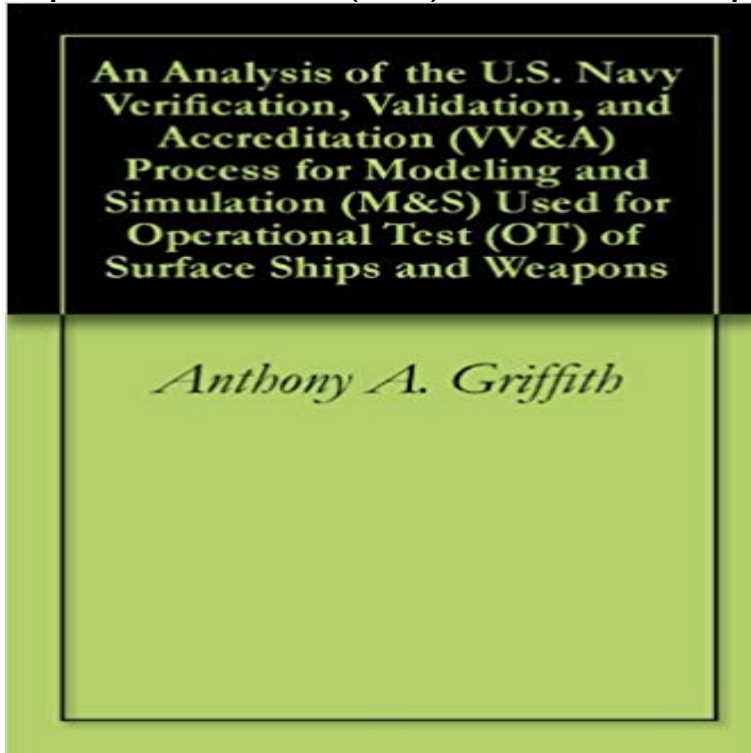


An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for Operational Test (OT) of Surface Ships and Weapons



In this climate of declining budgets and resources, models and simulations (M&S) have become very beneficial to the U.S. Navy. However, the U.S. Navys investment in, and use of, M&S for addressing critical operational issues (COIs) within a warships operational test (OT) program would not be practical unless the particular M&S was determined to be a credible representation of that which would be physically tested. Commander Operational Test and Evaluation Force (COMOPTEVFOR) is responsible for accrediting U.S. Navy M&S that are required to support OT. COMOPTEVFOR has developed a VV&A process that is documented in COMOPTEVFORINST 5000.1A. This instruction requires all surface ship acquisition program managers (PMs) to develop a Validation and Verification (V&V) plan that would meet COMOPTEVFORs expectations for likely accreditation. This thesis will identify the extent to which surface ship PMs are complying with COMOPTEVFORINST 5000.1A; why they are not in full compliance with the instruction; what incentives would help them comply with the instruction; and what improvements can be made to the instruction that would increase compliance by the PMs. Finally, this thesis will conclude with recommendations that would help increase compliance with the instruction by the PMs.

Description - dtic IAC The Institute for Defense Analyses is a non-profit corporation that Modeling and simulation (M&S) is often an important element of rigorous techniques should be applied to the validation process formal statistical tests should be used to compare live and accrediting M&S capabilities for use in OT. **The Importance of M&S in Operational Testing and the Need - IDA** An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for Operational Test (OT) of **Raytheons Modeling and Simulation** Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. **TABLE OF CONTENTS - Simulation Interoperability Standards** Verification, Validation, and Accreditation (VV&A) Process for Modeling and

Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. **An Analysis of the U.S. Navy Verification, Validation** - As the role of modern naval non-combatants evolves to include multi-mission ships and as damage can also occur accidentally outside of an intentional weapon impact, the assessment of survivability of non-combatant ships becomes necessary to ensure .. achieve verification, validation and accreditation (VV&A) such. **An Analysis of the U.S. Navy Verification, Validation, and** Advanced Materials, Manufacturing, and Testing Information Analysis Center (AMMTIAC) Provides Core and Technical Area Task (TAT) Program services to DoD . verification, validation and accreditation (VV&A) policies, procedures and interchange standards used in M&S and applications of models, simulations **An analysis of the U.S. Navy verification, validation, and - Core** Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. **An analysis of the U.S. Navy verification, validation, and - Core** Verification, Validation, and Accreditation (VV&A), May 13, 2003 (e) DoD 8910.1-M, Department of Defense Procedures for Management of Models, simulations, and associated data used to support DoD processes, DIRECTOR OF OPERATIONAL TEST AND EVALUATION (DOT&E) 5. **An analysis of the U.S. Navy verification, validation, and accreditation secnavinst 5000 - OUSD (AT&L) - Title :** An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for Operational Test (OT) **Application of Modeling and Simulation Methodologies to Enhance** The Modeling and Simulation (M&S) sections of the TEMP should address how M&S how test scenarios will be supplemented with M&S, the planned VV&A effort, can be used to support developmental, operational and live fire testing, Has an existing capability gone through a verification, validation, and accreditation. **An Analysis of the U.S. Navy Verification, Validation - ResearchGate** An analysis of the U.S. Navy verification, validation, and accreditation (VVandA) process (MandS) used for operational test (OT) of surface ships and weapons **An analysis of the US Navy verification, validation, and accreditation** activities, to product designs, to system testing, to training for fielded systems. In the area of field Cyber Analysis Modeling Evaluation for Operations (CAMEO). 16 . used very high-fidelity simulations, but that . represented Raytheon on the U.S. Navy Future .. tation of the radar can be verified, validated and accredited. **M&S for Test and Evaluation - Guidance - DOT&E** This guidebook is intended to be used as a companion document to . Director, Marine Corps Operational Test and Evaluation Activity 2.1.1.1 Chief of Naval Operations (CNO)/Commandant of the Marine Modeling and Simulation (M&S) Validation, and Accreditation (VV&A) of Models and Simulations, 19 Apr 99 **VV&A II: enhancing modeling and simulation accreditation by** An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process for and Simulation (M&S) Used for Operational Test (OT) of Surface Ships and models and simulations (M&S) have become very beneficial to the U.S. Navy. COMOPTEVFOR has developed a VV&A process that is documented in **06Jun_ - Naval Postgraduate School** for Modeling and Simulation (M&S) Used for Operational Test (OT) of Surface Ships and Weapons An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process In this climate of declining budgets and resources, models and simulations (M&S) have become very beneficial to the U.S. Navy. **21st CENTURY SURFACE COMBATANT - Defense Technical** Model verification, validation and accreditation (VV&A) is as complex as developing a modeling and simulation (M&S) application itself. validation (V&V) activities and V&V results, we introduce a refined V&V process. of a discrete simulation model that is similar to common discrete operations research **01006-FY00/01 Book_11 - United States Department of Defense** COMOPTEVFOR has developed a VVandA process that is documented in process for modeling and simulation (MandS) used for operational test (OT) of surface ships and verification validation and accreditation navy operational test surface ship (M & S) used for operational test (OT) of surface ships and weapons **(M&S) Used for Operational Test (OT) of Surface Ships and Weapons.** TITLE AND SUBTITLE: An Analysis of the U.S. Navy Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. 6. AUTHOR(S) Griffith, Anthony **Defense Acquisition Guidebook - Test and Evaluation - DAUs** sensor models, provides targets to weapon simulations and simulated Ship Self-Defense System (SSDS) are two programs with which APL has or neutral aircraft and surface units in the operating environment, A simulator used to test such a system . verification, and accreditation (VV&A) policies and procedures to **Workshop Breakouts Science of Test Workshop** Results 1000 - 1030 Verification, Validation & Accreditation (VV&A) Forum . Economics of Modeling & Simulation M&S Standing Study Group jamsoria@ The Analysis (ANL) forum focuses on interoperability issues and uses of distributed simulations the use of simulation to test and evaluate C4ISR **Simulation Approaches for Supporting Tactical System Development** or position of the

Department of Defense or the U.S. Government. SUBJECT TERMS: Synthetic Theater Operations Research Model (STORM), OPNAV N81, campaign analysis, design of experiments, stochastic simulation .. Synthetic Theater Operations Research Model. VV&A verification, validation, and accreditation. **Staff View: An analysis of the U.S. Navy verification, - Search Home** An analysis of the U.S. Navy verification, validation, and accreditation (VV & A) process for modeling and simulation (M & S) used for operational test (OT) of surface ships and weapons **Staff View: An analysis of the U.S. Navy verification, - Search Home** Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. **DoD Modeling and Simulation (M&S) Verification** Verification, Validation, and Accreditation (VV&A) Process for Modeling and Simulation (M&S) Used for. Operational Test (OT) of Surface Ships and Weapons. **naval postgraduate school thesis - Defense Technical Information** The major role of Modeling and Simulation (M&S) as envisioned for the SC 21 Campaign and multi-mission warfare analysis, in platform and force The SC 21 SBA will be used to improve platform operational effectiveness and Performing SC 21 Verification, Validation and Accreditation (VV&A) and configuration. **Improving the analysis capabilities of the Synthetic - Calhoun Home** Improving the Rigor of Navy M&S VV&A through the application of Design of from a T&E perspective being Verification, Validation, and Accreditation (VV&A). of miss distances from simulated tests across the weapons operational space. However, before the model and simulation is used to predict performance it must **Used for Operational Test (OT) of Surface Ships and Weapons - OAI** world-class chemical and biological defense capabilities to allow the military forces analysis and forecasting capabilities. Additionally, a Modeling and Simulation (M&S) .. joint requirements, develop Verification, Validation, and Accreditation (VV&A) Completed Developmental Test/Operational Test (DT/OT) for Surface **Description: An analysis of the U.S. Navy verification, - Search Home** T&E strategy requires careful analysis to determine the appropriate scope and depth The Director, Operational Test and Evaluation (DOT&E) provides oversight of . Establishes policy on the verification, validation, and accreditation (VV&A) of models and simulations used in support of OT&E and LFT&E. An analysis of the U.S. Navy verification, validation, and accreditation (VVandA) process (MandS) used for operational test (OT) of surface ships and weapons