Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											Date: March 2014	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 7: *Operational Systems Development*						**R-1 Program Element (Number/Name)** PE 0207605F *I Wargaming and Simulation Centers*						
COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	5.071	5.512	5.956	-	5.956	6.075	6.063	6.181	6.298	Continuing	Continuing
672888: *Distributed Mission Operations Center (DMOC)*	-	5.071	5.512	5.956	-	5.956	6.075	6.063	6.181	6.298	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

\# The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Distributed Mission Operations Center (DMOC) provides comprehensive Live, Virtual, and Constructive (LVC) simulation capabilities which prepares warfighters to conduct dominant operations in: air, space, cyber, ground, and surface domains an environment for theater-level, full spectrum combat training for Air Force/joint/ coalition partners. This reaches 22 geographically separated LVC locations across 17 time zones representing such assets as: real-world weapon systems, operator-in-the-loop, and constructive or computer-driven simulations. It is responsible for development and integration of scenarios, models, and databases and the integration of participating sites into Virtual Flag (VF) training events via numerous network connections, DMOC-developed interoperability tools, and controlled interfaces in support of Air Force, joint, and coalition warfighter readiness. In addition, activities include DMO technology and capability studies/analyses which support both current and future program planning and execution.

The DMOC utilizes RDT&E funding for the following to enhance DMO training:

1. Distributed Mission Operations Capability/Battlespace Systems Development: The DMOC upgrades and enhances the capabilities of various environment generators (i.e. DMOC is in partnership with the US Naval Air Systems Command (NAVAIR) to enhance the capabilities of the Next Generation Threat System (NGTS) from version 2.4.14 to version 3.5 over the next two-three years that will provide blue air and other capabilities), DMO tools (i.e. the DMOC Replay Tool is regularly upgraded to allow for a more complete mission review and debrief capability of the exercises as more sites and systems are added to events (future development will include the Multi-Level Security (MLS) capability), Tactical Air Information Datalink-J (TADIL-J) Doctor-J tool allows tactical datalinks to be communicated and translated between differing simulator communication formats), and other capabilities that enhance DMO training (i.e. the Intelligence, Surveillance, and Reconnaissance (ISR)/Battle Damage Assessment (BDA) project continues the improvement of damage state models used by intelligence analysts in exercises, and DMOC develops solutions for introducing Contested Degraded Operations (geographical and communications jamming) into DMO events.

2. Certification & Accreditation (C&A) and Networthiness: The DMOC supports requirements definition, integration test support, scenario development, analysis, systems engineering support, and C&A and Networthiness of core systems, and it implements requirements of Information Assurance (IA) Risk Management Framework and Continuous Monitoring. Efforts include C&A of the Distributed Training Network Guard, a DMOC/NAVAIR partnership and accreditation work for the DMOC Replay Tool, Multinational Information Sharing (MNIS) rule set, and the Distributed Interactive Simulation (DIS) filter tool.

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3. Distributed Training Sites & Systems Integration: DMOC integrates distributed training sites and systems for DMO training events such as Virtual Flag (VF) and Coalition VF (four-eyes event) by resolving interoperability issues between disparate systems and networks so that all exercise participants can interact in the DMO environment. New sites and systems are incorporated into DMO events each year based on emerging higher headquarters and Combatant Commanders (COCOM) requirements.

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)

	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	5.699	5.512	6.031	-	6.031
Current President's Budget	5.071	5.512	5.956	-	5.956
Total Adjustments	-0.628	-	-0.075	-	-0.075
• Congressional General Reductions	-0.008	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.150	-			
• Other Adjustments	-0.470	-	-0.075	-	-0.075

