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Meeting Minutes: VV&A TWG Workshop Number 11

Navy Modeling and Simulation Management Office (NAVMSMO) Verification, Validation, and Accreditation (VV&A) Program Technical Working Group (TWG) Workshop Number 11 was held at NAWCWD, China Lake on 11-12 Jun 2002.

The workshop agenda is presented in enclosure 1. The focus of Workshop 11 centered on VV&A activities within Naval Air Warfare Center Weapons Division (NAWCWD), COMOPTEVFOR efforts supporting Joint Simulation System (JSIMS) and V&V processes and modeling efforts, and performed by the Joint Cruise Missile Defense Office (JCMD). Workshop presentations highlighted policy, best practices guidance, and VV&A efforts within various DON programs. All available presentation slides have been included as separate attachments.

While some of the NAWCWD's efforts have been mentioned before, the workshop again established that key aspects for successful VV&A implementation include developing clear and detailed user M&S requirements, forming collaborative and open working relationships between sponsoring/accrediting and proponent/development organizations, and having a formal, centralized, and maintainable process for documenting and tracking VV&A activities and outcomes.

1.0 NAWCWPNS VV&A Efforts

NAWCWD presented the Navy's Air Defense and Related Threat Simulation Validation capability and processes and highlighted recent Validation successes. NAWCWD validates Air Defense and Related threat systems & simulations in support of DT&E, OT&E testing and Fleet training. Additionally NAWCWD validates systems to support accreditation and provides Navy validation and program management and oversight.

The briefings provided detailed discussion on processes used to perform validations and a discussion of models, how they differ from actual threats, and how they are validated. The brief concluded with an overview of the entire Navy "Air Defense" Threat Validation process, along with the report approval process.

2.0 COMOPTEVFOR V&V



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COMOPTEVFOR presented two briefs discussing their efforts in JSIMS and methodologies in Functional Decomposing and Synthesis requirements to identify needs. The first discussion explained the role JSIMS is performing. Further discussions focused on “use cases”—the intended use of the simulation. COMOPTEVFOR concluded the brief of the need of a formal process to define the cases.

The second brief discussed the Functional Decomposition emphasis focused on the technique of component behavior decomposition process to break down the model into both quantitative and qualitative components.

3.0 JCMD, Live, Virtual, and the Path to Data Correlation

The brief outlined the process developed by the JCMD to use data from field tests employing actual combat systems, in the validation of a legacy simulation federation. The objective of these efforts is to ensure the models used are credible for analyzing cruise missile defense in a joint environment.

4.0 NAVMSMO VV&A Turbo Tool

SPAWAR System Center-Charleston discussed and demonstrated the NAVMSMO VV&A Turbo Tool that is currently being beta tested. The capability of Turbo Tool was described as well as its intended use as an automated document creation tool for Navy VV&A documents. This brief generated numerous discussions on limited current capabilities that led to discussions describing future enhancements of the tool.

5.0 DMSO, Update on V&V Efforts

DMSO presented an update on ongoing DMSO efforts in V&V. Highlights included the status of DODI 5000.61 and DMSO initiative of identifying and quantifying levels of V&V.

6.0 Issues/Concerns



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Overall, a successful workshop with robust discussions on issues which need to be addressed in other forums. Highlights of the issues raised during the workshop, include the following:

Education and Training

Numerous participants raised the issue of lack of training and education on the part of program managers using M&S in their overall programmatic approach. Similarly they were discussions on the lack of a systematic approach and emphasis in providing proper training for the user in the context of integrating and validating M&S in their programs.

Program Management for M&S Requirements and Use

There were lengthy discussions about “use” cases and what is the intended use for the simulation. It was discussed that the M&S community has traditionally been user-based tools and that M&S needs to expand with a formal process to define the “use” cases. Other comments included the need to inject accreditation criteria into the requirements. Discussions continued into the arena of program management. Currently, strict budgeting constraints and procedures impact PM’s ability to effectively use M&S when required. Currently a PM has to budget at the outset of the program for M&S, that will not be required for a few years. This prohibits the PM of effectively utilizing the most capable M&S when required because of escalating costs that were not projected for the out years.

Simulation-Based Acquisition

Simulation is a tool traditionally used in different aspects of the conceptualization, design, and testing of individual systems. The discussion s focused on the lack of capitalization of the approach of demonstrable benefits of systematic use of simulation throughout the end-to-end development process. Many of these challenges stem from the advent of operational requirements for individual systems to work cooperatively with other systems.

Tools

The lack of a cost-modeling tool was identified as a serious limitation in helping users assess and fund appropriately the use of M&S. Other areas that were identified as requiring tools were in the area of testing to help assess how much testing needs to be done to



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satisfy requirements; a tool focused on risk assessment to help the developers to focus on areas that are assessed as significantly affecting the success of the program.

TURBO TOOL had been identified as significant in helping maintain the document database. However, additional capabilities were identified as mandatory for future versions.

Miscellaneous

Discussion included the training ranges that are desperately in need of validation.

7.0 Other Activities

Following the workshop, both attendees and participants toured the expansive field test facilities in China Lake. A Briefing and a Bus tour of China Lakes Electronic Combat Range, (ECR) facility followed the first day of briefings after lunch on the 11th. The afternoon of the 12th was followed by a video and historical tour of the Museum and some of the numerous weapons on exhibit that had been previously developed, modified and or tested at China Lake prior to Fleet fielding for Navy aircrew training and combat use.



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Attachment 1: NAVMSMO VV&A TWG Workshop Number 11 Agenda

Time	Topic	Speaker
	11 JUNE 2002	
0800-0830	Check-In/Coffee/Doughnuts	
0830-0845	Administrative Remarks/ Welcome/Introduction	NAWCWPNS/NAVMSMO
0845-0915	Navy Air Defense and Related Threat Simulation Validation Program	NAWCWPNS
0915-0945	Turbo Tool Demonstration	SPAWAR
0945-1020	JSIMS OTA	COMOPTEVFOR
1020-1045	Break	
1115-1200	Joint Cruise Missile Defense Joint Test and Evaluation Program	JCMD
1200-1315	Lunch	
1315-1600	ECR Tour	NAWCWPNS



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	12 JUNE 2002	
0800-0830	Coffee	
0830-0900	Validated Threat Simulators	NAWCWPNS
0900-0945	DMSO VV&A Activities	DMSO
0945-1035	Functional Decomposition & Synthesis	COMOPTEVFOR
1035-1100	NAVMSMO VV&A Update	NAVMSMO
1100-1115	Action Items and Wrap-up	NAVMSMO
1130-1230	Weapons Exhibit Center Tour	