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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	20.800	22.990	15.501	-	15.501	15.868	16.349	16.683	17.065	Continuing	Continuing
674567: <i>M&S Foundations</i>	5.745	6.488	6.590	-	6.590	6.622	6.561	6.744	6.833	Continuing	Continuing
674991: <i>Accelerated Acquisition</i>	4.494	5.235	-	-	-	-	-	-	-	Continuing	Continuing
675004: <i>New and Emerging Capabilities</i>	-	1.351	-	-	-	-	-	-	-	Continuing	Continuing
675135: <i>Warfighter Readiness</i>	10.561	9.916	8.911	-	8.911	9.246	9.788	9.939	10.232	Continuing	Continuing

A. Mission Description and Budget Item Justification

United States Air Force (USAF) Modeling & Simulation (M&S) Program Element (PE) is broken into four thrust areas: Modeling and Simulation Foundations, Accelerated Acquisition, New and Emerging Warfighting Capabilities, and Warfighter Readiness. It directly supports Air Force, Joint, Coalition composite training and rehearsal, concept development, and acquisition and testing through model and simulation development as well as the integration of these across and within Live, Virtual, and Constructive (LVC) environments. This program focuses on support of Department of Defense (DoD) Training Transformation (T2), acquisition excellence initiatives, and foundational capabilities needed for interoperability, accessibility, reuse, and scalability. It allows the authoritative portrayal of new and emerging Air Force capabilities within Army, Navy, Marines, OSD, interagency, and coalition LVC environments; as well as reciprocating their capabilities within our Air Force LVC environments.

LVC environments today are used as the most cost effective means to meet mission needs, the most practical means, and sometimes the only way. In support of the DoD T2 initiative, USAF M&S program thrust areas develop and modernize models and simulations that are the constructive backbone of Air Force and joint training and rehearsal. Once these models and simulations are developed, they are integrated across training LVC environments for use by Major and Combatant Commands. This development and integration is imperative to ensure that air, space, and cyberspace training and mission rehearsal activities are supported with realistic, interoperable, and readily available tools, data, and services. These, in turn, enable joint, coalition, and interagency training required to prepare forces for combat by generating the air and space picture for the Air and Space Operations Center (AOC), Joint Force Air Component Commander (JFACC), and Joint Force Commander in combat exercises; training over 30,000 personnel per year in exercises (e.g., Ulchi Freedom Guardian, Red & Blue Flags, Unified Endeavor, etc). These programs also provide the current foundational environment that enables warfighters to interact with high-fidelity tactical cockpit simulators, like 5th Generation (5th Gen) and beyond, which replicate high demand/low density platforms that are often unavailable for training due to real-world operations; while simultaneously linking it to warfighters using their current command and control systems 1,000 miles away and the constructive simulations being run from key operational wargaming and simulation centers worldwide.

USAF M&S is integral to inter-agency Homeland Defense (HLD) exercises chartered to train combat units tasked to protect the Homeland, including the National Capital Region (exercise Amalgam Arrow); generates equipment and manpower efficiencies by using simulations which reduce fuel consumption, aircraft wear and tear, and manpower costs. In support of the DoD drive to improve the effectiveness and efficiency of its enterprise-wide acquisition business processes, the USAF M&S Program Element develops and supports enhancements to models, simulations, tools, and the LVC infrastructure to provide for system-of-systems M&S

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>
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capabilities across the lifecycle, reduce developmental costs, and minimize risks. These capabilities support the acquisition process from concept development through test and evaluation. Activities also include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	21.638	23.091	20.928	-	20.928
Current President's Budget	20.800	22.990	15.501	-	15.501
Total Adjustments	-0.838	-0.101	-5.427	-	-5.427
• Congressional General Reductions	-	-0.101			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.619	-			
• Other Adjustments	-0.219	-	-5.427	-	-5.427

Change Summary Explanation

FY11 Congressional General Reduction of 0.219M in Other Adjustment row.