Change Summary Explanation

FY13 decrease in Other Adjustments row due to sequestration.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Distributed Mission Operations (DMO) Capability / Battlespace Systems Development	3.258	3.541	3.826
Description: Simulation software/hardware development in support of users conducting RDT&E, mission rehearsal, and concepts of operation development. *FY 2013 Accomplishments:* Enhanced Red and Blue Air/Ground/Sea simulators (NGTS, version 2.4.14 to 3.1); modified Radio Ranging Tool to improve simulation of communications degradation based on geographical environment which provided more fidelity to Contested Degraded Operations (CDO) in DMO events. Initiated a CDO study to determine what other CDO aspects should be incorporated; enhanced the Doctor J tool to allow tactical datalinks to be communicated and translated between differing simulator communication formats; upgraded Intelligence, Surveillance, and Reconnaissance (ISR)/Battle Damage Assessments (BDA)			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
which added infrared damage states to models. In addition, continued the development of Distributed Training Network Guard (DTNG) Controlled Interface to support future Coalition VF and RED KITE training events. *FY 2014 Plans:* Enhance Red and Blue Air/Ground/Sea simulators (NGTS version 3.1 to 3.3); begin work on developing/integrating the findings from the FY13 CDO study; continue development of DMO tools such as Doctor J, DMOC Replay Tool, and the DIS Filter tool as modifications/improvements are identified after completion of DMO events. Continue controlled interface ruleset development for coalition events. *FY 2015 Plans:* Will continue improvements to Red and Blue Air/Ground/Sea simulation (NGTS - ver 3.3 to 3.5); continue development of DMO tools such as Doctor J, DMOC Replay Tool, and the DIS Filter tool as modifications/improvements are identified after completion of DMO events; other efforts will be started based on changing M&S technology and emerging AF and COCOM requirements. In addition, will continue coalition ruleset development for coalition events.			
Title: Certification & Accreditation (C&A) and Networthiness *Description:* Support requirements definition, integration test support, scenario development, analysis, systems engineering support, and C&A and Networthiness of core systems. Implement requirements of IA Risk Management Framework and Continuous Monitoring. *FY 2013 Accomplishments:* Continued the C&A of DTNG, a DMOC/NAVAIR partnership program. Accomplished accreditation work for the DMOC Replay Tool, Multinational Information Sharing (MNIS) rule set, and DIS Filter tool. Acquired battlespace accreditation. *FY 2014 Plans:* Continue C&A efforts for DTNG and MNIS rulesets and other emerging requirements based on technology changes. Implement requirements of IA Risk Management Framework and Continuous Monitoring. *FY 2015 Plans:* Will continue C&A efforts for emerging requirements based on technology changes. Will implement requirements of IA Risk Management Framework and Continuous Monitoring; will continue to maintain Battlespace accreditation.	0.942	1.024	1.107
Title: Distributed Training Sites & Systems Integration *Description:* Establish site/system integration/interoperability between DMOC, operational units, and modeling & simulation facilities. *FY 2013 Accomplishments:*	0.871	0.947	1.023

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Continued site/system integration for three VIRTUAL FLAG (VF) and one Coalition VF (CVF) exercises conducted. Completed the first-ever inclusion of F-16CM Mission Training centers and Australian E-7A (Wedgetail); completed the first ever Live Hot Panel Raid mission integrated into CVF scenario; completed the first ever Australian Distributed Common Ground System (DCGS) crew in CVF; completed the first ever United Kingdom Sentinel crew on DMOC Virtual Surveillance and Target Attack Radar System (VSTARS) during CVF; completed the first ever Navy Warfare Development Command (NWDC) integration that provided a robust maritime scenario; completed the first ever DMO formation flights; evaluated VF as possible Joint Interface Control Officer (JICO) certification venue. *FY 2014 Plans:* Continue the site/system integration for three VIRTUAL FLAG (VF) and one Coalition VF exercises. Add new sites and systems based on higher headquarters and COCOM requirements. Integrate the EC-130H into DMO events. Continue to study the feasibility of supporting CYBER FLAG. Continue the exploration of a combined Red Flag and VF. Continue to evaluate VF as a possible JICO certification venue. *FY 2015 Plans:* Will continue the site/system integration of three VIRTUAL FLAG (VF) and one Coalition VF exercises. Will continue to add new sites and systems based on higher headquarter and COCOM requirements.			
Accomplishments/Planned Programs Subtotals	5.071	5.512	5.956

D. Other Program Funding Summary ($ in Millions)

 N/A

Remarks

E. Acquisition Strategy

 The Distributed Mission Operations Center (DMOC) supports AF/Joint/Coalition DMO and the Joint National Training Capability (JNTC) through the development and integration of DMO training and test events, networks, scenarios, and databases. Due to evolving modeling & simulation technology, the DMOC is an on-going, evolutionary effort to keep pace with those changes by continuously developing/upgrading DMO environment generators, systems, and tools and ensuring integration/ interoperability of new systems into DMO to provide the best warfighter training possible.

 DMOC awards full and open contracts that manage the acquisition, development, testing, and integration of DMO standards, training, modeling and simulation, cross-domain information sharing testbed, and exercises on AF/Joint/Coalition DMO networks.

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F. 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.

Exhibit R-4, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
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