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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: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	R-1 ITEM NOMENCLATURE PE 0603828D8Z: <i>Joint Experimentation</i>
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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
Total Program Element	100.253	106.800	111.946	0.000	111.946	113.999	115.297	117.153	119.245	Continuing	Continuing
P808: <i>Joint Experimentation</i>	100.253	106.800	111.946	0.000	111.946	113.999	115.297	117.153	119.245	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Experimentation (JE) Program Element is the lynchpin resource underwriting a diverse portfolio of experiments and concept development activities addressing the needs of the joint warfighter. Projects typically confirm critical joint mission capability gaps; identify potential remedies; explore a range of Doctrine, Organizational, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P) solutions; and establish the best path to solving security challenges. Experiments span a spectrum from early efforts to develop new joint operational concepts, to refinement of joint doctrine, to scenario-based examination of potential technology-based solutions. By defining emergent shortfalls and exploring force enhancement options, JE is essentially an early risk mitigation tool preceding implementation of doctrine changes, advanced prototype demonstrations and acquisition decision investments. Joint Combatant Commanders (COCOMs) and Services are the primary customers of projects funded by the JE Program, but these projects provide collateral benefits to a wider Defense Experimentation Enterprise including Agencies and the Office of the Secretary of Defense (OSD) as well as intra-government, international and Non-Government Organization (NGO) partners. The experiments funded by this program establish the path to resolve current joint warfighting deficiencies and lay the foundation for effective future joint forces. Director, Defense Research & Engineering (DDR&E) within the Office of the Secretary of Defense (OSD) provides oversight to ensure alignment with strategic guidance and emphasizes disciplined design and cost control of individual projects with meaningful results that can be assessed with metrics based on incremental force improvements. Flexibility is maintained in the JE Program to address emergent requirements identified by Combatant Commanders and Services, and necessary to resolve operational capability gaps that require time sensitive solutions for operational forces. Commander, U.S. Joint Forces Command and Director, Defense Research & Engineering work in concert to provide responsive support to customers and partners.

The JE Program Element provides funding for the Department's Joint Experimentation (JE) effort led by US Joint Forces Command (USJFCOM). The JE Enterprise includes the COCOMs, the military services, the National Guard, the Joint Staff, the Office of the Secretary of Defense (OSD), and several Defense Agencies. Intra-government agencies and coalition partners often participate in JCDE processes and projects. JE primarily serves the COCOMs and Services, but important collateral benefits accrue to other members and partners in the extended experimentation community. For example, much of the joint content in military "Title 10" wargames can be traced to coordination within the JE Enterprise. JE experiments originate from an annual call for nominations, as well as an assessment of COCOM identified critical warfighting capability gaps articulated in the Integrated Priority Lists submitted to the Chairman of the Joint Chiefs of Staff (CJCS). JE nominations undergo preliminary analysis by USJFCOM to confirm topic suitability for experimentation and, where feasible, to associate closely related subjects for economy of effort. The resultant list is termed Warfighter Challenges (WFC) and constitutes the list of experimentation efforts eligible for design and execution. The JE enterprise ranks WFCs before

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APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 0603828D8Z: <i>Joint Experimentation</i>

preliminary experimentation plans are developed. In consultation with JE partners, USJFCOM formulates an annual program of experimentation intended to support the widest customer base, while addressing the highest priorities and yielding meaningful outcomes.

JE experiments and activities examine potential solutions for COCOM operational needs through targeted DOTMLPF-P improvements. JE tackles joint capability issues demanding sophisticated analysis, innovative design and complex execution. JE addresses topics that would prove difficult for individual COCOMs and Services to capture in the context of their immediate operational and force generation responsibilities. Experiments and efforts produce a range of outcomes inclusive of fundamental joint doctrine, inputs to major policy documents such as Guidance for Development of the Force (GDF) and Guidance for Employment of the Force (GEF). In partnership with the COCOMs and military services, JE mitigates operational risk by establishing procedural models to conduct emergent concepts like Irregular Warfare that are not yet instantiated in conventional force generation.

