

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force **Date:** March 2024

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207701F / <i>Full Combat Mission Training</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	7.048	0.000	7.048	7.223	7.372	7.640	7.790	Continuing	Continuing
672888: <i>Distributed Mission Operations Center (DMOC)</i>	-	0.000	0.000	7.048	0.000	7.048	7.223	7.372	7.640	7.790	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2025, PE 0207605F, Wargaming and Simulation Centers, Project 672888, Distributed Mission Operations Center, efforts were transferred to PE 0207701F, Full Combat Mission Training, Project 672888, Distributed Mission Operations Center to meet higher priority AF Operational Readiness and Training efficiencies. Subsequently, PE207701F now resides in BA05 (AFRL integration work) and BA07 (DMOC Efforts)

A. Mission Description and Budget Item Justification

The Distributed Mission Operations Center (DMOC) provides comprehensive Live, Virtual, and Constructive (LVC) simulation capabilities which prepare warfighters to conduct Joint All-Domain Command & Control (JADC2) operations in air, land, sea, space, and cyber domains for Air Force, joint service, and coalition partners' theater-level, full spectrum combat training. The DMOC training capabilities reach over 40 geographically separated LVC locations representing real-world weapon systems, operator-in-the-loop, and constructive/computer-driven simulations. DMOC is responsible for development and integration of scenarios, models, and databases of participating sites into Virtual Flag (VF) and other Distributed Mission Operations (DMO) training events via network connectivity, 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 by:

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

ASSESSMENT & AUTHORIZATION (A&A)/SOFTWARE CERTIFICATION: The DMOC supports cybersecurity requirements definition, integration/test support, analysis, systems engineering support, A&A of core systems, and support software certification. The DMOC implements cybersecurity requirements and complies with the

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
--	-------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207701F / <i>Full Combat Mission Training</i>
--	---

application of the Risk Management Framework (RMF) and Continuous Monitoring. Efforts include Cross-Domain Information Sharing / Multi-national Information Sharing (CDIS/MNIS) ruleset development, load sharing, and testing; integration and testing of various newly developed / updated systems such as the DMOC Replay Tool, Dr. J, DIS Filter, and the DMOC Battlespace; support of Air Force Network Integration Center (AFNIC) software certification.

DISTRIBUTED TRAINING SITES & SYSTEMS INTEGRATION: DMOC integrates over 40 geographically separated LVC training locations and 50+ systems into LVC DMO training events such as VF and VF:C 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 Commander's (CCDRs) emerging requirements.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23 \$0.00M was expended for civilian pay expenses in this program element, and in FY24 \$0.00M is forecasted for civilian pay expenses in this program element.

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 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	7.048	0.000	7.048
Total Adjustments	0.000	0.000	7.048	0.000	7.048
• 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	0.000	0.000			
• Other Adjustments	0.000	0.000	7.048	0.000	7.048

Change Summary Explanation

No other significant changes.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: Distributed Mission Operations (DMO) Capability / Battlespace Systems Development	0.000	0.000	4.758

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force		Date: March 2024		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0207701F / <i>Full Combat Mission Training</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Description: Simulation software/hardware development in support of users conducting RDT&E, mission rehearsal, and concepts of operation development.</p> <p>FY 2024 Plans: N/A</p> <p>FY 2025 Plans: Redesign and enhance legacy DMO tools. Continue DMOC/NAWCAD partnership, enhancing NGTS source code to implement future Air Force DMO requirements, develop/install future versions of DMOC customized NGTS, and focus on increasing NAWCAD partnership/ requirements development to better meet AF DMO needs. Explore additional virtualized methods to enhance training. Research and test emerging Modeling & Simulation (M&S) technologies for possible integration into DMO training and explore/transition to cloud-base software development.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to PE transfer and FY25 plan above. This effort is NOT an FY2025 New Start. Work was previously accomplished in PE 0207605F.</p>				
<p>Title: Assessment and Authorization (A&A)/Software (A&AS) Certification</p> <p>Description: Support requirements definition, integration test support, scenario development, analysis, systems engineering support, Certification and Accreditation (C&A) and Networthiness of core systems. Implement requirements of Cybersecurity, Risk Management Framework, and Continuous Monitoring.</p> <p>FY 2024 Plans: N/A</p> <p>FY 2025 Plans: Perform testing for the following Assessment and Authorization activities: Authority to Operate (ATO) from HAF/A3 for Battlespace; ATO for Jumper Room with accompanying System Security Plan (SSP) modifications to support event-driven needs; DMOC software assessments for the Air Force Network Integration Center (AFNIC) Evaluated/Approved Products List (E/APL) process; Support Virtual Flag: Coalition (VF:C) and RED KITE (UK exercise) with Cross-Domain Information Sharing (CDIS) rule set development, testing, and implementation; A&A support for virtualization efforts; and Develop Cross Domain Solution into LVC training.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement:</p>		0.000	0.000	0.543

