



#### FEATURING:

- ▶ Top Pentagon leadership presentations on T&E / acquisition policy and issues
- ▶ Industry leaders sharing T&E perspectives and responses to recent policy initiatives
- ▶ Special former NSA guest speaker addressing cyber security policy
- ▶ Over 80 speakers addressing a host of issues facing today's T&E community
- ▶ Parallel breakout sessions focused on specific T&E issues

# 27<sup>TH</sup> ANNUAL NATIONAL TEST & EVALUATION CONFERENCE

*“Test & Evaluation: Serving the Warfighter”*

Co-Sponsored by the NDIA C4ISR & Systems  
Engineering Divisions

#### CONFERENCE AGENDA

MARCH 14-17, 2011

[WWW.NDIA.ORG/MEETINGS/1910](http://WWW.NDIA.ORG/MEETINGS/1910)

MARRIOTT TAMPA WATERSIDE ▶ TAMPA, FLORIDA

EVENT #1910

## CONFERENCE ANNOUNCEMENT

The 27th Annual National Test & Evaluation Conference is sponsored by the NDIA Test & Evaluation Division and supported by the Office of the Under Secretary of Defense (AT&L) and the Director, Operational Test & Evaluation (DOT&E). Co-sponsors of this symposium are the C4ISR and Systems Engineering Divisions of NDIA.

Test and Evaluation is often looked at by Program Managers, Program Executive Officers and other proponents of weapon systems as an unwelcome obstacle to the deployment of systems to the Department of Defense and Homeland Security. T&E is often seen as a source of bad news which can potentially delay the deployment of these systems and add to their eventual cost.

Most engineers, technicians and program administrators recognize that test and evaluation is an integral part of the scientific method of systematically assessing the effectiveness, suitability and survivability of hardware, software and personnel.

This national conference will focus on policies, methods, and approaches that could better serve the ultimate consumer of our T&E efforts, the Warfighter. Given that Tampa is the home of both the U.S. Special Operations Command and the U.S. Central Command, it will provide a fertile opportunity to see and hear first-hand about how T&E could better serve our fighting forces.

With the recent combat surge into Afghanistan and change in our operational support in Iraq, it is vital that we take note of the recent lessons learned in both rapid deployment as well as tailoring our responses to the changing environments and tactics our fighting forces are now facing.

Increasing fiscal pressures also prompt us to address T&E approaches to saving time and money as well as to examine those other disciplines which feed the T&E activity, including Systems Engineering, Logistics, C4ISR, and R&D and Training.

Recent policy initiatives will also be addressed as to their implications, applications and effectiveness. Discussions will include how the recent legislative initiatives requiring additional T&E statutory responsibilities for Developmental Test and Evaluation are being implemented. Multiple topic tracks and tutorial sessions will be included in the conference to enable more focused discussions of specific topics enabling additional time for Q&A as well.

## CONFERENCE ATTIRE

Conference attire is business for civilians and Class A uniform for military. In addition, your identification badge, received upon conference check-in, must be worn at all times.

## NDIA T&E EXECUTIVE BOARD

- ▶ **Mr. Joe Andrese**, *APG NDIA Chapter\**
- ▶ **Dr. Suzanne Beers**, *MITRE Corporation*
- ▶ **Dr. Keith Bradley**, *LLNL*
- ▶ **Mr. Britt Bray**, *DRC Corporation*
- ▶ **Mr. Sam Campagna**, *NDIA*
- ▶ **RADM David Crocker**, *USN (Ret)*, *Booz Allen Hamilton*
- ▶ **Dr. Paul Deitz**, *AMSAA\**
- ▶ **Mr. Dick Dickson**, *Tybrin Corporation*
- ▶ **Dr. Anne Hillegas**, *ARA Corporation*
- ▶ **Mr. John Illgen**, *Northrop Grumman*
- ▶ **RADM Bert Johnston**, *USN (Ret)*, *Wyle Corporation*
- ▶ **Dr. Mark Kiemele**, *Air Academy Associates*
- ▶ **Mr. Chuck Larson**, *SURVICE Engineering*
- ▶ **Mr. James O'Bryon**, *The O'Bryon Group, T&E Division Chair*
- ▶ **Mr. Brendan Rhatigan**, *Lockheed Martin*
- ▶ **Mr. Jack Sheehan**, *ORSA Corporation*
- ▶ **Dr. James Streilein**, *OSD, DOT&E\**
- ▶ **Dr. Lowell Tonnessen**, *IDA*
- ▶ **Dr. Juan Vitali**, *OSD CBD\**
- ▶ **Mr. Martin Woznica**, *Raytheon Company*
- ▶ **Mr. William Yeakel**, *ORSA Corporation*