JE examines joint concepts and develops exploratory concepts in an effort to describe how the Joint Force Commander will operate to meet current and future security challenges, and examines the joint capabilities required to execute the concepts. To support the continued transformation of the joint force even while it is engaged in operations around the world, joint concept development applies historical precedents, lessons learned from current operations, and studies the projected joint operational environment to advance the conceptual foundation for the future force. A relatively stable investment projection for the JE Program drives aggressive efforts to derive greater return on investment for the DoD in the face of increasing demand for projects from COCOMs and joint experimentation partners.

Joint and Service experimentation are complementary efforts. Joint experimentation focuses on the needs of the Joint Force Commander, while Service experimentation enables the components the Joint Force Commander will employ. Complementing the experimentation efforts undertaken by USJFCOM (JCDE directorate), other COCOMs may conduct Limited Objective Experiments (LOEs) to address operational capability gaps and support identification of potential solutions for theater specific and functional joint warfighter needs, as part of the overall JCDE campaign. Within the process, the JCDE enterprise leverages Service wargame/experimentation to address joint challenges. All experimentation activities undertaken are coordinated within the JCDE enterprise to cover gaps and avoid unnecessary duplication, and the results are reported to the enterprise. The collaborative planning effort of the JCDE enterprise is intended to ensure joint context, concepts, and anticipated capabilities are effectively integrated into service experimentation as appropriate.

A biennial report captures activities across the Defense Experimentation domain to inform Congress of program execution and project accomplishments.

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0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i>	PE 0603828D8Z: <i>Joint Experimentation</i>
BA 3: <i>Advanced Technology Development (ATD)</i>	

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	114.947	124.480	0.000	0.000	0.000
Current President's Budget	100.253	106.800	111.946	0.000	111.946
Total Adjustments	-14.694	-17.680	111.946	0.000	111.946
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-20.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.320			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-5.436	0.000			
• SBIR/STTR Transfer	-2.620	0.000			
• Other Program Adjustments	-6.638	0.000	111.946	0.000	111.946

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: P808: *Joint Experimentation*

Congressional Add: *Collaboration Gateway*

Congressional Add: *Tidewater Full Scale Exercise*

Congressional Add Subtotals for Project: P808

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	1.200	0.000
	0.000	2.320
Congressional Add Subtotals for Project: P808	1.200	2.320
Congressional Add Totals for all Projects	1.200	2.320

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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
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A. Mission Description and Budget Item Justification

The Joint Experimentation (JE) Program Element is the lynchpin resource underwriting a diverse portfolio of experiments and concept development activities addressing the needs of the joint warfighter. Projects typically confirm critical joint mission capability gaps; identify potential remedies; explore a range of Doctrine, Organizational, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P) solutions; and establish the best path to solving security challenges. Experiments span a spectrum from early efforts to develop new joint operational concepts, to refinement of joint doctrine, to scenario-based examination of potential technology-based solutions. By defining emergent shortfalls and exploring force enhancement options, JE is essentially an early risk mitigation tool preceding implementation of doctrine changes, advanced prototype demonstrations and acquisition decision investments. Joint Combatant Commanders (COCOMs) and Services are the primary customers of projects funded by the JE Program, but these projects provide collateral benefits to a wider Defense Experimentation Enterprise including Agencies and the Office of the Secretary of Defense (OSD) as well as intra-government, international and Non-Government Organization (NGO) partners. The experiments funded by this program establish the path to resolve current joint warfighting deficiencies and lay the foundation for effective future joint forces. Director, Defense Research & Engineering (DDR&E) within the Office of the Secretary of Defense (OSD) provides oversight to ensure alignment with strategic guidance and emphasizes disciplined design and cost control of individual projects with meaningful results that can be assessed with metrics based on incremental force improvements. Flexibility is maintained in the JE Program to address emergent requirements identified by Combatant Commanders and necessary to resolve operational capability gaps that require time sensitive solutions for operational forces. Commander, U.S. Joint Forces Command and Director, Defense Research & Engineering work in concert to provide responsive support to experimentation customers and partners.

