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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	5.819	4.245	12.839	0.000	12.839	13.054	13.298	13.530	13.805	Continuing	Continuing
672888: Distributed Mission Operations Center (DMOC)	-	5.819	4.245	12.839	0.000	12.839	13.054	13.298	13.530	13.805	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2018, PE 0207601F, USAF Modeling and Simulation, Project 674567, M&S Foundations efforts were transferred to PE 0207605F, Wargaming and Simulation Centers, Project 672888, Distributed Mission Operations Center (DMOC), in order to support the Air, Space, and Cyberspace Constructive Environment - Information Operations Suite (ACE-IOS).

A. Mission Description and Budget Item Justification

Distributed Mission Operations Center (DMOC) & Air, Space and Cyberspace Collaborative Environment – Information Operations Suite (ACE-IOS)

The DMOC provides comprehensive Live, Virtual, and Constructive (LVC) simulation capabilities which prepare warfighters to conduct dominant operations in air, space, and cyber domains for theater-level, full spectrum combat training for Air Force, joint service, and coalition partners. The Distributed Mission Operations Center - Cyber (DMOC-C) provides the Air, Space and Cyberspace Collaborative Environment – Information Operations Suite (ACE-IOS) to support Air Force information operations. The DMOC training capabilities reach 31 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 Distributed Mission Operations (DMO) technology and capability studies/analyses which support both current and future program planning and execution by:

1. Distributed Mission Operations Capability/Battlespace Systems Development: The DMOC upgrades and enhances the capabilities of various systems, tools, and simulators to incorporate ever-changing technology and emerging training requirements into DMO events; such as, Virtual Flag (VF) and Coalition VF (CVF) to enhance the quality of warfighter training. Activities include Environment Generator development, DMO Tool Development, and Simulator Enhancement. DMOC is in partnership with the US Naval Air Warfare Center-Aircraft Division (NAWCAD) to enhance the capabilities of the Next Generation Threat System (NGTS). The NGTS is the primary environment generator for both Blue and Red Air in DMOC White Force. The DMOC “Replay Tool” facilitates a more complete mission review and debrief capability of the exercises as more sites and systems are added to events. Future DMO Tool development includes: a. enhancement & improvement of the Distributed Interactive Simulation (DIS) Filter and the Doctor-J (Dr. J) tools to enable tactical datalinks to be communicated and translated between disparate simulator and operationally fielded (i.e. live aircraft) communication formats; b. Development of Intelligence, Surveillance, and Reconnaissance (ISR)/Battle Damage Assessment (BDA) to improve damage state models used by intelligence analysts in exercises, and c. development of solutions for integrating Contested Degraded Operations (geographical and communications jamming) into DMO events; and simulator enhancement efforts incorporate Mission Package standards upgrades into the Control and Reporting Center (CRC) Simulation Package (CSP) to allow a real-world system to be used as a simulator when needed in DMO events.

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<p>2. Certification & Accreditation (C&A) and Networthiness: The DMOC supports requirements definition, integration test support, analysis, systems engineering support, and C&A and Networthiness of core systems. It implements requirements of Cybersecurity and is working toward the application of the Risk Management Framework and Continuous Monitoring. Efforts include Cross-Domain Information Sharing / Multi-national Information Sharing (CDIS/MNIS) ruleset development, load sharing, and testing; accreditation of various newly developed / updated systems such as the DMOC Replay Tool, Dr. J, DIS Filter, and the DMOC Battlespace.</p> <p>3. Distributed Training Sites & Systems Integration: DMOC integrates up to 30 geographically separated LVC training locations and 50+ systems into LVC DMO training events such as VF and CVF 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 LVC DMO events each year based on higher headquarters and Combatant Commanders (CCDRs) emerging requirements.</p> <p>ACE-IOS is a federation of constructive models for the authoritative representation of Air Force information operations. ACE-IOS is developed and operated by the Air Force Cyber Simulation Center (CSC) to support training and mission rehearsal for the Air Force, Joint Task Force commanders, and Combatant Commands battle staffs during Joint and Service exercises, tests and experiments. The CSC provides cyber live-virtual-constructive (LVC) environments to support the development and fielding of offensive and defensive cyber capabilities for the AF, DoD, and national agencies. The CSC is managed by the 90th Cyberspace Operations Squadron, a unit of the 318th Cyberspace Operations Group, 688th Cyberspace Wing, 24th Air Force (AFCYBER). The Distributed Mission Operations Center for Cyberspace (DMOC-C) is a subset of the CSC focused on training and exercising tactical cyber mission forces (CMF) and cyber service providers (CSP) and operational-level command and control, intelligence, and cyber planners and operators. DMOC-C, using ACE-IOS, directly supports Air Force, Joint, Coalition composite training and rehearsal, concept development, and acquisition and testing for use by Major and Combatant Commands. DMOC-C thrust areas develop and modernize models and simulations covering cyberspace, intelligence and command and control activities as part of the constructive backbone of Air Force capabilities within DOD and coalition LVC environments. This program also supports the DoD Training Transformation Initiative.</p> <p>DMOC-C's development and integration efforts on ACE-IOS are 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. LVC environments today are used as one of the most cost effective and practical means to meet mission needs. These efforts enable 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.</p> <p>Certification and Accreditation is maintained via the Information Technology (IT) systems Risk Management Framework (RMF) for six classified systems and two supported cross domain solutions, which includes code and ruleset development, testing, and fielding, and meets AF Joint Worldwide Intelligence Communications System (JWICS) and AF Secret Internet Protocol Router Network (SIPRNET) net worthiness standards and evaluations.</p> <p>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 anticipated production funding in the current or subsequent fiscal year.</p>		