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force		Date: March 2024		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0207701F / <i>Full Combat Mission Training</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
Funding increased due to PE transfer and FY25 plan above. This effort is NOT a New Start. Work was previously accomplished in PE 0207605F.				
<p>Title: Distributed Training Sites and Systems Integration</p> <p>Description: Establish distributed training site system integration and interoperability between DMOC, operational units, and modeling & simulation facilities.</p> <p>FY 2024 Plans: N/A</p> <p>FY 2025 Plans: Develop LVC concepts in support of VF/CVF VF:C integration efforts. Support emerging higher headquarters/ Combatant Commander's (CCDR) requirements. Develop Virtual-into-Live integration and testing with Nevada Test and Training Range (NTTR)/Virtual Test and Training Center (VTTC)/Red-Flag (RF). Expand Jumper Room support capabilities to Chairman, Joint Chief of Staff (CJCS) events. Expand distributed operations to increase the number of small-scale, joint/coalition events.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to PE transfer and FY25 plan above. This effort is NOT a New Start. Work was previously accomplished in PE 0207605F.</p>		0.000	0.000	1.747
Accomplishments/Planned Programs Subtotals		0.000	0.000	7.048
D. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
E. Acquisition Strategy 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>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:</p>				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207701F / <i>Full Combat Mission Training</i>	
<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. IDE is a firm-fixed-price contract.</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 delivered 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>Additionally, Military Interdepartmental Purchase Requests (MIPRs) are sent to other external organizations (i.e., NAWCAD) to fund development of DMO tools that support DMOC efforts.</p>		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force **Date:** March 2024

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207701F / Full Combat Mission Training	Project (Number/Name) 672888 / Distributed Mission Operations Center (DMOC)
--	--	---

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
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 : TBD	-	-		-		3.887	Nov 2024	-		3.887	Continuing	Continuing	18.074
Distributed Mission Operations (DMO) Capability / Battlespace Systems Development, Certification & Accreditation (C&A) and Networkiness, and Distributed Training Sites & Systems Integration (NGTS)	MIPR	NAWCAD:Patuxent River, MD : TBD	-	-		-		1.000	Oct 2024	-		1.000	Continuing	Continuing	-
Subtotal			-	-		-		4.887		-		4.887	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical requirements development, integration/ acceptance testing, and engineering support (Follow-on Contract)	C/FFP	TBD: Kirtland AFB, NM : TBD	-	-		-		1.018	Nov 2024	-		1.018	Continuing	Continuing	4.994
Subtotal			-	-		-		1.018		-		1.018	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207701F / Full Combat Mission Training	Project (Number/Name) 672888 / Distributed Mission Operations Center (DMOC)

FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
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	
DMO Capability/ Battlespace Systems Development	
Virtual Flag (VF)	
Virtual Flag/Coalition Virtual Flag exercises	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207701F / Full Combat Mission Training	Project (Number/Name) 672888 / Distributed Mission Operations Center (DMOC)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DMO				
DMO Capability/ Battlespace Systems Development	1	2025	4	2029
Virtual Flag (VF)				
Virtual Flag/Coalition Virtual Flag exercises	1	2025	4	2029