The JE Program Element provides funding for the Department's Joint Experimentation (JE) effort led by US Joint Forces Command (USJFCOM). The JE Enterprise includes the COCOMs, the military services, the National Guard, the Joint Staff, the Office of the Secretary of Defense (OSD), and several Defense Agencies. Intra-government agencies and coalition partners often participate in JCDE processes and projects. JE primarily serves the COCOMs and services, but important collateral benefits accrue to other members and partners in the extended experimentation community. For example, much of the joint content in military "Title 10" wargames can be traced to coordination within the JE Enterprise. JE experiments originate from an annual call for nominations, as well as an assessment of COCOM identified critical warfighting capability gaps articulated in the Integrated Priority Lists submitted to the Chairman of the Joint Chiefs of Staff (CJCS). JE nominations undergo preliminary analysis by USJFCOM to confirm topic suitability for experimentation and, where feasible, to associate closely related subjects for economy of effort. The resultant list is termed Warfighter Challenges (WFC) and constitutes the list of experimentation efforts eligible for design and execution. The JE enterprise ranks WFCs before preliminary experimentation plans are developed. In consultation with JE partners, USJFCOM formulates an annual program of experimentation intended to support the widest customer base, while addressing the highest priorities and yielding meaningful outcomes.

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<p>JE experiments and activities examine potential solutions for COCOM operational needs through targeted DOTMLPF-P improvements. JE tackles joint capability issues demanding sophisticated analysis, innovative design and complex execution. JE addresses topics that would prove difficult for individual COCOMs and services to capture in the context of their immediate operational and force generation responsibilities. Experiments and efforts produce a range of outcomes inclusive of fundamental joint doctrine, inputs to major policy documents such as Guidance for Development of the Force (GDF) and Guidance for Employment of the Force (GEF). In partnership with the COCOMs and military services, JE mitigates operational risk by establishing procedural models to conduct emergent concepts like Irregular Warfare that are not yet instantiated in conventional force generation.</p> <p>JE examines joint concepts and develops exploratory concepts in an effort to describe how the Joint Force Commander will operate to meet current and future security challenges, and examines the joint capabilities required to execute the concepts. To support the continued transformation of the joint force even while it is engaged in operations around the world, joint concept development applies historical precedents, lessons learned from current operations, and studies the projected joint operational environment to advance the conceptual foundation for the future force. A relatively stable investment projection for the JE Program drives aggressive efforts to derive greater return on investment for the DoD in the face of increasing demand for projects from COCOMs and joint experimentation partners.</p> <p>Joint and Service experimentation are complementary efforts. Joint experimentation focuses on the needs of the Joint Force Commander, while Service experimentation enables the components the Joint Force Commander will employ. Complementing the experimentation efforts undertaken by USJFCOM (JCDE directorate), other COCOMs may conduct Limited Objective Experiments (LOEs) to address operational capability gaps and support identification of potential solutions for theater specific and functional joint warfighter needs, as part of the overall JCDE campaign. Within the process, the JCDE enterprise leverages Service wargame/experimentation to address joint challenges. All experimentation activities undertaken are coordinated within the JCDE enterprise to cover gaps and avoid unnecessary duplication, and the results are reported to the enterprise. The collaborative planning effort of the JCDE enterprise is intended to ensure joint context, concepts, and anticipated capabilities are effectively integrated into service experimentation as appropriate.</p> <p>A biennial report captures activities across the Defense Experimentation domain to inform Congress of program execution and project accomplishments.</p> <hr/> <p>Description (JE Program): The JE Program delivers relevant, sufficient, and necessary DOTMLPF-P comprehensive solutions responding to specific needs of Joint Force Commander articulated Warfighter Challenges. Warfighter Challenges focus on solving DoD's most important security challenges now and for the future: inform and are informed by strategic guidance; and address issues from the tactical to strategic levels of war. From the perspective of OSD engagement and oversight, emphasis will be focused on the following refinements to influence the JE business model.</p>		