\*Government liaison to NDIA T&E Executive Board

## WALTER W. HOLLIS HONORS LUNCHEON

The Walter W. Hollis Award is presented annually in recognition of lifetime contributions and achievement in the area of defense Test & Evaluation. The award is presented in the name of Walter W. Hollis who is recognized for his dedicated and long-standing service in the field of Defense Test & Evaluation. This year's recipient, **Dr. James N. Walbert, Chief Scientist, SURVICE Engineering Company**, will be recognized at the conference Awards Luncheon on Tuesday, March 15.

### Previous Recipients of this Award:

**Dr. James J. Streilein**, *Technical Director/Deputy to the Commander, U.S. Army Test and Evaluation Command (2010)*

**Dr. Ernest Seglie**, *Science Advisor to the Director, Operational Test & Evaluation, OSD (2009)*

**Dr. Paul H. Deitz**, *Technical Director, AMSAA, APG, MD (2008)*

**Mr. James F. O'Bryon**, *Former DDOT&E / LFT (2007)*

**RADM Charles "Bert" Johnston, USN (Ret)**, *Wyle Laboratories (2006)*

**Hon Thomas Christie**, *DOT&E, OSD (2005)*

**Dr. Marion Williams**, *HQ AFOTEC (2004)*

**Mr. James Fasig**, *Aberdeen Test Center (2003)*

**Mr. G. Thomas Castino**, *Underwriters Laboratories, Inc. (2002)*

**Hon Philip Coyle, III**, *DOT&E, OSD (2001)*

**Mr. Walter W. Hollis**, *Department of the Army (2000)*

## TESTER OF THE YEAR AWARDS LUNCHEON

These awards, presented to outstanding individuals in the field of Test & Evaluation, offer OSD and each Military Service Test & Evaluation Department the opportunity to select three award recipients for recognition as the Tester of the Year in specific categories. The three categories recognized are: Military, Civilian, and Contractor. Recipients will be recognized at the conference Awards Luncheon on Wednesday, March 16.

### MAJ Brian Spurlock, USA

2010  
Army  
Military Tester of the Year

### Ms. Patricia Frounfelker

2010  
Army  
Civilian Tester of the Year

### Mr. Henry Waller

2010  
Army  
Contractor Tester of the Year

### COL Steven Duke, USA

2010  
OSD  
Military Tester of the Year

### Ms. Stephanie Koch

2010  
OSD  
Civilian Tester of the Year

### Mr. Patrick Matthews

2010  
OSD  
Contractor Tester of the Year

### Maj Ryan Voneida, USAF

2010  
USAF  
Military Tester of the Year

### Mr. William Nix

2010  
USAF  
Civilian Tester of the Year

### Mr. David Smith

2010  
USAF  
Contractor Tester of the Year

### CDR John Verniest, USN

2010  
Navy  
Military Tester of the Year

### Mr. Don Nelson

2010  
Navy  
Civilian Tester of the Year

### Mr. Douglas Cornell

2010  
Navy  
Contractor Tester of the Year

### Capt Todd Richardson, USMC

2010  
Marine Corps  
Military Tester of the Year

### Ms. Cam Donohue

2010  
Marine Corps  
Civilian Tester of the Year

### Mr. Eric Rannenberg

2010  
Marine Corps  
Contractor Tester of the Year

## MONDAY, MARCH 14, 2011

- 10:00 AM - 6:00 PM**    **CONFERENCE REGISTRATION OPEN - 2ND LEVEL REGISTRATION**
- 10:00 AM - 2:45 PM**    **TUTORIALS A-D, SESSION 1 - SEE TRACK LAYOUT FOR ROOM ASSIGNMENTS**  
There is a \$50 registration fee for tutorial attendance.
- 11:00 AM - 4:00 PM**    **DISPLAY SET-UP - GRAND SALONS A-D**
- 12:00 NOON - 1:00 PM**    **LUNCH BREAK**  
Lunch not included in conference or tutorial registration
- 2:45 PM - 3:00 PM**    **AFTERNOON BREAK - GRAND BALLROOM FOYER**  
For tutorial registrants only
- 3:00 PM - 4:30 PM**    **TUTORIALS E-H, SESSION 2 - SEE TRACK LAYOUT FOR ROOM ASSIGNMENTS**
- 4:30 PM**    **TUTORIALS CONCLUDE**
- 5:00 PM - 6:00 PM**    **KICKOFF RECEPTION IN THE DISPLAY AREA - GRAND SALONS A-D**  
Open to all conference registrants
- 6:00 PM**    **CONFERENCE ADJOURNED FOR THE DAY**



