



## **2009 Verification and Validation Summit Event Record**

The 5th Annual Verification & Validation (V&V) Summit was sponsored by the ATO Next Generation Air Transportation System (NextGen) & Operations Planning organization and the FAA Acquisition Executive Board (AEB) V&V Working Group at Resorts Casino Hotel in Atlantic City, NJ on November 4-5, 2009. Over 129 participants attended, which was a record high for the annual summit. There were 15 individual speakers who addressed and promoted the V&V culture needed to meet the challenges of NextGen. Additionally, five panel members presented concepts and ideas on V&V best practices and lessons learned. Short training videos on creative management were also presented to provide additional perspectives on the V&V culture.

John Frederick from the FAA William J. Hughes Technical Center (WJHTC) Test Standards and Program Assessment Team (TSPAT) facilitated the event. The 20 total speakers represented the FAA, NASA, DOD, and other external organizations as follows:

- Adam Greco – Air Traffic Domain Director, Technology Integration Team, FAA WJHTC: Presented a historical perspective on the benefits of a V&V culture and the beneficial impacts to technology of V&V.
- Nigel Makins – Single European Sky ATM Research Program (SESAR) Liaison, DOD EUROCONTROL: Presented the European perspective on Research & Development (R&D) and how V&V is addressed throughout R&D.
- Fred A. Myers – Deputy Director, Test Resource Management Center, Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, DOD: Presented a DOD perspective on the V&V lifecycle.
- Laurie Camilien-Pietrack - Senior Advisor, Operations Research Analyst, FAA: Presented the Aviation Safety (AVS) role in V&V and the establishment of the AVS Acquisition Management System (AMS) Office.
- Rebecca Deloney – Manager, Acquisition Career Management Group, FAA: Briefed on establishing the Test and Evaluation (T&E) Certification & Management Models for the FAA Acquisition Workforce.
- David Michael Phillips – Program Manager, CMMI at the Software Engineering Institute (SEI): Briefed on SEI's CMMI process and their best practices relating to V&V.
- Amy Pritchett – Director, Aviation Safety Program, NASA: Briefed on the role of V&V for Flight Critical Systems.
- Wilson N. Felder – WJHTC Director, FAA: Discussed the challenges of V&V with the implementation of NextGen systems.
- Jesse Wijntjes – Chief Architect, NAS Enterprise Architecture, FAA: Briefed on the FAA NAS architecture and roadmaps and the implications of NextGen.
- Tim O'Hara – Manager, Concepts and Requirements Definition Group, FAA: Briefed on Concepts and Requirements Definition (CRD) guidelines.

- Kimberly Gill – Manager, NAS Requirements and Interface Management (R&IM) Group, FAA: Briefed on the establishment of the R&IM Working Group, including their goals and process improvement efforts.
- Victoria Cox – Vice President, NextGen Operations and Planning, FAA: Spoke on the increasingly critical role that V&V will play in meeting the challenges of NextGen.
- Daniel V. Kinder – Director, Terminal Operations, FAA – Panel Moderator: Briefed on the proposed FAA acquisition categories and the categorization of existing acquisition programs.
- Vincent J. Lasewicz, Jr. – Laboratory Integration Lead, FAA WJHTC: Briefed on NextGen testbeds and the NextGen Integration & Evaluation Capability (NIEC) labs located at the WJHTC.
- John Frederick – Test Standards Board Chair, Test Standards and Program Assessment Team, FAA WJHTC – Summit Facilitator: Presented the AEB V&V Working Group status.
- James Daum – Safety Manager, NextGen and Operations Planning, System Engineering and Safety, FAA: Briefed on the T&E and V&V role in Safety Risk Management (SRM).
- Michael J. Greco – Manager, Test & Evaluation Test Services Group, FAA WJHTC – Panel Moderator: Led the five-member panel discussion on V&V.
- Kristina Carr – Computer Scientist, FAA Research, Technology and Development Directorate, FAA WJHTC – Panel Member: Briefed the challenges and successes of validating NextGen operational concepts.
- Brian Jefferson – Data Communication Test Director, FAA WJHTC – Panel Member: Briefed on the critical role of V&V in interface testing.
- Eric Hoover – Alaska Flight Service Modernization Test Director, FAA WJHTC – Panel Member: Briefed on the V&V challenges and successes of three Flight Service test programs.
- Jennifer Duffy – Test Conduct Manager, Operation SLS Test Group, FAA WJHTC – Panel Member: Briefed the V&V challenges, successes, and areas of improvement for the In-Service Management (ISM) team.
- Mark Denicuolo – SMS Directorate's Manager of Safety Assurance, FAA WJHTC – Panel Member: Briefed on the V&V challenges and successes for Safety Management Systems.

The common theme echoed during this two-day event was the importance of robust V&V activities early and throughout the Acquisition Management System (AMS) lifecycle. The summit promoted V&V culture by presenting shared visions and new approaches to V&V. By adopting a lifecycle V&V culture in the FAA, acquisition work products and end products can be continuously assessed against known and previously assessed mission needs, plans, concepts, and requirements. The systematic assessment of each critical work product and end product helps to ensure that oversights, deviations, defects, and potential risks can be addressed as early in the lifecycle as possible. This provides a reliable foundation for a program, minimizes cost overruns and schedule delays, and presents opportunities to adjust the program direction to minimize critical risks later in its lifecycle. V&V is especially important to the success of NextGen because of its many complexities, including new operational concepts and the interaction between systems and subsystems. By hosting the V&V Summit, the need for V&V is brought to the forefront of multiple agencies' program planning activities.

The 2009 V&V Summit was made successful by the attendees and speakers who represented the crosscutting body of knowledge and support infrastructure that will be needed to fully embrace and implement a V&V culture across all of the effected disciplines and domains in the FAA and meet the challenges posed by NextGen.