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<p>Refinements to the JE business model. Aiming to constantly improve return on investment, USJFCOM and OSD partners engage partners throughout the Department of Defense to join the experimentation process and to incorporate results in policy, doctrine, tactics, materiel, training and operational procedures. In pragmatic terms, this effort to distill ever greater benefit includes:</p> <ul style="list-style-type: none"> - Tracing JE efforts to discriminate changes to joint capabilities. - Tying JE closer to Department operational analysis & Defense Planning Scenarios. - Periodically and deliberately rebalancing near-term critical capability adjustments and long-term capability conceptualization. - Positioning joint experimentation in a larger scheme of overarching capability development that begins with lessons learned and critical analysis, enjoins experimentation, and progresses through demonstration, acquisition, and training. - Designing experiments for more responsive deliverables through quicker starts, event-driven "go/no go" reviews, and incremental designs permitting faster "do-learn-decide" cycles for continued investment. <p>Analytical Rigor.</p> <p>Increased emphasis has been placed on adherence to standards of analytical rigor in design, conduct, and exploitation of experiments. A significant part of this rigor is aligning the JE to warfare areas common to wider areas of Defense analyses. FY 10 and FY 11 experimentation efforts are organized into Lines of Joint Experimentation (LOJX), grouping prioritized war fighter challenges into areas of related or complementary work. This organizational construct facilitates DoD-wide understanding and tracking of planned joint experimentation activities and resulting products and outcomes by matching the Tier 1 Joint Capability Areas. JE work follows seven LOJXs, including: Battlespace Awareness (BA), Building Partnerships (BP), Command & Control (C2), Force Application (FA), Logistics (LOG), Net – Centric (NC) and Protection (P). In addition, in FY 08, USJFCOM employed Community Management and Support to establish the DoD-wide JE Enterprise. The Enterprise will continue to contribute to overall DoD JE results.</p> <p>Initiatives.</p> <ul style="list-style-type: none"> - Contract Vehicle Initiative. USJFCOM completed an ambitious multi-year effort to redesign their contracted support vehicle for JE. Departing from the model of a single large contractor, USJFCOM's awarding of a new contract structure including three prime vendors enables the command to compete bids for individual experiment support. Early results from FY09 indicate noteworthy decline in per event experimentation costs, increasing the enterprises ability to address backlogged requests (warfighter challenges) from enterprise customers. - Networked Coordination. Introduction of a Virtual Operations Center (VOC) to allow Enterprise-wide transparency and holds the potential for decreasing travel associated with customer service and enterprise-wide coordination. Increasing use of distributed experimentation design will allow geographically separated groups to join experiment projects from their home bases, again saving travel funds and increasing potential partner base. - Transition of the JCDE enterprise from an independent computer network to the USJFCOM computer network, and a consolidation of Information Technology support have potential to further decrease indirect cost within the enterprise. 		

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<p>FY10-11 experimentation efforts seek to provide innovative joint solutions and joint interoperability standards to address capability shortfalls identified by Warfighter Challenges organized within the DoD Joint Capability Areas (JCA). This organizational construct facilitates DoD-wide understanding and tracking of planned joint experimentation activities and resulting products and outcomes by matching the Tier 1 Joint Capability Areas. The FY10, Warfighter Challenges mapped to seven JCAs: Battlespace Awareness, Building Partnerships, Command and Control, Force Application, Logistics, Net-Centric, and Protection. Force Support and Corporate Management and Support JCAs did not have FY10 Warfighter Challenges that could be mapped to the JCAs. The JE enterprise is capable and prepared to accept Warfighter Challenges from all nine JCA's.</p>						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Building Partnerships (BP)</p> <p>The evolving nature of joint operations creates a corresponding need to integrate operations with international, governmental and non-governmental partners to address a wide variety of security challenges using a comprehensive approach.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> • Provided the defense portion of an integrated interagency security sector assessment to support COCOM/Joint Task Force (JTF) peacetime engagement planning; validated in Albania and provided basis for assessment for JTF 435 in Afghanistan. • Developed seven pre-doctrinal publications to improve coalition force ability to counter irregular adversaries; benefitting 18 international partners and NATO. • Developed and applied a series of Joint Commander Handbooks to guide planning and coordination with USG agencies; incorporated into Joint doctrine; supported ISAF campaign assessment and JTF 435 rule of law planning. • Developed Armed Private Security Contractor Guide to enable the Joint Force Commander in establishing operational and functional relationships with armed private security contractors to achieve theater mission objectives. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> • Develop and validate a planning framework and procedures to support Inter-Agency (IA) steady-state campaign planning. 		22.764	15.401	23.998	0.000	23.998