# MONDAY, MARCH 14, 2011 — *Tutorials*

## 10:00 AM - 2:45 PM

| TUTORIAL | TUTORIAL A<br>Session Chair: Dr. Paul Deitz,<br><i>AMSAA</i><br>Grand Salon G   | TUTORIAL B<br>Session Chair: Mr. Martin Woznica,<br><i>Raytheon Company</i><br>Grand Salon H   | TUTORIAL C<br>Session Chair: Dr. Suzanne Beers,<br><i>MITRE Corporation</i><br>Grand Salon I  | TUTORIAL D<br>Session Chair: Mr. Britt Bray, <i>DRS Corporation</i><br>Grand Salon J  |
|----------|---|--|---|---|
|          | SESSION 1   | SESSION 1  | SESSION 1   | SESSION 1   |
| 10:00 AM | 11678 - Using DFSS as an Integrating Framework for MBT&E and DOT&E<br><br>Dr. Mark Kiemele, <i>President and Co-founder, Air Academy Associates</i> | 11694 - Efficient Modeling and Simulation (M&S) Using Design of Experiments (DOE) Methods<br><br>Dr. Tom Donnelly, <i>Principal Customer Advocate, Systems Engineer, JMP</i> | 11653 - Test Planning — Advancing the Science<br><br>Mr. Steve Scukanec, <i>Senior Test Engineer, Northrop Grumman Aerospace Sector</i> | 11488 - Testing and Evaluating Intranets, Portals, and Enterprise Systems for Usability<br><br>Dr. Patricia Chalmers, <i>Chief Science Advisor, U.S. Joint Forces Command</i> |
|          | SESSION 1 CONTINUED   | SESSION 1 CONTINUED  | SESSION 1 CONTINUED   | SESSION 1 CONTINUED   |
| 1:00 PM  | 11678 - Using DFSS as an Integrating Framework for MBT&E and DOT&E<br><br>Dr. Mark Kiemele, <i>President and Co-founder, Air Academy Associates</i> | 11694 - Efficient Modeling and Simulation (M&S) Using Design of Experiments (DOE) Methods<br><br>Dr. Tom Donnelly, <i>Principal Customer Advocate, Systems Engineer, JMP</i> | 11653 - Test Planning — Advancing the Science<br><br>Mr. Steve Scukanec, <i>Senior Test Engineer, Northrop Grumman Aerospace Sector</i> | 11488 - Testing and Evaluating Intranets, Portals, and Enterprise Systems for Usability<br><br>Dr. Patricia Chalmers, <i>Chief Science Advisor, U.S. Joint Forces Command</i> |

## 3:00 PM - 4:30 PM

| TUTORIAL | TUTORIAL E<br>Session Chair: Dr. Lowell Tonnessen,<br><i>IDA</i><br>Grand Salon G                                       | TUTORIAL F<br>Session Chair: Mr. Dick Dickson,<br><i>Tybrin Corporation</i><br>Grand Salon H  | TUTORIAL G<br>Session Chair: Mr. Chuck Larson,<br><i>SURVICE Engineering</i><br>Grand Salon I   | TUTORIAL H<br>Session Chair: Mr. Brendon Rhatigan, <i>Lockheed Martin</i><br>Grand Salon J   |
|----------|---|---|---|--|
|          | SESSION 2   | SESSION 2   | SESSION 2   | SESSION 2  |
| 3:00 PM  | 11703 - Ships Are Different<br><br>Mr. Mark Lucas, <i>Command Technical Director, Combat Direction Systems Activity</i> | 11693 – Modern Design of Experiments (DOE) Methods<br><br>Dr. Tom Donnelly, <i>Principal Customer Advocate, Systems Engineer, JMP</i> | 11570 - A Day in the Life of a Verification Statement<br><br>Mr. Steve Scukanec, <i>Senior Test Engineer, Northrop Grumman Aerospace Sector</i> | 11705 - Defense Information Systems Agency Joint Interoperability Test Command Interoperability Support for the Afghanistan Mission Network<br><br>Mr. Jeffery Phipps, <i>CIAV Co-Chair, US Lead, JITC</i> |