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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				
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Previous President's Budget	6.035	4.245	6.071	0.000	6.071	
Current President's Budget	5.819	4.245	12.839	0.000	12.839	
Total Adjustments	-0.216	0.000	6.768	0.000	6.768	
• Congressional General Reductions	0.000	0.000				
• Congressional Directed Reductions	0.000	0.000				
• Congressional Rescissions	0.000	0.000				
• Congressional Adds	0.000	0.000				
• Congressional Directed Transfers	0.000	0.000				
• Reprogrammings	0.000	0.000				
• SBIR/STTR Transfer	-0.216	0.000				
• Other Adjustments	0.000	0.000	6.768	0.000	6.768	
Change Summary Explanation						
In FY 2018, PE 020605F, Wargaming and Simulation Centers, Project 672888, Distributed Mission Operations Center (DMOC) was increased \$6.768M to fund the Air, Space, and Cyberspace Constructive Environment - Information Operations Suite (ACE-IOS).						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: Distributed Mission Operations (DMO) Capability / Battlespace Systems Development				4.359	3.180	4.570
Description: Simulation software/hardware development in support of users conducting RDT&E, mission rehearsal, and concepts of operation development.						
FY 2016 Accomplishments:						
- Continued Next Generation Threat System (NGTS) development; enhanced source code to implement Air Force Distributed Mission Operations (DMO) requirements; upgraded versions 3.1.0-3.1.3						
- Enhanced system automation and model database to increase training for intel community						
- Continued DMO tool development (Distributed Interactive Simulation (DIS) Tools, DMOC Replay Tool, Dr. J, etc)						
-- Completed transition to web based user interface						
-- Improved filtering, routing, and entity management to ensure seamless connectivity between disparate Live, Virtual and Constructive systems						
- Upgraded capabilities of DMOC-Space (DMOC-S) Global Positioning System Environment Generator to implement features to improve realism of space aspects in DMO events						
FY 2017 Plans:						
- Continue NGTS development; enhance NGTS source code to implement future Air Force DMO requirements; enhance versions 3.1.4 - 3.2.0 as future requirements are identified						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continue DMO tool development (DIS Tools, DMOC Replay Tool, Dr. J etc.) as modifications/improvements are identified after completion of DMO events to support changing M&S technology and emerging AF and CCDR requirements - Support DMOC-S by upgrading systems that incorporate space aspects into DMO events - Commence design on a dedicated network to allow design and testing of new/updated systems without impacting operational battlespace <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Will continue NGTS development; enhance source code to implement future Air Force DMO requirements; enhance NGTS version 3.2.0 as future requirements are identified - Will continue DMO tool development (DIS Tools, DMOC Replay Tool, Dr. J etc.) as improvements are identified after completion of each DMO event to support changing M&S technology and emerging AF and Combatant Commander requirements - Will support DMOC-S by upgrading systems that incorporate space aspects into DMO events 				
<p>Title: Certification & Accreditation (C&A) and Networkiness</p> <p>Description: Support requirements definition, integration test support, scenario development, analysis, systems engineering support, and Certification & Accreditation (C&A) and Networkiness of core systems. Implement requirements of Cybersecurity, Risk Management Framework (RMF), and Continuous Monitoring.</p> <p>FY 2016 Accomplishments:</p> <ul style="list-style-type: none"> - Completed DoD Information Assurance Certification and Accreditation Process (DIACAP) to acquire DMOC Battlespace Authority to Operate (ATO) from HAF/A3, expires January 2018 - Commenced DIACAP's transition to RMF - Registered DMOC Battlespace in enterprise Mission Assurance Support Service (eMASS) for Risk Management Framework (RMF) - Conducted C&A activities to accredit DMO Tools, systems, and battlespace modifications after upgrades were completed - Supported Coalition Virtual Flag (CVF) and RED KITE with Cross-Domain Information Sharing (CDIS) ruleset development, testing, and implementation based on FY16 requirements <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Begin accreditation of the Jumper Room enclave to conduct high-side / 5th Generation operations - Commence RMF activities to accredit battlespace by January 2018 - Continue C&A activities to re-accredit DMO Tools, systems, and battlespace modifications - Commence certification of DMOC - Develop software within the Air Force Network Integration Center (AFNIC) Enterprise Product Listing (EPL) standards 		0.484	0.353	0.486