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B. Accomplishments/Planned Program (\$ in Millions)						
<p>Joint force commander requires secure, robust and reliable networks to provide responsive command and control in complex, chaotic and degraded information environments to integrate and share information with a full range of partners.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> • Provided training and education, targeting support and automation initiatives to meet targeting needs of combatant commanders; initiatives were institutionalized by the Joint Staff at the direction of the Joint Chief's of Staff Vice Chairman. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> • Develop the following products to address shortfalls in DOD's ability to conduct cyberspace operations(CYBEROPS): <ul style="list-style-type: none"> - Offensive cyber manning model. - Cyberspace operations crisis action planning template. - Computer network attack measures of performance and measures of effectiveness guide. - Joint force commanders' planning guide for cyberspace operations. <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> • Conduct prototyping of cyber operations to improve integration and synchronization of cyberspace operations across DOD and IA organizations. • Enable Ballistic Missile Defense C2 across COCOM seams and boundaries by improving planning and collaboration between component commanders and COCOMs. • Develop capabilities, processes and procedures across all levels of warfare for the continuation of operations in a degraded communications environment, including cyber attack. • FY 11 projects will be further developed based on Enterprise Warfighter Challenges with continued support to perennial and new Joint Service Experimentation efforts. 						
Force Application (FA)						
		14.606	15.618	15.426	0.000	15.426

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B. Accomplishments/Planned Program (\$ in Millions)																	
<ul style="list-style-type: none"> • FY 11 projects will be further developed based on Enterprise Warfighter Challenges with continued support to perennial and new Joint Service Experimentation efforts. 																	
<table border="1"> <thead> <tr> <th></th> <th align="center">FY 2009</th> <th align="center">FY 2010</th> <th align="center">FY 2011 Base</th> <th align="center">FY 2011 OCO</th> <th align="center">FY 2011 Total</th> </tr> </thead> <tbody> <tr> <td> Protection (P) Joint Force Commander lacks sufficient ability to detect, prevent and mitigate adverse effects of attacks on personnel (combatant/non-combatant) and physical assets of the United States, allies and friends. <i>FY 2009 Accomplishments:</i> <ul style="list-style-type: none"> • Defined current authorities, responsibilities, capabilities and identified gaps and seams throughout DOD and USG agencies to resolve critical challenges in combating WMD operations. <i>FY 2010 Plans:</i> <ul style="list-style-type: none"> • Identify organizational and operational construct to detect, interdict and seize, destroy or defeat nuclear yield devices to fill identified capability gaps in WMD mission areas. • Identify organizational structures, architectures, processes, capabilities, and supporting authorities enabling development of an operating concept that defined DOD's role in Non-Domestic Consequence Management (NDCM). • Develop a concept and commander's handbook, and identify promising mid-term capabilities for countering irregular threats to air operations. • Identify requirements and develop CONOPs and TTPs to counter irregular adversary ability to deploy and employ Precision Guided Munitions. <i>FY 2011 Base Plans:</i> <ul style="list-style-type: none"> • Expand the joint force capability to detect, track and engage the full range of missile threats against the homeland. • Increase effectiveness of the CBRNE response sourcing and sustainment by improving an operating concept and organizational construct. </td> <td align="center">14.946</td> <td align="center">16.088</td> <td align="center">15.890</td> <td align="center">0.000</td> <td align="center">15.890</td> </tr> </tbody> </table>							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Protection (P) Joint Force Commander lacks sufficient ability to detect, prevent and mitigate adverse effects of attacks on personnel (combatant/non-combatant) and physical assets of the United States, allies and friends. <i>FY 2009 Accomplishments:</i> <ul style="list-style-type: none"> • Defined current authorities, responsibilities, capabilities and identified gaps and seams throughout DOD and USG agencies to resolve critical challenges in combating WMD operations. <i>FY 2010 Plans:</i> <ul style="list-style-type: none"> • Identify organizational and operational construct to detect, interdict and seize, destroy or defeat nuclear yield devices to fill identified capability gaps in WMD mission areas. • Identify organizational structures, architectures, processes, capabilities, and supporting authorities enabling development of an operating concept that defined DOD's role in Non-Domestic Consequence Management (NDCM). • Develop a concept and commander's handbook, and identify promising mid-term capabilities for countering irregular threats to air operations. • Identify requirements and develop CONOPs and TTPs to counter irregular adversary ability to deploy and employ Precision Guided Munitions. <i>FY 2011 Base Plans:</i> <ul style="list-style-type: none"> • Expand the joint force capability to detect, track and engage the full range of missile threats against the homeland. • Increase effectiveness of the CBRNE response sourcing and sustainment by improving an operating concept and organizational construct. 	14.946	16.088	15.890	0.000	15.890
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> • Identified the Joint Urban Operations (JUO) unique capability gaps within the JUO Joint Integrating Concept (JIC) 12 required capabilities, and production of sufficient data to achieve transition. • Developed the JUO Master Plan as the overarching strategy to provide direction to DOTMLPF-P initiatives and supporting Joint Capability Integration & Development System (JCIDS) documentation. • Executed discovery seminar wargames with multi-national, interagency, and academic partners to develop understanding of how to positively influence relevant populations and foster multi-national support during conflict "shaping" in complex operational environments and when required defeat adversaries embedded within urban areas while protecting the population and society. (Joint Urban Warrior 09 and US-Israel Hybrid Threat Seminar) • Conducted the Small Unit Decision Making Limited Objective Experiment (LOE) which identified how war fighters make decisions under stress (sensory overload). The results informed Service training programs of record to develop realistic combat training environments for live, virtual and constructive (LVC) training/ decision making (tactical, moral, legal and ethical). <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> • Continue development, articulation and refinement of DOD Joint Urban Operations Master Plan, as a comprehensive document describing DoD's approach to lead, coordinate, and integrate urban operations doctrine, organization, training, and equipment that transform the capability to conduct urban operations. • Partner with the Joint Unmanned Aerial System Center of Excellence (JUAS COE) to assess current and planned efforts to employ unmanned aircraft systems (UAS) for Foreign Internal Defense and Influence Operations and in support of current operations. • Develop the DoD Test and Evaluation Strategic Plan to improve the replication of the Urban Environment for T&E, that results in better understanding and risk assessment in the system development process. • Lead the enterprise partnership improving M&S capabilities related to the small unit training simulations and urban environment to optimize service programs and improve population models that support training, analysis and experimentation. 					