FY12 Congressional General Reduction (FFRDC, Sec. 8023) of 0.101M.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation				PROJECT 674567: M&S Foundations			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
674567: M&S Foundations	5.745	6.488	6.590	-	6.590	6.622	6.561	6.744	6.833	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Modeling and Simulation Foundations (MSF) focuses on integrating foundational capabilities needed to improve the usefulness, productivity, scalability and efficiency of Modeling and Simulation (M&S) capabilities derived from the Warfighter Readiness (WR) thrust, the Accelerated Acquisitions (AA) thrust, and the New and Emerging Warfighting Capabilities (NEWC) thrust. MSF is the: standards, policies, procedures, architectures, and tools that enable the rapid and efficient composition of distributed environments to support both the warfighter needs and the US Air Force's (USAF) functional communities of: acquisition, training, planning, analysis, testing, training, education, and experimentation requirements. The efforts supporting the MSF thrust include both concept exploration and development.

Activities also include studies and analysis to support both current program planning and execution and future program planning. This also funds the USAF in its capacity as the Department of Defense (DoD) Modeling and Simulation Executive Agent (MSEA) for the Aerospace Natural Environment. MSF's objective is to establish a USAF Live-Virtual-Constructive-Integrated Architecture (LVC-IA) that provides a persistent network of constructive computer simulations, man-in-the-loop virtual simulators, and live forces/resources in an interoperable environment that supports USAF organizations and the functional communities. This objective will be achieved by MSF providing tools, standards and interfaces to be used by model developers and users to ensure efficiencies and model reuse.

MSF provides the capability to rapidly and efficiently create realistic and accurate synthetic operational battlespaces to support the full spectrum of activities associated with concept development to acquisition and testing through composite training and mission rehearsal. This is done by providing appropriate authoritative data and component representations. With the capability generated via MSF, users will readily access available repositories of reusable, validated, and integrated synthetic components. Synthetic components include representations of operational battlespace entities (such as friendly and enemy assets) and representations of the natural environment that include the terrain, atmospheric and space weather effects; and energy and signal propagation effects. The rapid composition is based on a durable common architecture framework, policies, and common standards. MSF capability also supports: efficient, cost-effective verification, validation, and accreditation activity across all of the M&S functional and organizational communities.

As the DoD Air and Space Natural Environment Modeling and Simulation Executive Agent (ASNE MSEA), the Air Force coordinates all aspects of DoD M&S related to representations of the air and space natural environment. The tools developed through this include the Environmental Scenario Generator, the Environmental Data Cube Support System, and the Space Weather Analysis. ASNE MSEA collaborates with other national partners to provide the USAF and DoD access to authoritative natural environment scenarios necessary for robust "What-if" mission planning and rehearsal and for realistic training, analysis, and acquisition. ASNE MSEA leads the development and execution of the DoD Integrated Natural Environment Authoritative Representation Process (INEARP) Concept of Operations.

The Information Operations Suite (IOS) provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. Other capabilities, such as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) provide for Intelligence, Surveillance, and Reconnaissance

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation		PROJECT 674567: M&S Foundations		
(ISR) training and exercise support by using virtual simulators and constructive models for command and staff level training. These capabilities provide commanders, staffs, and operators with common training systems for the employment, tasking, exploitation and dissemination of imagery.						
This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.						
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2011	FY 2012	FY 2013
Title: Air Constructive Environment - Information Operations Suite (ACE-IOS) Description: Information Operations Suite (IOS) provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. FY 2011 Accomplishments: Provided the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. FY 2012 Plans: Provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. FY 2013 Plans: Will provide the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations.				4.250	4.900	5.047
Title: Live, Virtual, and Constructive - Integrating Architecture (LVC-IA) Description: Provide M&S Foundations (MSF) support to: Live, Virtual, and Constructive(LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort. FY 2011 Accomplishments: Provided M&S Foundations (MSF) support to: Live, Virtual, and Constructive(LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort. FY 2012 Plans:				0.705	0.593	0.548