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
- Continue support of CVF and RED KITE with Cross Domain Information Sharing (CDIS) ruleset development, testing, and implementation FY 2018 Plans: - Will continue NGTS development; enhance source code to implement future Air Force DMO requirements; enhance NGTS version 3.2.0 as future requirements are identified - Will continue DMO tool development (DIS Tools, DMOC Replay Tool, Dr. J etc.) as improvements are identified after completion of each DMO event to support changing M&S technology and emerging AF and Combatant Commander requirements - Will support DMOC-S by upgrading systems that incorporate space aspects into DMO events				
Title: Distributed Training Sites & Systems Integration Description: Establish distributed training site system integration and interoperability between DMOC, operational units, and modeling & simulation facilities. FY 2016 Accomplishments: - Explored options for integration of 5th Gen fighters and advanced systems into FY16 Virtual Flags (VFs)/Coalition Virtual Flag (CVF) - Completed NORTHCOM scenario in VF 16-2 that discovered efficiencies for Homeland Defense Command & Control (C2) and enabled informed North American Aerospace Defense Command (NORAD) Weapons Tactics (WEPTAC) discussions - Completed Joint IO Range connected Cyber participants into VF 16-3 - Completed MQ-9 Medium Altitude Long Endurance Tactical - Joint Systems Integration Lab (MALET-JSIL) Aircrew Trainer (MJAT) at Ellsworth AFB enabling Remotely Piloted Aircraft (RPA) crews to count VF training towards Ready Aircrew Program (RAP) requirements - Completed Marine Air Control Squadrons (MACS) 1 and 2 in VFs 16-1 and 16-3 - Completed new British Rivet Joint (Airseeker) into CVF 16-4 FY 2017 Plans: - Continue development of Live, Virtual, and Constructive (LVC) concepts in support of VF/CVF/RED FLAG (RF) integration - Continue 5th Generation and future Distributed Mission Operations Network (DMON) infrastructure integration into DMOC Jumper Room -- Commence support of VF 17-2, NORTHCOM defense in depth of the CONUS from near peer systems, 1st planned use of advanced systems integration (4th/5th gen fighters, AEGIS, and Patriot) -- Support/leverage/collaborate DMOC efforts with Virtual Warfare Center-Nellis (VWC-N), to enable a high end testing and tactics development capability - Support emerging higher headquarters/Combatant Commander (CCDR) requirements		0.976	0.712	1.032

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
- Commence Virtual-into-Live integration and testing with RF to include virtual Rivet Joint, virtual JSTARS, etc. FY 2018 Plans: - Will continue development of LVC concepts in support of VF/CVF/RF integration - Will continue to support/leverage/collaborate DMOC efforts with Virtual Warfare Center-Nellis to enable a high end testing and tactics development capability - Will support emerging higher headquarters/CCDR requirements - Will continue Virtual-into-Live integration and testing with RF				
Title: Air, Space and Cyberspace Collaborative Environment – Information Operations Suite (ACE-IOS) Description: Air, Space and Cyberspace Collaborative Environment – Information Operations Suite (ACE-IOS) provides the authoritative representation of Air Force information operations. ACE-IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and Combatant Command battle staffs during Joint and Service exercises and experimentations. In Fiscal Year 2018, these efforts transferred in from Program Element 0207601F, USAF Modeling & Simulation. FY 2018 Plans: - Will complete ACE-IOS version 5.0.19 as open systems architecture version evolving from 5.0.18 - Will complete development of license-free replacements for two commercial licensed applications - Will complete product agnostic database interface allowing future replacement and upgrades with minimal software and configuration modifications - Will complete control Graphical User Interfaces (GUIs) and run-time scripts for map displays, control and monitoring of the system - Will complete development of Supervisory Control and Data Acquisition (SCADA) and cascading battlefield effects - Will develop Joint LVC (JLVC) 2020 database Application Program Interface (API) - Will maintain Certification & Accreditation		-	-	6.751
Accomplishments/Planned Programs Subtotals		5.819	4.245	12.839
D. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
E. Acquisition Strategy Distributed Mission Operations Center (DMOC):				