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		R-1 ITEM NOMENCLATURE PE 0603828D8Z: <i>Joint Experimentation</i>		PROJECT P808: <i>Joint Experimentation</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>The Joint Futures Group (JFG) is the Command's team to identify the next big challenges or opportunities for the joint force that are not being addressed elsewhere in DOD. It is a unique entity within Joint Forces Command that utilizing analytic and research processes integrates future thinking and extrapolates likely future operational environments within which to generate innovative ideas about challenges and military implications for the Department of Defense. The JFG integrates the results of its "futures" research into down stream processes for concept development, experimentation scenarios, capabilities definition, doctrine, and training.</p> <p>The objective of the JFG is to provide a vision of the future and support identification and articulation of joint force implications, through collection, analysis, synthesis, dissemination of the world's strategic and international relations futures. The current means of articulation is the Joint Operating Environment (JOE) report. Further, the JOE provides the foundational problem statement for the CJCS's Capstone Concept for Joint Operations (CCJO), and is intended to inform the development of Joint Operating Concepts and Joint Integrating Concepts, as well as to provide a framework to experiment with those concepts through its vision of the future. Support to the analytical agenda consists of improving and refining the Defense Planning Scenarios (DPS) and ensuring that the DPSs reflect a balanced and plausible set of irregular and hybrid warfare challenges.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> • Supported the Chairman's CCJO, completed 2008 JOE and 2009 JOE White Paper Update. Produced research papers with emphasis on the future trends, conditions, challenges, and opportunities faced by future joint warfighting. • At the request of the COCOMs, services, and multinational governments provided "future briefs" to combatant commanders, DOD officials, multinational partners, war colleges, concept developers, Services, and senior contractors. • Supported OSD by developing and refining classified DPS and QDR documents. 								

