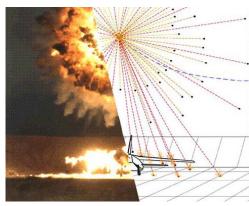


VERIFICATION, VALIDATION, AND ACCREDITATION (VV&A)



BACKGROUND

The field of modeling and simulation (M&S) has become an integral part of the systems acquisition process, augmenting design, development, and T&E while reducing program technical and cost risk. M&S can examine a broader tradespace in a shorter amount of time and at less cost than traditional T&E. As the complexity of these models has increased, model users have implemented verification, validation, and accreditation (VV&A) processes to assess and demonstrate the credibility of the M&S results used to support program decisions. Moreover, Department of Defense (DoD) instructions require that M&S be accredited for use, and that accreditation be supported by data demonstrating how well the M&S meets



user requirements. The SURVICE Engineering Company uses a cost-effective approach to M&S VV&A, where V&V activities are scoped and prioritized by first determining critical user requirements (e.g., what capabilities are required in the M&S, how accurate the M&S needs to be, and what user support is required). SURVICE tailors the VV&A process to focus only on providing those results that directly support user accreditation requirements, thereby producing the best answer for the least cost to the customer.

OUR CUSTOMERS

SURVICE has provided M&S VV&A support to a variety of customers, including the NAVAIR Battlespace Modeling Verification and Validation Branch (BMVVB), the Joint Aircraft Survivability Program (JASP), the Joint Accreditation Support Activity (JASA), the Modeling and Simulation Coordination Office (MSCO), the Program Manager Unit of Action (PM UA), and the U.S. Army Evaluation Center (AEC). Systems supported include AIM-9X, JSF, SEWIP, F/A-18E/F, RAM, VETT, JEM, EFV, FCS, MQ-4C, Stryker, and numerous other system acquisition programs.

EXPERIENCE AND EXPERTISE

SURVICE has also developed a tutorial to educate the Defense community on the purpose, metrics, methodologies and techniques of an effective VV&A effort. This tutorial is based on:

- MSCO Best Practices.
- · Navy Handbook on VV&A.
- · Department of the Army PAM 5-11.

SURVICE develops and executes VV&A plans in accordance with BMVVB process descriptions and with other accepted community standards. We bring extensive experience in using all three varieties of validation data (benchmarking, face validation, and validation with test data), for a wide variety of M&S types and applications. SURVICE also applies expertise in using various automated Computer-Aided Software Engineering (CASE) tools that can be useful in verification of either new or legacy M&S. In addition, we bring subject-matter expertise in a variety of technical areas as required, and we apply our extensive experience in facilitating accreditation reviews to support customer requirements. SURVICE can meet customer needs for software development, software V&V, and M&S validation; and we organize, develop, and execute cost-effective accreditation plans for a wide variety of customers and programs.

THE ESSENCE OF ACCREDITATION

M&S REQUIREMENTS • Capability • Accuracy • Usability USER PROBLEM CONTEXT



M&S INFORMATION

- Data Quality
- M&S Documentation
- Design Documentation
- Configuration Mgt
- V&V Results

MODEL DEVELOPER OR MODEL PROPONENT

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