as follows: Joint Persistent Fire 01, Joint Expeditionary Forces Experiment (JEFX) 09-02 and 03, Broad Area Maritime Surveillance System (BAMS) Live, Virtual, Constructive (LVC) Distributed Event (DE) (Unmanned Aircraft Systems in a National Airspace); Joint Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (JC4ISR) Interoperability Test and Evaluation Capability (InterTEC) System Integration Test, Air Force Strategic Integrated M&S Capability Event (SIMACE), Test and Training Enabling Architecture (TENA) Developmental Test, Multi-Service System-of-Systems Test Bed (MSSTB), and the Joint Surface Warfare (JSuW) Joint Capability Technology Demonstration (JCTD). - Continued collaboration with the Air Force Integrated Collaborative Environment (AF-ICE) to leverage efficiencies through use of the provided JMETC products and services infrastructure. Completed integration of AF-ICE test sites into the JMETC Virtual Private Network (VPN). - Continued coordination discussions and plans with the Navy Distributed Engineering Plant (DEP) for supporting their distributed events by providing the necessary infrastructure. JMETC and Navy DEP	8.286	9.379	10.287	0.000	10.287

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
conducted a risk reduction evaluation event prior to aid in planning for the integration of Navy DEP sites into the JMETC VPN in FY10. - Continued providing requirements analysis support to acquisition programs such as Small Diameter Bomb, Brigade Combat Team Modernization, Joint Integrated Air and Missile Defense’s Joint Track manager, and Multi-Mission Maritime Aircraft (MMA). - Continued collaboration with AF-ICE and Navy DEP distributed test events to leverage efficiencies through use of the JMETC infrastructure. - Continued to work with the JMETC Users Group to facilitate development and incorporation of the highest priority improvements to the distributed test software and standard interfaces to meet customer requirements. JMETC conducted three Users Group meetings in FY09 with an average of 225 participants from all DoD Components. Through the JMETC Users Group, the JMETC program office has begun to assess and evaluate “best-of-breed” distributed test tools for application by the DoD T&E Community. - Continued to develop customer support providing acquisition programs and test ranges with technical assistance on JMETC capabilities, standards, interfaces, tools, available nodes, and expertise in planning and conducting distributed tests. - Continued to expand the JMETC VPN from 33 sites to 38 sites to meet customer requirements. Added a second (West Coast) aggregation router and initiated risk reduction steps to provide peer connectivity to the Army Cross Command Collaborative Effort (3CE). - Continued conducting a technical watch for commercially available software tools to reinforce the current suite of JMETC standard distributed test support tools. - Continued outreach efforts to new acquisition programs that must demonstrate compliance with Net-Ready Key Performance Parameter requirements. - Continued planning support to on-going programs, particularly JEFX, Gerald R. Ford Class (CVN-21), Army Brigade Combat Team Modernization, Navy Program Executive Office (PEO) for Integrated Warfare Systems, and InterTEC as well as future planning support to Joint Strike Fighter (JSF) and MMA for their distributed test events.						

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Initiated the coordination with the Army to integrate the United States Army Test and Evaluation Command (ATEC) Test Integration Network (ATIN) into the JMETC VPN in FY10. - Established the DoD Information Assurance Certification and Accreditation Process (DIACAP) Tiger Team to identify issues/impacts with current DIACAP implementation and to generate actionable recommendations to DoD Senior Leaders to improve DIACAP policy and/or implementation. - Continued planning support to on-going acquisition programs, particularly CVN-21, Army Brigade Modernization, NECC, JSF, and InterTEC. <i>FY 2010 Plans:</i> - Complete the DIACAP Tiger Team Senior-Level Report and provide to DoD Senior Leaders. - Continue to provide distributed test support for seven major customer events such as JEFX 2010 program, Air Ground Integrated Layer Exploration (AGILE) Fire, BAMS LVC DE, United Endeavor 10-1, Terminal Fury, Battlefield Airborne Communications Node (BACN) Joint Urgent Operational Need (JUON), and Austere Challenge. - 10 smaller test activities. Assist customers with distributed test tools and expertise for planning their distributed events. - Continue outreach efforts to new acquisition programs that must demonstrate compliance with Net-Ready Key Performance Parameter requirements. - Continue to provide general distributed test support to customers such as BAMS, Army Brigade Combat Team Modernization, MMA, CVN-21, JEFX, MMSTB, BACN JUON, Air Force Special Operations Command, and InterTEC Spiral 3, and for 3-Continue to provide distributed test planning support to other customers for their distributed test events. - Continue to support and upgrade the JMETC Reuse Repository to store software interfaces, tools, utilities, and test metadata making all available to the DoD test community for reuse. Launch Reuse Repository version 2.0. - Continue to expand and sustain the JMETC VPN to some 45 sites to meet customer requirements in full consideration of maximizing the potential for reuse. Continue coordination with High Performance Computing Modernization Office (HPCMO) to develop plans to transition to the GIG (DISN Core) when								

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
the DISN Core meets the requirements for the Secure Defense Research and Engineering Network (SDREN) to make the transition. - Continue to integrate Navy DEP and ATIN sites into the JMETC VPN. - Continue “best of breed” distributed test tools selection process in coordination with the JMETC Users Group and complete plans and resource requirements determinations to sustain the “selected” tools. FY 2011 Base Plans: - Continue outreach efforts to new acquisition programs that must demonstrate compliance with Net-Ready Key Performance Parameter requirements. - Continue planning support to on-going acquisition programs, particularly JEFX, CVN-21, Army Brigade Combat Team Modernization, NECC, JSF, and InterTEC. - Continue to provide distributed test planning support to other customers for their distributed test events. - Continue collaboration with AF-ICE and Navy DEP distributed test events to leverage efficiencies through use of the JMETC infrastructure. - Continue to support and upgrade the JMETC Reuse Repository to store software interfaces, tools, utilities, and test metadata making all available to the DoD test community for reuse. - Continue to sustain the JMETC VPN and expand as necessary to meet customer requirements in full consideration of maximizing the potential for reuse. Continue coordination with HPCMO to develop plans to transition to the GIG (DISN Core) when the DISN Core meets the requirements for the SDREN to make the transition. - Continue “best of breed” distributed test tools selection process in coordination with the JMETC Users Group and complete plans and resource requirements determinations to sustain the “selected” tools. Begin sustainment of “selected” tools. - Continue to expand and sustain the JMETC VPN to some 69 sites to meet customer requirements in full consideration of maximizing the potential for reuse.								

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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: N/A					
Accomplishments/Planned Programs Subtotals				8.286	9.379
				10.287	0.000
				10.287	
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy N/A					
E. Performance Metrics - Expansion of initial capability to support acquisition program test requirements, providing distributed capability to test systems and demonstrating required joint capability. - Successful use of integration software compatible with the JNTC and Joint Training infrastructure. - Number of test sites/locations that are reused to support distributed tests using the JMETC infrastructure.					

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