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B. Accomplishments/Planned Programs (\$ in Millions)							FY 2011		FY 2012		FY 2013	
Provides M&S Foundations (MSF) support to: Live, Virtual, and Constructive(LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort.												
FY 2013 Plans: Will provide M&S Foundations (MSF) support to: Live, Virtual, and Constructive(LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort.												
Title: Air & Space Natural Environment (ASNE) Description: Provide DoD M&S community with tools to search Air & Space Natural Environment (ASNE) scenarios; measure effects on weapon systems and subsystems and distribute tailored reusable databases and products. FY 2011 Accomplishments: Developed the Air and Space Natural Environment (ASNE) capabilities. Continued the implementation and RDT&E of a standardized Integrated Architecture for the Live-Virtual-Constructive enterprise. FY 2012 Plans: Develops the Air and Space Natural Environment (ASNE) capabilities. Continues the implementation and RDT&E of a standardized Integrated Architecture for the Live-Virtual-Constructive enterprise. FY 2013 Plans: Will develop the Air and Space Natural Environment (ASNE) capabilities. Will continue the implementation and RDT&E of a standardized Integrated Architecture for the Live-Virtual-Constructive enterprise.							0.790		0.995		0.995	
Accomplishments/Planned Programs Subtotals							5.745		6.488		6.590	
C. Other Program Funding Summary (\$ in Millions)												
Line Item		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• N/A: N/A		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy												
Office of Aerospace Studies (OAS), Kirtland AFB, NM manages the acquisition and incremental development process for all M&S Foundation activities. All major contracts will be awarded after full and open competition.												
E. Performance Metrics												
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.												

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation	PROJECT 674567: M&S Foundations

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>	PROJECT 674567: <i>M&S Foundations</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Air Constructive Environment - Information Operations Suite (ACE-IOS)	1	2011	4	2017
Live-Virtual-Constructive Integrated Architecture (LVC-IA)	1	2011	4	2017
Air and Space Natural Environment (ASNE)	1	2011	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force								DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation				PROJECT 674991: Accelerated Acquisition			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
674991: Accelerated Acquisition	4.494	5.235	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note Project 4991, Accelerated Acquisition, was terminated in fiscal year 2013.											
A. Mission Description and Budget Item Justification In Fiscal Year 2013, no Air Force requirement. In Fiscal Year 2012, Accelerated Acquisition (AA) focused on fostering M&S tools, data, and infrastructure that enabled high confidence acquisition of capabilities that supported the joint warfighter. This included Live-Virtual-Constructive (LVC) infrastructure, tools and processes supporting LVC events, and models, tools, data, simulations/stimulation that supported requirements definition, systems engineering and test activities. Activities also included M&S support for studies and analysis that supported both current program planning and execution and future program planning. These efforts enabled more efficient delivery of effective capabilities to the warfighter while reducing the time and resources required for design, development, test and evaluation, maintainability and sustainment. A key objective was to improve interoperability of weapon systems and platforms through continuing, rigorous interoperability evaluation in a representative Joint Mission Environment. Additionally, AA activities sought to reduce risk associated with acquisition programs by influencing models, simulations, tools, data and infrastructure linking combat system engineering sites to facilitate concept exploration, development and assessment of systems in a net-centric mission context. This provided the capability to improve both Service and Joint system performance in a system-of-systems environment. Connectivity established by the infrastructure built upon existing Service and Joint combat system engineering and test sites, such as Command, Control, Communications, Computer, and Intelligence (C4I) hardware in the loop and computer-program-in-the-loop engineering sites (including design activities, software support activities, test & evaluation facilities and training commands). Development included concept of operations, business rules, and procedures that enabled acquisition managers to effectively use LVC capabilities. These efforts enabled accurately represented C4I networks for capability requirement definition, development, and testing activities to evaluate those systems for interoperability and integration into a joint environment. This addressed interoperability issues by providing a means for discovering issues early on. This program was in Budget Activity 7, Operational System Development because this budget activity included development efforts to upgrade systems that have been fielded or have received approval for full rate production.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: Architecture & Links								0.155	0.174	-	