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> • Air Force – Unified Engagement 09: With support to the Air Force in FY09 for the execution Unified Engagement 10 in FY10, provided joint analysis and planning resources to provide solutions to a potential 15 FY10 warfighter challenges and three Chief of Staff, Air Force objectives. • Marines – Expeditionary Warrior 09: Supported the Marine Corps Warfighting Laboratory with joint analysis and subject matter expertise to inform the Counter – Insurgency Joint Integrating Concept, and Seabasing capabilities. <p><i>FY 2010 Plans:</i></p> <p>COCOM Experimentation</p> <ul style="list-style-type: none"> • Support to USNORTHCOM with joint analysis and consequence management subject matter expertise for two limited objective experiments to revise the Homeland Defense and Civil Support Joint Operating Concept version 4.0. • Support USSTRATCOM with facilities and network architecture to execute Nimble Titan 10 that will explore coalition mission defense policy, challenges, and solutions. • Provide experiment design/control and joint analysis support to USEUCOM/USAFRICOM/ USTRANSCOM in execution of Theater Lift/Point of Need Delivery (POND). Project will determine near, mid, and long term solution to deliver within 3-5 days a ready-to-employ, task organized element up to brigade-sized or equivalent, to or from a point-of-need, independent of receptive infrastructure. <p>Joint Service Experimentation</p> <ul style="list-style-type: none"> • Army – Unified Quest 10: Support the Army’s Training and Doctrine Command with joint analysis for major irregular warfare experimentation efforts within the Unified Quest 10 campaign of learning. 					

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> • Army – Earth, Wind, and Fire 10: Support the Army’s Training and Doctrine Command with joint analysis to inform the Joint Air Ground Integration Cell to provide solutions to airspace de-confliction and integration. • Air Force – Unified Engagement 10: Provide joint analysis and planning resources to provide solutions to warfighter challenges and Chief of Staff, Air Force objectives. • Marines – Expeditionary Warrior 10: Support the Marine Corps Warfighting Laboratory with joint analysis and subject matter expertise to inform the Seabasing concept. <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> • FY 11 projects will be further developed based on Enterprise Warfighter Challenges with continued support to perennial and new Joint Service Experimentation efforts. 						
Accomplishments/Planned Programs Subtotals		99.053	104.480	111.946	0.000	111.946
		FY 2009	FY 2010			
Congressional Add: Collaboration Gateway <i>FY 2009 Accomplishments:</i> <ul style="list-style-type: none"> • Completed development of Collaboration Gateway 2.0 • Completed IV&V testing of CG 2.0 • Completed Operational Use Assessments in CWID09, Trident Warrior 09, Empire Challenge 09 • Completed fielding of CDCIE Chat 1.2 to USCENTCOM (Bagram AFB) • Completed integration of CG 2.0 with DataSyncGuard 3.0, Radiant Mercury 5.0, and ISSE Guard 4.0 		1.200	0.000			
Congressional Add: Tidewater Full Scale Exercise		0.000	2.320			

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B. Accomplishments/Planned Program (\$ in Millions)		
	FY 2009	FY 2010
<p><i>FY 2010 Plans:</i> Funds executed by Virginia Modeling and Simulation Center to implement a multi-agency, statewide emergency modeling and simulation exercise to enhance responses to security threats to the Commonwealth of Virginia. The full scale exercise will involve a coordinated effort between federal, state, and local officials.</p>		
Congressional Adds Subtotals	1.200	2.320

C. Other Program Funding Summary (\$ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance of Joint Experimentation efforts is measured by successful development of:

- (1) objective validation of enhanced capabilities enabling the joint force commander to perform joint missions.
- (2) delivery of relevant, intellectually rigorous joint concepts to enhance or change Joint Doctrine.
- (3) confirmed transition of capability/products from experimentation to force implementation through the DOTMLPF-P Change Recommendations (DCR) process.
- (4) identification of innovative integrated solutions and joint interoperability standards for Service and Agency capability developers to pursue.
- (5) resolution of specific joint concept and capability shortfalls delineated through the JCD&E experimentation campaign plan development process.

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