## TUTORIAL DESCRIPTIONS — *Session 1*

### **TUTORIAL A: USING DFSS AS AN INTEGRATING FRAMEWORK FOR MBT&E AND DOT&E**

This tutorial will provide attendees a comprehensive process to capture all of the activities in MBT&E and DOT&E needed to achieve a successful system acquisition. It will use DFSS in its more expansive connotation, namely Designing for Successful Systems vice Design for Six Sigma, the more common but limited meaning. DFSS starts with the voice of the warfighter (or customer) and the required operational capability. These requirements are then flowed down to the critical performance measures using tools that help to prioritize along the way. The performance measures may include KPPs, MOEs, MOSs, and CTPs. The critical performance measures are linked to key design parameters, and once this linkage is firm, performance optimization can be accomplished. Design of Experiments (DOE) is shown to be a critical player in the design and optimization phases, as well as in every facet of testing and evaluation. Once the design and performance is optimized, it must be validated and the capability rolled back up to the system level capability. DFSS will be shown as an interdisciplinary activity, spanning the activities of systems engineering, reliability engineering, design and optimization, test and evaluation, and system capability confirmation.

### **TUTORIAL B: EFFICIENT MODELING AND SIMULATION (M&S) USING DESIGN OF EXPERIMENTS (DOE) METHODS**

Attendees will learn how Design of Experiments (DOE) methods can be used to extract the most useful information from computer simulation models. They will see how the sequential running of blocks of simulations can be used to conduct the overall fewest trials necessary to do sensitivity analysis of the factors being studied. They will also see how to develop a fast-running (seconds) surrogate model — which testers and analysts can interactively query — of a long-running (hours, days or weeks) simulation. Design solutions will include the application of traditional DOE methods to discrete event and agent-based simulations, and modern space-filling designs to more complex physics-based simulations such as Computational Fluid Dynamics (CFD). When to use, and how to choose between traditional linear regression approximation methods and spatial regression interpolation methods will be discussed. The effective practice of using checkpoint simulations for determining the accuracy of surrogate model predictions will be demonstrated.

### **TUTORIAL C: TEST PLANNING — ADVANCING THE SCIENCE**

Test planning is rapidly becoming a lost art. Many test planning activities are based solely on corporate knowledge and “Like we did it last time” theories. Solidifying requirements development, improving the program’s verification and validation activities, increased program collaboration and streamlined test programs are all benefits of a solid and well defined test planning approach. By increasing program collaboration and the overall time spent on the “engineering of a program” while significantly reducing the time required producing the engineering verification and validation artifacts, solid model based test planning can ensure that a test program is more effective across its lifecycle. This tutorial examines the test planning process. From verification to test plan modeling and test plan generation, participants will see the processes and tool sets in action. To demonstrate some of these capabilities, participants will generate test requirements and objectives, model the plan, optimize the plan and assign resources, and finally generate a simple test plan while maintaining connections to the original requirements intent.

### **TUTORIAL D: TESTING AND EVALUATING INTRANETS, PORTALS, AND ENTERPRISE SYSTEMS FOR USABILITY**

This tutorial will teach attendees how to perform intranet, portal, and enterprise usability evaluations. Attendees are encouraged to come with a project in mind as they will be worked on throughout the tutorial. Attendees will learn how to analyze their stakeholders’ goals and needs: How to decide who their stakeholders are, decide which stakeholders to include in their evaluation, choose a random sample of end users, and determine stakeholders’ goals/needs. Attendees will learn how to design a Usability Evaluation: How to budget time, knowing what types of T&E methods are possible, deciding what methods to use, designing a first-rate survey, determining sample completion tasks, deciding how many methods to use, and how to quantify usability data. Attendees will write a design for their portal evaluation including topics discussed. Information will be provided on How to Evaluate Your Portal Usability Evaluation: Pilot evaluations, participant performance, survey understandability, task understandability, determining if tasks are too easy or too hard, understanding the data, feedback from participants, making improvements. Attendees will also learn how to write their reports. Portal evaluation samples will be provided.

