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MEMORANDUM FOR DISTRIBUTION C
MAJCOMs/FOAs/DRUs

FROM: HQ USAF/A3
1480 AF Pentagon
Washington DC, 20330-1480

SUBJECT: Air Force Guidance Memorandum on Implementation of Authoritative Data Sources for Live, Virtual, and Constructive Operational Training (LVC-OT) Systems

By Order of the Secretary of the Air Force, this Air Force Guidance Memorandum immediately implements modeling and simulation management guidance for LVC-OT systems. This guidance memo implements Department of Defense (DoD) Directive (DoDD) 5000.59, *DoD Modeling and Simulation (M&S) Management*, August 8 2007, DoDI 5000.70, *Management of DoD Modeling and Simulation (M&S) Activities*, 10 May 2012, and AFPD 16-10, *Modeling and Simulation*, and will be codified in the future AFI 16-1004, *LVC-OT Management*. This guidance memo applies to all Air Force personnel, to include the Air Force Reserve (AFR) and Air National Guard (ANG). Compliance with this memorandum is mandatory. There are no releasability restrictions on this publication. To recommend changes or identify conflicts between this and other departmental publications, use the AF Form 847, *Recommendation for Change of Publication*, and route it through publishing channels to the Office of Primary Responsibility (OPR) for this directive, the Model & Simulation/Live, Virtual and Constructive Division (AF/A3OL) workflow (usaf.pentagon.af-a3.mbx.a3ol-workflow@mail.mil) or 1480 Air Force Pentagon, Washington, DC 20330-1480. To the extent its directions are inconsistent with other Air Force publications; the information herein prevails, in accordance with AFI 33-360, *Publications and Forms Management*.

This memorandum identifies authoritative sources for interoperable data and models that support MAJCOM LVC-Operational Training and Readiness. For the purposes of this AFGM, LVC-OT systems are considered “key M&S assets used primarily for LVC-OT support,” with “key M&S asset” being defined in DoDI 5000.70.

AF/A3 is designated the Lead Integrator for LVC-OT and serves as the lead for centrally managed oversight of LVC efforts across Major Commands. In order to increase the consistency of terrain, weather, airfields, and threat characterizations, as well as achieve cost savings across LVC training through the reduction of duplicative efforts, the following guidance identifies the

authoritative sources of data for AF LVC-OT applications as agreed to by the owning organizations. This concept aligns with the AF Strategy document titled “America’s Air Force: A Call to the Future,” signed by SecAF and CSAF. In this document our senior leadership challenges that we design future systems/concepts that maintain readiness across all our mission sets while seeking to drive down costs. The authoritative sources for LVC-OT data and models are as follows:

Terrain/Cultural Overlay Data: Per DoD Directive 5105.60 the National Geospatial Intelligence Agency (NGA) supports national security objectives by providing geospatial intelligence for safety of navigation information to the DoD, the Intelligence Community, and other US Government departments and agencies. Within NGA the authoritative source for topographic terrain and cultural overlay data is the Foundation GEOINT Group (SF).

Airfield Data: Per DoD Directive 5105.60 the authoritative source for airfield data within the NGA is the Foundation GEOINT Group (SF).

Weather Data: AF/A3W is designated as the Air & Space Natural Environment Modeling & Simulation Executive Agent. The operational provider of authoritative Air & Space Natural Environment data, products and services is Air Combat Command (ACC), through the 2nd Weather Group.

Threat Models and Data: The authoritative source for Threat models and data is the Defense Intelligence Enterprise. The Defense Intelligence Agency (DIA), the Missile and Space Intelligence Center (MSIC), National Air and Space Intelligence Center (NASIC), the National Ground Intelligence Center (NGIC), and the Office of Naval Intelligence (ONI) are the primary participants in the DIE for authoritative threat models and data. In accordance with CJCSM 3320.04, the Electronic Warfare Integrated Reprogramming Database (EWIRDB) is the primary approved source for technical parametric and performance data on non-communication electronic emitters. Additionally the Combat Support Database (CSDB) is the approved source of data for joint mission planning models.