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<p>The 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.</p> <p>DMOC has the following two primary 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. Additionally, Military Interdepartmental Purchase Requests (MIPRs) are sent to other external organizations (i.e. NAWCAD and DMOC-S) to fund development of DMO tools that support DMOC efforts.</p> <p>Infrastructure, Development, and Engineering (IDE) Contract: Develops/upgrades various DMOC tools, systems, and simulators that are needed to conduct DMO training events. Develops, implements, and tests technical solutions for the integration of sites/systems into VF, CVF, and other DMO events. The current IDE contract is cost-plus-fixed-fee with multiple task orders awarded for individual projects over the course of the fiscal year, and the follow-on IDE contract, which is scheduled to be awarded in the 2nd quarter of FY17, will be firm-fixed-price.</p> <p>Command and Control Technical Support Contract (C2TSC): Supports government by assisting with development of technical requirements for upgrades to various systems and tools that will be developed by the IDE contractor and then performs acceptance testing of the those products. Develops requirements for site/system integration of sites/systems into VF, CVF, and other DMO events. C2TSC is a firm-fixed-price contract.</p> <p>Air, Space and Cyberspace Collaborative Environment – Information Operations Suite (ACE-IOS):</p> <p>Acquisition goals are achieved through incremental development of the project's M&S activities; all contracts are awarded using full and open competition. To meet evolving M&S technology, and the challenges of new requirements arriving almost daily, DMOC-C is an on-going, evolutionary effort to keep pace with those changes by continuously developing and upgrading environment generators, systems, and tools and to ensure integration and interoperability with other LVC systems to provide the best warfighter training possible.</p> <p>F. Performance Metrics</p> <p>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.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force												Date: May 2017			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0207605F / Wargaming and Simulation Centers				Project (Number/Name) 672888 / Distributed Mission Operations Center (DMOC)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Distributed Mission Operations (DMO) Capability / Battlespace Systems Development, Certification & Accreditation (C&A) and Networkiness, and Distributed Training Sites & Systems Integration	C/CPFF	Lockheed Martin : Kirtland AFB, NM	-	2.704	Mar 2016	0.865	Dec 2016	0.000		0.000		0.000	Continuing	Continuing	94.000
Follow-on Distributed Mission Operations (DMO) Capability / Battlespace Systems Development, Certification & Accreditation (C&A) and Networkiness, and Distributed Training Sites & Systems Integration	C/FFP	TBD : Kirtland AFB, NM	-	0.000		2.333	Jul 2017	3.451	Mar 2018	0.000		3.451	Continuing	Continuing	75.000
ACE-IOS	C/Various	90th COS : Lackland AFB, TX	-	0.000		0.000		5.977	Jan 2018	0.000		5.977	Continuing	Continuing	47.000
Subtotal			-	2.704		3.198		9.428		0.000		9.428	-	-	216.000
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical requirements development, integration/ acceptance testing, and engineering support	C/FFP	Alpha-Omega Change Engineering, Inc. : Kirtland AFB, NM	-	1.602	Sep 2016	0.437	Sep 2017	2.017	Sep 2018	0.000		2.017	Continuing	Continuing	30.000
Subtotal			-	1.602		0.437		2.017		0.000		2.017	-	-	30.000

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Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force										Date: May 2017	
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0207605F / Wargaming and Simulation Centers					Project (Number/Name) 672888 / Distributed Mission Operations Center (DMOC)	