## TUTORIAL DESCRIPTIONS — *Session 2*

### TUTORIAL E: SHIPS ARE DIFFERENT

Recent fleet concerns with surface ship and system performance have punctuated the need to evolve the Navy's ship T&E processes and practices in such a way that enables acquisition decisions that are based on a framework of mission area effectiveness and suitability. However, because any given ship supports multiple missions through the employment of a complex array of systems, sensors, and weapons, the aforementioned changes truly require a "system of systems" approach. This approach must take care in balancing multiple systems at differing states of lifecycle maturity through their development processes. This necessitates a progressive examination of systems maturity using mission-based, measurable, testable artifacts. This tutorial will discuss the Navy's Mission Based Test Design methodology and illustrate how its application through an Integrated Test process can be used in ship and ship systems acquisition. It will also discuss how this approach can enable improved rigor leading to a better understanding of risks and warfighting effects, thereby facilitating the information quality needed for effective ship deployment decisions.

### TUTORIAL F: MODERN DESIGN OF EXPERIMENTS (DOE) METHODS

This tutorial will provide attendees the very latest experimental designs published since 2008. References will be provided for four new types of design that offer testers the ability to run either fewer trials or for the same number of trials, learn more about interactions or quadratic behavior. These recently peer-reviewed designs have not yet made it into textbooks. The new designs include non-regular orthogonal fractional-factorial, robust screening, alias-optimal, and Bayesian D-optimal supersaturated designs. Comparisons between these new alternative methods and traditional designs will be provided to show the new methods are superior or strong competitors.

### TUTORIAL G: A DAY IN THE LIFE OF A VERIFICATION STATEMENT

One measure of the quality of a product requirement is that it be verifiable. Verifiability assessment is one of the exit criteria for the Systems Requirements Review and is necessary for requirement validity. Nomination of one or more verification methods (examination, analysis, demonstration or test) is often taken as the sole evidence of verifiability. A completed Verification Cross Reference Matrix is frequently considered

as the final verifiability assessment and responsibility for the remainder of the verification effort is transferred to the test and evaluation and other implementing communities for completion. Lessons learned from many programs have shown that a more robust application of systems engineering should include the requirements engineers (with detailed knowledge of product requirement intent) working with the verification implementing organizations as the best combination to define the verification requirements. Such definition should include statement of the verification objectives, success criteria and environment. Including this information in the "Quality Assurance" section of the requirements document allows for buy-in by the customer well in advance of implementing the verification activities. This information is used by verification personnel to generate one or more verification plans and to develop the detailed verification program. Verification requirements are planned into verification events which are executed using the proper system elements and environments. These verification requirements are key to establishing long lead verification facilities, tools and laboratories. Early definition of these requirements helps prevent facility re-designs and verification re-plans that can cause expensive delays. Finally, verification data analysis is performed, and the information compiled into verification reports certifying system product requirements compliance. This robust verification approach will provide proof of requirements satisfaction, leading to systems that meet the customers' needs at a lower life-cycle cost. This presentation explores the value of well-crafted verification requirements developed early in the Program. A "Day in the Life of a Verification Requirement" shows the interaction and benefits of verification requirements to the verification execution teams. The presentation will offer a lifecycle description of the verification requirement from conception to certification.



## TUTORIAL DESCRIPTIONS — *Session 2 Continued*

### **TUTORIAL H: DEFENSE INFORMATION SYSTEMS AGENCY JOINT INTEROPERABILITY TEST COMMAND INTEROPERABILITY SUPPORT FOR THE AFGHANISTAN MISSION NETWORK**

USCENTCOM operates in a coalition environment and must be able to generate and pass critical information to U.S. and coalition partners. The Command and NATO, as members of the International Security Assistance Forces (ISAF), understand that widespread interoperability is a key component to achieve effective and efficient operations. These communication capabilities must include a wide variety of not only military governmental operations, but also non-governmental agencies and industrial partners. To that end, they've created the Afghan Mission Network (AMN) and commissioned the Defense Information Systems Agency's Joint Interoperability Test Command to develop the Coalition Test and Evaluation Environment (CTE2) testing arm of the Coalition Interoperability Assurance and Validation (CIAV) process. The AMN is the backbone or core infrastructure that will provide long-term communications and information system and satellite communication services to support the ISAF as it expands its operations across the country during the ongoing operations. This tutorial will discuss the eight core critical Coalition Mission threads, phases for testing, and how the JITC stood up a network and is testing the systems in a distributed hardware in the loop environment to ensure interoperability across the AMN. It will also discuss the applicability to other theaters that may need to implement a similar process.