Friendly “Blue” Data: The authoritative source for blue system data is the government program office. Program managers of LVC-OT systems are responsible for identifying sufficient and adequate blue data throughout the acquisition life cycle. The government program office may utilize government owned data and/or procured data based on the program's Modeling & Simulation (M&S) data management strategy. System data and supporting M&S tools will be periodically updated as needed to support user requirements. AFAMS will develop and maintain AF LVC knowledge management sites and tools to assist with identification of authoritative LVC data sources. The 57th Intelligence Squadron (IS) maintains the authoritative repository for blue parametric data covering DoD aircraft emitters & signatures. In accordance with CJCSI 3320.01, government program offices are to ensure current and complete electromagnetic systems/equipment parametric, signature and antenna data are released to the United

States Electromagnetic Systems Database (USELMSDB) for inclusion in EWIRDB, CSDB, and signature databases.

Space and Cyberspace Data: The authoritative source for space and cyberspace data is HQ AFSPC/A2/3/6. Additional information may be found on the Space/Cyberspace Analysis Resource Portal (SARP).

Programs and AF-managed applications with requirements for terrain, weather, airfields, space, cyberspace, and threat and blue data or models that support LVC-OT systems, shall coordinate their requirements in an effort to obtain required data and models from authoritative sources to increase data reusability across the LVC community. Throughout the acquisition life-cycle, program managers shall obtain data and models from the authoritative source when available and coordinate with authoritative source providers to plan necessary resources to satisfy requirements (with consideration to cost, schedule, and performance objectives). Program managers must assess the cost/benefit of directing an authorized data source and/or consider the technical feasibility of integrating authoritative data and models in legacy systems. Additionally, models and data should be reviewed at least once every three years by the model/data owner to ensure they remain current. If a system requires data that is not readily supported by an authoritative source, then the program office should coordinate with the appropriate authoritative source in order to inform the enterprise. Designated authoritative data sources will manage data and utilize the DoD Data Service Environment (DSE), in accordance with DoDI 8320.07. AF/A3OL will assist with providing additional guidance to address LVC-OT authoritative data sources and data management via the AF Data Panel, chaired by SAF/CIO A6 CTO. AFAMS will implement this guidance per AF Mission Directive 56, 14 January 2014.

Ensure all records created as a result of processes prescribed in this memorandum are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) maintained in the Air Force Records Information Management System (AFRIMS).

This memorandum becomes void after one year has elapsed from the date of its signature, or upon publication of an interim change or rewrite of the affected publication, whichever is earlier. The POC for this memo is Mr. David E. Underwood, AF/A3OL, (703) 697-7582, DSN 227-7582, david.e.underwood.civ@mail.mil.

JOHN W. RAYMOND, Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

CJCSI 3320.01C, *Joint Electromagnetic Spectrum Management Operations in the Electromagnetic Operational Environment*, 14 Dec 2012

CJCSM 3320.04, *Joint Tactical Exploitation of National Capabilities (TENCAP) Special Projects*, 22 July 2002

DoDD 5000.59, *DoD Modeling and Simulation (M&S) Management*, August 8 2007

DoDD 5105.60, *National Geospatial-Intelligence Agency (NGA)*, 29 July, 2009

DoDI 5000.70, *Management of DoD Modeling and Simulation (M&S) Activities*, 10 May 2012

DoDI 8320.07, *Implementing the Sharing of Data, Information, and Information Technology (IT) Services in the Department of Defense*, 3 Aug 2015

AFPD 16-10, *Modeling and Simulation*, 23 Jan 2015

Prescribed Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ACC - Air Combat Command

AFAMS - Air Force Agency for Modeling & Simulation

AFI - Air Force Instruction

AFGM - Air Force Guidance Memo

AFMAN – Air Force Manual

AFPD - Air Force Policy Directive

AFR - Air Force Reserve

ANG - Air National Guard

CJCS - Chairman of the Joint Chiefs of Staff

CSDB - Combat Support Database

DIA - Defense Intelligence Agency

DoDD - Department of Defense Directive

DoDI - Department of Defense Instruction

DRU - Direct Reporting Unit

EWIRDB - Electronic Warfare Integrated Reprogramming Database

FOA - Field Operating Agency

HQ USAF or HAF - Headquarters Air Force, includes the Secretariat and the Air Staff

LVC-OT - Live, Virtual, and Constructive - Operational Training

M&S - Modeling & Simulation

MAJCOM - Major Command

MSIC - Missile and Space Intelligence Center

NASIC - National Air and Space Intelligence Center

NGA - National Geospatial Intelligence Agency

NGIC - National Ground Intelligence Center

ONI - Office of Naval Intelligence

OPR - Office of Primary Responsibility

SECAF - Secretary of the Air Force

USELMSDB - United States Electromagnetic Systems Database