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| Exhibit R-2, PB 2010 Office of Secretary Of Defense RDT&E Budget Item Justification | | | | | | | | DATE: May 2009 | | |
| APPROPRIATION/BUDGET ACTIVITY 0400 - Research, Development, Test & Evaluation, Defense-Wide/BA 3 - Advanced Technology Development (ATD) | | | | | R-1 ITEM NOMENCLATURE PE 0603832D8Z DoD Modeling and Simulation Management Office | | | | | |
| COST (\$ in Millions) | FY 2008 Actual | FY 2009 Estimate | FY 2010 Estimate | FY 2011 Estimate | FY 2012 Estimate | FY 2013 Estimate | FY 2014 Estimate | FY 2015 Estimate | Cost To Complete | Total Cost |
| Total Program Element | 22.068 | 33.602 | 38.505 | | | | | | Continuing | Continuing |
| P476: DoD Modeling and Simulation Management Office | 22.068 | 33.602 | 38.505 | | | | | | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Modeling and Simulation (M&S) is a key enabler of DoD activities in communities such as acquisition, analysis, experimentation, planning, test & evaluation, and training. The strategic objective of the DoD Modeling and Simulation Management Office is to execute enterprise management of a robust, defense-wide M&S capability. The goal is to enhance the return on DoD's M&S investment through funding and coordinating high-priority activities that: (1) encourage collaboration among M&S stakeholders throughout the DoD; (2) promote outreach and better understanding of defense systems, missions, and operations; (3) support efficiency, reduce duplication, and enhance reuse through improved characterization of M&S programs and resources; and (4) leverage the investment in this National Critical Technology within the DoD, with other governmental agencies, industry, and academia. Under the authority of DoD Directive 5134.1, Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) provides the oversight for this Modeling and Simulation Management Office Program Element with advice and assistance from a flag-officer level M&S Steering Committee. The Program Element is executed by the Modeling and Simulation Coordination Office (M&S CO) in accordance with DoD Directive 5000.59, Management of Modeling and Simulation, DoD 4120.24-M, DoD Standardization Program (DSP) Policies and Procedures, and DoD Instruction 3200.14, Principles and Operational Parameters of the DoD Scientific and Technical Information Program.

Comment: Performance in this program is monitored in the following ways:

1. Number of instances where M&S standards have been adopted.
2. Number of M&S standards registered with the Defense Standardization Program.
3. Number of M&S capabilities identified in Community M&S business plans and in the Corporate and Crosscutting Business Plan.
4. Number of new M&S gaps addressed in Community M&S business plans and in the Corporate and Crosscutting Business Plan.
5. Number of policy decisions obtaining M&S Steering Committee concurrence, which result in action with the Communities and Services.
6. Number of M&S resources (tools, data, and services) made visible for reuse.
7. Number of curricula available for educating the M&S workforce.
8. Number of collaborative events held with other DoD Departments and Agencies and with coalition partners.

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B. Program Change Summary (\$ in Millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> |
|----------------------------------|----------------|----------------|----------------|----------------|
| Previous President's Budget | 22.639 | 38.147 | 39.208 | |
| Current BES/President's Budget | 22.068 | 33.602 | 38.505 | |
| Total Adjustments | -0.571 | -4.545 | -0.703 | |
| Congressional Program Reductions | | -5.000 | | |
| Congressional Rescissions | | -0.185 | | |
| Total Congressional Increases | | 0.640 | | |
| Total Reprogrammings | | | | |
| SBIR/STTR Transfer | -0.526 | | | |
| Internal realignment of funds | -0.045 | | | |
| Other | | | -0.703 | |

Congressional Increase Details (\$ in Millions)

Project: P476, Modeling and Simulation Standards Development

| | FY 2008 | FY 2009 |
|--|----------------|----------------|
| | | 0.640 |

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| COST (\$ in Millions) | FY 2008 Actual | FY 2009 Estimate | FY 2010 Estimate | FY 2011 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

Modeling and Simulation (M&S) is a key enabler of DoD activities in communities such as acquisition, analysis, experimentation, planning, test & evaluation, and training. The strategic objective of the DoD Modeling and Simulation Management Office is to execute enterprise management of a robust, defense-wide M&S capability. The goal is to enhance the return on DoD's M&S investment through funding and coordinating high-priority activities that: (1) encourage collaboration among M&S stakeholders throughout the DoD; (2) promote outreach and better understanding of defense systems, missions, and operations; (3) support efficiency, reduce duplication, and enhance reuse through improved characterization of M&S programs and resources; and (4) leverage the investment in this National Critical Technology within the DoD, with other governmental agencies, industry, and academia. Under the authority of DoD Directive 5134.1, Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) provides the oversight for this Modeling and Simulation Management Office Program Element with advice and assistance from a flag-officer level M&S Steering Committee. The Program Element is executed by the Modeling and Simulation Coordination Office (M&S CO) in accordance with DoD Directive 5000.59, Management of Modeling and Simulation, DoD 4120.24-M, DoD Standardization Program (DSP) Policies and Procedures, and DoD Instruction 3200.14, Principles and Operational Parameters of the DoD Scientific and Technical Information Program.

The M&S CO is responsible for facilitating and coordinating:

- (1) execution of DoD's Strategic vision for DoD Modeling and Simulation activities
- (2) oversight and strategic governance of DoD's M&S capabilities and resources
- (3) development and implementation of policies, plans, procedures, and DoD issuances to manage M&S, to include the M&S Corporate and Crosscutting Business Plan and the community business plans
- (4) best practices for M&S acquisition, development, management, and use by DoD Components and communities
- (5) development of M&S technologies to meet identified capability gaps

The M&S CO also serves as DoD's:

- (1) lead standardization activity (LSA) for managing modeling and simulation standards and methodologies
- (2) focal point for coordinating DoD M&S outreach activities and interactions with non-DoD M&S agencies including NATO and Partnership for Peace (PfP) nations, The Technical Cooperation Program (TTCP), and other international Allies.