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012
Description: Continue communications architectures and network support			
FY 2011 Accomplishments: Continued to support the development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
FY 2012 Plans: Continue to support the development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
Title: Event Coordination		0.225	0.253
Description: Continue to support LVC events to assist in Air Force requirements definition, development and T&E activities			-
FY 2011 Accomplishments: Continued to support development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
FY 2012 Plans: Continue to support development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
Title: M&S Tools		3.323	3.970
Description: Develop, enhance and verify models, tools, data, simulations/stimulation environments for systems engineering and test activities			-
FY 2011 Accomplishments: Continued to support development and maturation of collaborative processes and capabilities of support systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
FY 2012 Plans: Continue to support development and maturation of collaborative processes and capabilities of support systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
Title: Joint Service Integration		0.791	0.838
Description: Continue to support Joint Service integration & test			-

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>			PROJECT 674991: <i>Accelerated Acquisition</i>					

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<i>FY 2011 Accomplishments:</i> Continued to support development and maturation of collaborative processes and capabilities of support systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.). <i>FY 2012 Plans:</i> Continue to support development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
Accomplishments/Planned Programs Subtotals	4.494	5.235	-

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy Secretary of Air Force, Information Dominance & Chief Information Officer (SAF/CIO A6) provides oversight of the Accelerated Acquisition project. Various Air Force activities incrementally develop, verify, and validate models, tools, data and simulations/simulation environments. All major contracts are awarded after full and open competition.
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E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>	PROJECT 674991: <i>Accelerated Acquisition</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Architecture & Link Support	1	2011	4	2012
Event Coordination	1	2011	4	2012
M&S Tools	1	2011	4	2012
Joint Service Integration	2	2011	3	2012

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation				PROJECT 675004: New and Emerging Capabilities			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675004: New and Emerging Capabilities	-	1.351	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The New and Emerging Capabilities (NEWC) are a collection of short-term, special Modeling & Simulation (M&S) programs requiring rapid prototype and fielding. These capabilities meet Air, Space, or Cyberspace gaps identified by Air Force Major Commands, U.S. Combatant Commands, or Agencies; address Air Force core competencies; ensure Air Force's force structure or power projections are appropriately represented in DoD, Joint, and Service training, rehearsal, and assessments; ensure interoperability of simulations among weapon system programs; and field initial Air Force capabilities in support of Department of Defense priorities. Activities also include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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

	FY 2011	FY 2012	FY 2013
Title: NEWC	-	1.351	-
Description: This NEWC (Joint Close Air Support (JCAS) Mobile Synthetic Training System) provides persistent, mobile, on-demand Battlefield Airman Training.			
FY 2011 Accomplishments: N/A			
FY 2012 Plans: Provides persistent, mobile, on-demand Battlefield Airman Training, specifically Joint Terminal Attack Controller (JTAC) training, using synthetic Predator/Reaper imagery and/or Fighter/Bomber Advanced Targeting Pod feeds. Training is accomplished on designated Air Force and Joint ranges and (e.g. Nellis Range Complex, Fort Irwin National Training Center, and Fort Polk Joint Readiness Training Center) and designated military operating areas using Live, Virtual and Constructive Integrated M&S.			
Accomplishments/Planned Programs Subtotals	-	1.351	-

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C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2013</u>	<u>FY 2013</u>	<u>FY 2013</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Complete</u>	<u>Total Cost</u>
• N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy All contract in NEWC will use full and open competition.											
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
New and Emerging Warfighting Capabilities - JCAS Mobile Synthetic Training System	1	2012	4	2013

