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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0308601N: Modeling & Simulation Support							
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	7.737	7.995	8.158	0.000	8.158	8.306	8.456	8.645	8.823	Continuing	Continuing
2222: Modeling & Simulation	7.737	7.995	8.158	0.000	8.158	8.306	8.456	8.645	8.823	Continuing	Continuing
A. Mission Description and Budget Item Justification											
This Program Element addresses projects under the Navy Modeling and Simulation (M&S) Office. It supports technical and management initiatives directed by Congress, Department of Defense (DoD), Secretary of the Navy (SECNAV), and Chief of Naval Operations (CNO) with the aim of bringing organization and focus to the development and use of M&S throughout the Navy and DoD. It provides a central agency for the formulation and implementation of policy and guidance in M&S, and represents Navy interests in Joint and other agency initiatives. It funds efforts to define and coordinate the corporate Navy M&S policy and guidance to evolve an interoperable and reusable core M&S capability consistent with the M&S technical framework prescribed by DoD. Efforts are organized around four product areas: (1) Engineering Studies and Analysis: identifies and measures the relevance of existing and emerging standards, technologies and services necessary to guide Navy M&S use; (2) Products and Services: promotes the policy, standards and technologies necessary to guide more efficient development and use of M&S across the Navy, including development and management of the Navy Modeling and Simulation Information Service (NMSIS); (3) M&S Quality Assurance Program: establishes and manages a disciplined process of model Verification, Validation and Accreditation (VV&A); and (4) Simulation Experiments: supports M&S use in Navy exercises and experiments across a wide variety of warfighting and supporting communities. Specifically, Simulation Experiments integrate appropriate models and simulations into Fleet exercises to test, validate and evaluate for possible transition to operationally relevant M&S products in support of Navy operations, training, acquisition, analysis and assessment.											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0308601N: Modeling & Simulation Support			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	7.985	8.028	0.000	0.000	0.000
Current President's Budget	7.737	7.995	8.158	0.000	8.158
Total Adjustments	-0.248	-0.033	8.158	0.000	8.158
• Congressional General Reductions		-0.033			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.248	0.000			
• Program Adjustments	0.000	0.000	8.158	0.000	8.158
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Not applicable.					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0308601N: <i>Modeling & Simulation Support</i>				PROJECT 2222: <i>Modeling & Simulation</i>			
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
2222: <i>Modeling & Simulation</i>	7.737	7.995	8.158	0.000	8.158	8.306	8.456	8.645	8.823	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>This project addresses critical coordination of Navy M&S efforts, integrates individual programs into a coherent whole, promotes reuse of resources, and aligns Navy efforts with Joint programs. It develops and maintains a comprehensive repository of models, simulations and authoritative data to support broad-based Navy requirements. It promotes reusability through the Quality Assurance process for models, simulations and data, and enhances interoperability by coordinating and reviewing Navy's transition to DoD-mandated standards for distributed simulations. The project participates in Fleet exercise experiments, distributed simulations and demonstrations such as Limited Objective Experiments (LOE), Virtual at Sea Training (VAST), and Virtual Missile Range (VMR).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
ENGINEERING STUDIES AND ANALYSIS						3.664	3.792	3.854	0.000	3.854	
<p>This activity conducts engineering studies and analyses aimed at determining the feasibility and applicability of proposed standards or technical approaches to Navy M&S, and investigate Service-unique requirements for standards or guidance. Individual efforts focus on developing or evaluating approaches to optimize training, assessments and acquisition functional/mission objectives through more efficient development and use of M&S. This activity develops methodologies and standards that will result in model and data reusability and interoperability through the formulation of a technical framework. These standards will support the full range of architecture and engineering design and analysis requirements across the Navy. This activity also provides an M&S degree program through the Naval Postgraduate School, Modeling Virtual Environments and Simulation (MOVES) curriculum.</p>											

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: " Eighteen officers completed postgraduate degrees in modeling and simulation at Naval Postgraduate School. " Completed Beta test of new DoD wide M&S catalog capability that enables visibility and reuse. " Completed efforts to assist the Training Community in their efforts to expand their Virtualat SEA Training (VAST) capability FY 2010 Plans: Continued to work with the MOVES Institute and the MOVES degree program to provide military relevant thesis topics for research. " Continued M&S support to Fleet Forces Command (FFC) for the CNO-directed Task Force Sim. " Continued M&S utilization in Campaign/Mission assessments to support OPNAV N81 analysis of warfighting requirements. FY 2011 Base Plans: Continue all efforts of FY-2010					
PRODUCT AND SERVICES This activity supports development of common services, tools, databases and standards to ensure the integration and connectivity of M&S products employed in Naval assessments, in training and acquisition, and among operational communities. It manages and maintains the Navy M&S Information System (NMSIS), as a central M&S information resource to support informed M&S investment decision making across Navy. It provides essential planning and coordination of M&S efforts with other Services, the Office of Secretary of Defense (OSD), the Joint Staff, and other agencies to develop policies and procedures necessary for M&S standardization within the Navy. It provides annual updates to the Naval M&S Catalog, Master Plan, and Investment Strategy.	1.616	1.682	1.730	0.000	1.730