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| <p>The Modeling and Simulation Coordination Office (M&S CO) objectives for community best business practices include:</p> <p>Commonality: making visible and accessible common and crosscutting M&S tools, data, and services.</p> <p>Reuse: fostering visibility, accessibility, and usability of such components.</p> <p>Interoperability: creating and maintaining standards that enhance interoperability among the real operations environment, the simulated operations environment, and the range operations environment.</p> <p>Efficiencies: coordinating enterprise-wide M&S activities for cost efficiency in satisfying departmental strategic requirements including, but not limited to, standards for the use of M&S; DoD M&S Coordination Agents; a DoD M&S Information Analysis Center; and M&S professional development.</p> <p>Effectiveness: enabling enhanced effectiveness and use of M&S through rapid sharing of readily understandable verification, validation, and accreditation information.</p> | | | | |
| B. Accomplishments/Planned Program (\$ in Millions) | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| <p>DoD Modeling and Simulation Management Office</p> <p><i>FY 2008 Accomplishments:</i> The DoD initiated a new M&S management structure and implemented its M&S strategic vision and goals as the foundation for selecting M&S priorities and subsequently allocating resources supporting the Department-level goal to “use all sources of information – combat experience, intelligence, commercial marketplace, and our technology – to inform our choices and to minimize the probability of technology surprise from adversaries.” M&S best business practices provided the necessary capabilities that allow the Warfighter to defeat any adversary on any battlefield. In FY 2008, the DoD Modeling and Simulation Management Office program element accomplished the following: Completed the development of an initial draft of the M&S Corporate and Crosscutting Business Plan and continued the evolution of the Community Business Plans, identifying major capabilities which limit the DoD's effective use of M&S. Continued acting as the USD(AT&L) action agent in developing M&S policies, plans and programs that support the effective and efficient management of the Department's M&S resources. Continued a two-year effort to provide authoritative natural environment representations (initially focused on space and weather) to the DoD M&S community for use in distributed simulation-based activities. Continued a two-year effort to develop recommended changes to policy and guidance for the verification, validation, and accreditation (VV&A) of models and simulations while standardizing VV&A planning and reporting. Addressed Political, Military, Economic, Social, Infrastructure, and Information non-kinetic effects of warfare: consolidated the basic research, continued improving existing models and simulations to</p> | 22.068 | 33.602 | 38.505 | |

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| B. Accomplishments/Planned Program (\$ in Millions) | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| <p>reflect these effects, and initiated an effort to develop a DoD-owned simulation to represent these effects. Improved the capabilities of existing simulations to address homeland defense challenges. Continued to improve the ability to rapidly generate and analyze multi-option operational plans. Continued research necessary to educate the DoD workforce to more effectively employ M&S. Acted as lead standardization activity (LSA) for managing M&S standards and methodologies. Served as focal point for coordinating DoD M&S outreach activities and interactions with non-DoD M&S agencies including NATO and Partnership for Peace (PfP) nations, The Technical Cooperation Program (TTCP), and other international Allies.</p> <p><i>FY 2009 Plans:</i> DoD M&S management is implementing the “Strategic Vision for DoD Modeling and Simulation” and its emerging focus areas of standards, interoperability, and visibility. The goal is to achieve a set of standards for the development, integration, and conduct of DoD M&S activities; improved interoperability driving the Department towards best business practices across the spectrum of DoD activities; and increased capability to discover and reuse modeling and simulation (tools, data, and services) across the Department. Specific high-level tasks planned for FY09-11 include coordinating the development and dissemination of tools for the Department’s chief priority – irregular warfare; managing the DoD #1 M&S priority – standards; developing distributed simulation architectures; evolving towards a net-centric architecture; implementing new Verification, Validation and Accreditation (VV&A) technologies and processes; continuing as lead standardization activity (LSA) for managing M&S standards and methodologies; and serving as focal point for coordinating DoD M&S outreach activities and interactions with non-DoD M&S agencies including NATO and Partnership for Peace (PfP) nations, The Technical Cooperation Program (TTCP), and other international Allies. These tasks will develop, produce, and apply enterprise-wide best business practices which will encourage commonality, interoperability, reuse, and cost savings across the Services, Combatant Commands, and OSD-level activities. These efforts are essential to informing choices for Joint solutions and providing for improved enterprise efficiency, effectiveness, and return on investment (ROI) for M&S.</p> | | | | |

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| C. Other Program Funding Summary (\$ in Millions) N/A | | | | |
| D. Acquisition Strategy Not applicable for this item. | | | | |
| E. Performance Metrics (U) Comment: Performance in this program is monitored in the following ways: (U) 1. Number of instances where M&S standards have been adopted. (U) 2. Number of M&S standards registered with the Defense Standardization Program. (U) 3. Number of M&S capabilities identified in Community M&S business plans and in the | | | | |

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| <p>Corporate and Crosscutting Business Plan.</p> <p>(U) 4. Number of new M&S gaps addressed in Community M&S business plans and in the Corporate and Crosscutting Business Plan.</p> <p>(U) 5. Number of policy decisions obtaining M&S Steering Committee concurrence, which result in action with the Communities and Services.</p> <p>(U) 6. Number of M&S resources (tools, data, and services) made visible for reuse.</p> <p>(U) 7. Number of curricula available for educating the M&S workforce.</p> <p>(U) 8. Number of collaborative events held with other DoD Departments and Agencies and with coalition partners.</p> | | |

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