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DMO Capability / Battlespace Systems Development (Design)																												
DMO Capability / Battlespace Systems Development (Development)																												
DMO Capability / Battlespace Systems Development (Integration/Test)																												
Certification & Accreditation (C&A) and Networthiness (Concept Activities)																												
Certification & Accreditation (C&A) and Networthiness (Design)																												
Certification & Accreditation (C&A) and Networthiness (Development)																												
Distributed Training Sites & Systems Integration (Design)																												
Distributed Training Sites & Systems Integration (Development)																												
Distributed Training Sites & Systems Integration (Integration/Test)																												
VIRTUAL FLAG 16-1 (VF 16-1) (Dec 2016)																												
VF 16-2 (Mar 2016)																												
VF 16-3 (May 2016)																												
CVF 16-4 (Aug 2016)																												
VF 17-1 (Dec 2016)																												
VF 17-2 (Mar 2017)																												
VF 17-3 (May 2017)																												
CVF 17-4 (Aug 2017)																												
VF 18-1 (Dec 2017)																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force																							Date: May 2017					
Appropriation/Budget Activity										R-1 Program Element (Number/Name)										Project (Number/Name)								
3600 / 7										PE 0207605F / Wargaming and Simulation Centers										672888 / Distributed Mission Operations Center (DMOC)								
	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
VF 18-2 (Mar 2018)																												
VF 18-3 (May 2018)																												
CVF 18-4 (Aug 2018)																												
VF 19-1 (Dec 2018)																												
VF 19-2 (Mar 2019)																												
VF 19-3 (May 2019)																												
CVF 19-4 (Aug 2019)																												
VF 20-1 (Dec 2019)																												
VF 20-2 (Mar 2020)																												
VF 20-3 (May 2020)																												
CVF 20-4 (Aug 2020)																												
VF 21-1 (Dec 2020)																												
VF 21-2 (Mar 2021)																												
VF 21-3 (May 2021)																												
CVF 21-4 (Aug 2021)																												
VF 22-1 (Dec 2021)																												
VF 22-2 (Mar 2022)																												
VF 22-3 (May 2022)																												
CVF 22-4 (Aug 2022)																												
ACE-IOS v5.0.19																												
ACE-IOS v5.0.20																												
ACE-IOS v5.0.21																												
ACE-IOS v5.0.22																												
ACE-IOS v5.0.23																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DMO Capability / Battlespace Systems Development (Design)	1	2016	4	2022
DMO Capability / Battlespace Systems Development (Development)	2	2016	4	2022
DMO Capability / Battlespace Systems Development (Integration/Test)	3	2016	4	2022
Certification & Accreditation (C&A) and Networthiness (Concept Activities)	1	2016	4	2022
Certification & Accreditation (C&A) and Networthiness (Design)	2	2016	4	2022
Certification & Accreditation (C&A) and Networthiness (Development)	3	2016	4	2022
Distributed Training Sites & Systems Integration (Design)	2	2016	4	2022
Distributed Training Sites & Systems Integration (Development)	3	2016	4	2022
Distributed Training Sites & Systems Integration (Integration/Test)	4	2016	4	2022
VIRTUAL FLAG 16-1 (VF 16-1) (Dec 2016)	1	2016	1	2016
VF 16-2 (Mar 2016)	2	2016	2	2016
VF 16-3 (May 2016)	3	2016	3	2016
CVF 16-4 (Aug 2016)	4	2016	4	2016
VF 17-1 (Dec 2016)	1	2017	1	2017
VF 17-2 (Mar 2017)	2	2017	2	2017
VF 17-3 (May 2017)	3	2017	3	2017
CVF 17-4 (Aug 2017)	4	2017	4	2017
VF 18-1 (Dec 2017)	1	2018	1	2018
VF 18-2 (Mar 2018)	2	2018	2	2018
VF 18-3 (May 2018)	3	2018	3	2018
CVF 18-4 (Aug 2018)	4	2018	4	2018
VF 19-1 (Dec 2018)	1	2019	1	2019

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	Start		End	
Events	Quarter	Year	Quarter	Year
VF 19-2 (Mar 2019)	2	2019	2	2019
VF 19-3 (May 2019)	3	2019	3	2019
CVF 19-4 (Aug 2019)	4	2019	4	2019
VF 20-1 (Dec 2019)	1	2020	1	2020
VF 20-2 (Mar 2020)	2	2020	2	2020
VF 20-3 (May 2020)	3	2020	3	2020
CVF 20-4 (Aug 2020)	4	2020	4	2020
VF 21-1 (Dec 2020)	1	2021	1	2021
VF 21-2 (Mar 2021)	2	2021	2	2021
VF 21-3 (May 2021)	3	2021	3	2021
CVF 21-4 (Aug 2021)	4	2021	4	2021
VF 22-1 (Dec 2021)	1	2022	1	2022
VF 22-2 (Mar 2022)	2	2022	2	2022
VF 22-3 (May 2022)	3	2022	3	2022
CVF 22-4 (Aug 2022)	4	2022	4	2022
ACE-IOS v5.0.19	1	2018	4	2018
ACE-IOS v5.0.20	1	2019	4	2019
ACE-IOS v5.0.21	1	2020	4	2020
ACE-IOS v5.0.22	1	2021	4	2021
ACE-IOS v5.0.23	1	2022	4	2022