## TUESDAY, MARCH 15, 2011

**7:00 AM - 6:30 PM CONFERENCE REGISTRATION OPEN - 2ND LEVEL REGISTRATION**

**7:00 AM - 8:00 AM CONTINENTAL BREAKFAST IN THE DISPLAY AREA - GRAND SALONS A-D**

**8:00 AM OPENING REMARKS - GRAND SALONS E-F**

▶ Mr. Sam Campagna, *Assistant Vice President, Operations, NDIA*

**8:05 AM TRIBUTE TO OUR NATION AND WARFIGHTERS, NATIONAL ANTHEM**

### **SESSION A: CONFERENCE WELCOME & KEYNOTES**

**8:10 AM WELCOME AND CONFERENCE INTRODUCTORY REMARKS**

▶ Mr. James O'Bryon, *Chairman, NDIA T&E Division; The O'Bryon Group*

**8:20 AM CONFERENCE KEYNOTE ADDRESS**

▶ Honorable Dr. J. Michael Gilmore, *Director, Operational Test & Evaluation, OSD*

Honorable Dr. J. Michael Gilmore was sworn in as Director of Operational Test and Evaluation on September 23, 2009. A Presidential appointee confirmed by the United States Senate, he serves as the senior advisor to the Secretary of Defense on operational and live fire test and evaluation of Department of Defense weapon systems. Prior to his current appointment, he was the Assistant Director for National Security at the Congressional Budget Office (CBO), and was responsible for CBO's National Security Division. Dr. Gilmore is a former Deputy Director of General Purpose Programs within the Office of the Secretary of Defense, Program Analysis and Evaluation (OSD(PA&E)). Dr. Gilmore also has served as the Division Director of Operations Analysis and Procurement Planning, within the Office of the Deputy Director, Resource Analysis and as an Analyst for Strategic Defensive and Space Programs Division, Office of the Deputy Director, Strategic and Space Programs. Dr. Gilmore's service with Program Analysis and Evaluation covered 11 years. Early in his career, Dr. Gilmore worked at the LLNL, Livermore, California performing research in their magnetic fusion energy program. He has also worked with Falcon Associates, McLean, VA, and the McDonnell Douglas Washington Studies and Analysis Group. Dr. Gilmore is a graduate of MIT where he earned a B.S. in Physics. He subsequently earned a M.S. and Ph.D. in Nuclear Engineering from the University of Wisconsin.





# TUESDAY, MARCH 15, 2011

9:00 AM

## GUEST SPEAKER

- ▶ Honorable Frank Kendall, *Principal Deputy Under Secretary of Defense, AT&L, OSD*

Mr. Frank Kendall was sworn in as Principal Deputy Under Secretary of Defense for Acquisition, Technology, and Logistics (PDUSD(AT&L)) on March 5, 2010. In his role as PDUSD(AT&L), Mr. Kendall is authorized to act for and provide assistance to the Under Secretary of Defense for Acquisition, Technology & Logistics (USD(AT&L)). He also advises and assists the USD(AT&L) in providing staff advice and assistance to the Secretary of Defense on the acquisition system; research and development; modeling and simulation; systems engineering; advanced technology and developmental test and evaluation. Within government, Mr. Kendall held the position of Director of Tactical Warfare Programs in the Office of the Secretary of Defense and the position of Assistant Deputy Under Secretary of Defense for Strategic Defense Systems. Mr. Kendall was also Vice President of Engineering for Raytheon Company. Mr. Kendall also spent ten years on active duty with the Army serving in Germany, teaching Engineering at West Point, and holding research and development positions. He is a Distinguished Graduate of the U.S. Military Academy at West Point and he holds a Masters Degree in Aerospace Engineering from California Institute of Technology, a Master of Business Administration degree from C.W. Post Center of Long Island University, and a Juris Doctoris from Georgetown University Law Center.