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207601F: USAF Modeling and Simulation				PROJECT 675135: Warfighter Readiness			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675135: Warfighter Readiness	10.561	9.916	8.911	-	8.911	9.246	9.788	9.939	10.232	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Modeling and Simulation support to our Warfighter's Readiness is a United States Air Force (USAF) corporate imperative to ensure air, space, cyberspace training, and mission rehearsal activities are supported with realistic, interoperable, and readily available, tools, data, services and environments. Warfighter Readiness supports Department of Defense (DoD) Training Transformation (T2) and Joint National Training Capability (JNTC) along with the USAF priorities and core functions. Activities also include studies and analysis to support both current program planning, execution, and future program planning.											
It includes several complimentary programs, initiatives and areas for investment: Warfighter and Joint Training Integration supports the Chief of Staff of the Air Force (CSAF) directed Live-Virtual-Constructive (LVC) integration efforts and is a critical piece to the USAF's implementation of the Strategic Plan for Transforming DoD Training. The goal of LVC training and mission rehearsal is to prepare our warfighters for the full range of military operations and maintain the combat readiness levels required by the Combatant Commands (COCOMs). This can only be accomplished by training and rehearsing in realistic operational environments. These environments include live training ranges and virtual simulators enhanced with constructive entities. Specific training and mission rehearsal events can include some or all of these simultaneously; making the ability to integrate LVC capabilities a necessity.											
The Air, Space, and Cyberspace Constructive Environment (ASCCE) is the USAF's authoritative federation of constructive training models and tools realistically representing the tactical and operational capabilities the USAF brings to the Joint fight. It includes the Air Force Modeling and Simulation Training Toolkit (AFMSTT), which provides the authoritative representation of Air Force and Joint theater-level air and space power and is used to train Air and Space Operations Center (AOC) personnel and Combat Commanders (COCOM) battle-staffs. The primary model in the AFMSTT is the Air Warfare Simulation (AWSIM). The Joint Training Transformation Initiative (JTTI) is a CSAF and Chief of Staff of the Army initiative to improve air, space, and cyberspace power fidelity to the Battle Command Training Program (BCTP), a US Army training event for senior commanders and their staffs, as well as improving ground component fidelity to Air Force operational-level exercises.											
This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: Air, Space, and Cyberspace Constructive Environment (ASCCE)								9.230	9.299	7.930	
Description: Air Force Modeling & Simulation Training Toolkit (AFMSTT)/Air Warfare Simulation (AWSIM)											
FY 2011 Accomplishments:											

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force										DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>				PROJECT 675135: <i>Warfighter Readiness</i>				
B. Accomplishments/Planned Programs (\$ in Millions)												
Maintained, improved, certified and accredited the Air, Space, and Cyberspace Constructive Environment (ASCCE) and integrated with other Service models in support of major Service, Joint, and COCOM exercises, experiments, and mission rehearsals. FY 2012 Plans: Maintain, improve, certify and accredit the Air, Space, and Cyberspace Constructive Environment (ASCCE) and integrate with other Service models in support of major Service, Joint, and COCOM exercises, experiments, and mission rehearsals. FY 2013 Plans: Will maintain, improve, certify and accredit the Air, Space, and Cyberspace Constructive Environment (ASCCE) and will integrate with other Service models in support of major Service, Joint, and COCOM exercises, experiments, and mission rehearsals.										FY 2011	FY 2012	FY 2013
Title: ASCCE C&A / JTTI Description: Air, Space, Cyber Constructive Environment Certification and Accreditation / Joint Training Transformation Initiative (JTTI) FY 2011 Accomplishments: Continued the development of Air, Space, Cyber Constructive Environment Certification and Accreditation / Joint Training Transformation Initiative (JTTI) FY 2012 Plans: Continues the development of Air, Space, Cyber Constructive Environment Certification and Accreditation / Joint Training Transformation Initiative (JTTI) FY 2013 Plans: Will continue the development of the Air, Space, Cyber Constructive Environment Certification and Accreditation / Joint Training Transformation Initiative (JTTI)										1.331	0.617	0.981
Accomplishments/Planned Programs Subtotals										10.561	9.916	8.911
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost	
• N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>	PROJECT 675135: <i>Warfighter Readiness</i>
<u>D. Acquisition Strategy</u> Electronic Systems Center (ESC) at Hanscom AFB, MA manages the AFMSTT portion of the Warfighter Readiness project. ESC incrementally develops, verifies and validates models, tools, data and simulations/simulation environments. All major contracts are awarded after full and open competition. <u>E. Performance Metrics</u> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207601F: <i>USAF Modeling and Simulation</i>	PROJECT 675135: <i>Warfighter Readiness</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0207601F: *USAF Modeling and Simulation*

PROJECT

675135: *Warfighter Readiness*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ASCCE/AFMSTT/IOS/AWSIM	1	2011	4	2017
ASCCE C&A/JTTI	1	2011	4	2017