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> " Deployed a new SOA to enable the collection review and prioritization of M&S requirements " Designed and assisted DoD in bringing the M&S Standards Vetting Tool on line					
<i>FY 2010 Plans:</i> " Continued to promote and enhance state-of-practice M&S catalog and technology within the Navy M&S community. " Continued the development, servicing and use of M&S catalog as directed under applicable DoD DIR, SECNAVINST, and OPNAVINST. " Continued to organize and facilitate quarterly NAVY M&S Technical Interchange Meetings to bring together the Navy M&S community for a direct interchange of M&S requirements, technology, standards and experience. " Continued to foster and develop the DoD M&S Standards Process that draws M&S experts from the acquisition, training and operational communities, and from industry. " Update DON VV&A Instructions to ensure compliance with new DoD Instructions					
<i>FY 2011 Base Plans:</i> Continue all efforts of FY-2010					
M&S QUALITY ASSURANCE PROGRAM This activity implements and manages the Modeling and Simulation (M&S) Quality Assurance development of the VV&A process and guidelines for modeling, simulation, and data. It reviews both new and legacy M&S VV&A plans and reports, and develops and maintains the Naval M&S VV&A repository. It establishes and implements a VV&A training curriculum for developers and accreditors, and provides an annual VV&A assessment to CNO. <i>FY 2009 Accomplishments:</i> " Assisted DoD in completing the DoD Instruction VV&A of M&S	0.512	0.553	0.580	0.000	0.580

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
" Assist DoD in completing its rewrite of the VV&A Instruction FY 2010 Plans: " Continue to develop and update case studies within the VV&A Handbook " Continued to incorporate information developed for training/education into the VV&A Handbook. " Continued to coordinate with the NMSIS and DoD M&S catalog effort to update and Beta test new VV&A data entry fields as required. " Assist the Navy Virtual SYSCOM in writing a VV&A Instruction for the SYSCOMS " Lead the DoD Acquisition Community's VV&A Subcommittee in its attempt to bring VV&A data to the M&S catalog FY 2011 Base Plans: Continue all efforts of FY-2010					
SIMULATION EXPERIMENTS This activity supports Fleet exercises and experiments through the application of distributed simulations across a wide variety of warfighting and supporting communities. Specifically, it develops and integrates appropriate M&S into Fleet Synthetic Training (FST), and develops simulation efforts to test and evolve the standards for models, interfaces, and data. It supports development of tools necessary to enable the seamless access and use of operationally relevant M&S products to support Navy training, warfare assessments and acquisition requirements. FY 2009 Accomplishments: " Completed first phase additions to POM analysis model STORM (USAF) for Navy and USMC to enable more consistent POMand model reuse. " Continued to define Fleet training initiatives and M&S enhancements. " Continued development of Naval capabilities in the USAF/USN Strategic Analysis tool STORM.	1.945	1.968	1.994	0.000	1.994

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>" Continued to document elements of the maritime virtual environment and models that can be used effectively to enable reuse in naval simulations and to establish best practices where standards are not yet feasible.</p> <p>" Continued the mission level M&S data interchange capability with OT&E testing scripts and acquisition mission threads to demonstrate a capability to exchange M&S structural data with architectural data.</p> <p><i>FY 2010 Plans:</i> Continue all efforts of FY-2009</p> <p><i>FY 2011 Base Plans:</i> Continue all efforts of FY-2010</p>						
Accomplishments/Planned Programs Subtotals		7.737	7.995	8.158	0.000	8.158
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						
E. Performance Metrics This program supports ongoing efforts to define, develop and utilize M&S technologies, standards and techniques in DoN and Joint programs across a wide range of disciplines and technical arenas. As such, performance metrics are specific to individual projects initiated under this program element. Representative examples of performance criteria for M&S support include the following: VV&A of deployed M&S systems to support Fleet and Force missions and assessments; degree of composability and adaptability of system architectures employed in M&S systems; ability of M&S systems to replicate and permit recreation of force or system interactions that otherwise would be performed by more labor-intensive or expensive personnel, forces or elements; degree to which M&S frameworks would permit rapid integration and employment of analytic capabilities for the analysis and documentation of warfighter missions, weapons systems or Tactics, Techniques and Procedures (TT&P); and ability of a specific M&S technology or technique to meet the requirements specified in an individual project supported by this program.						

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