9:30 AM

## HOMELAND SECURITY T&E PERSPECTIVES

- ▶ Mr. Gary Carter, *Director, Test & Evaluation and Standards Division, Department of Homeland Security*

10:00 AM

## MORNING BREAK AND NETWORKING IN THE DISPLAY AREA - GRAND SALONS A-D

## SESSION B: OTA'S (OPERATIONAL TEST AGENCY'S) ROUNDTABLE

Session B Chair and Roundtable Moderator: Dr. Catherine Warner, *Science Advisor, DOT&E, OSD*

10:30 AM

## ROUNDTABLE

- ▶ MG Genaro Dellarocco, USA, *Commander, ATEC*
- ▶ RADM David Dunaway, USN, *Commander, OPTEVFOR*
- ▶ Maj Gen David Eichhorn, USAF, *Commander, AFOTEC*
- ▶ Col David Reeves, USMC, *Commander, MCOTEA*
- ▶ COL Joseph Puett, USA, *Commander, JITC*

11:30 AM

## WALTER W. HOLLIS HONORS LUNCHEON: PRESENTATION FOR OUTSTANDING LIFETIME ACHIEVEMENT IN DEFENSE TEST & EVALUATION - FLORIDA SALONS I-IV

- ▶ Dr. James N. Walbert, *Chief Scientist, SURVICE Engineering Company*

Dr. Walbert has more than 35 years of DoD T&E and related experience including extensive and novel work as an interior and exterior ballisticians, a vulnerability/lethality tester and analyst, a materials engineer, and an author and instructor. From 1974 to 1978, Dr. Walbert served as a mathematician and test director for the U.S. Army Material Testing Directorate, where he planned, analyzed, evaluated, and assessed a wide range of engineering test programs. From 1978 to 2000, he served as a research scientist/engineer for the Ballistic Research Laboratory (and then the Army Research Laboratory) and from 2001 to 2003, Dr. Walbert served as Chief Scientist for the DARPA Future Combat Systems Program Office. Since joining SURVICE in 2003 as the Chief Scientist, Dr. Walbert has developed numerous analytical processes for exploitation of ballistic test data. He has authored/co-authored more than 50 technical publications during his career, including the AIAA-published text *Fundamentals of Ground Combat System Ballistic Vulnerability/Lethality*, which was named ARL's Publication of the Year for 2009. Based on this text, Dr. Walbert also developed and teaches a highly acclaimed basic ballistic vulnerability course to Government and industry practitioners throughout the T&E community. Dr. Walbert holds a B.S., M.S., and Ph.D. in mathematics all from the University of Delaware.



# TUESDAY, MARCH 15, 2011 — Continued

11:30 AM

## LUNCHEON GUEST SPEAKER: SOME PROBLEMS OF CYBER SECURITY

▶ Mr. Robert L. Deitz, *former General Counsel, National Security Agency*

Robert L. Deitz is currently Distinguished Visiting Professor & CIA Officer-in-Residence at George Mason University. From 2006 until February 2009 he served as Senior Councillor to the Director of the Central Intelligence Agency. From September 1998 to September 2006 he was the General Counsel at the National Security Agency where he represented the NSA in all legal matters. He has also held positions as Acting General Counsel at the National Geospatial-Intelligence Agency and as Acting Deputy General Counsel, Intelligence, at the Department of Defense. Professor Deitz began his career as a law clerk to the Honorable Justices Douglas, Stewart, and White of the United States Supreme Court. He has also been in private practice and was Special Assistant to Deputy Secretary of State Warren Christopher and to Secretary of Health, Education and Welfare Joseph Califano during the Carter Administration. Professor Deitz received his J.D. (magna cum laude) from Harvard Law School, where he was the Supreme Court Note and Note Editor of the Harvard Law Review. He received an M.P.A. from the Woodrow Wilson School of Public and International Affairs at Princeton University, where he studied international politics and economics. He majored in English literature at Middlebury College where he received a B.A. (cum laude) and became a member of Phi Beta Kappa.



## SESSION C: ACQUISITION REFORM - THE IMPACT ON INDUSTRY

Session C Chair: Dr. Suzanne Beers, *MITRE Corporation*

1:15 PM

### PENTAGON RESPONSE TO CONGRESSIONAL STRENGTHENING OF DT&E

▶ Mr. Chris DiPetto, *Principal Deputy, Developmental Test & Evaluation*

1:45 PM

### REPORT ON NDIA'S INDUSTRIAL COMMITTEE ON TEST & EVALUATION (ICOTE)

▶ Mr. James Ruma, *Chairman, NDIA ICOTE; Vice President, Engineering, GDLS*

2:15 PM - 5:25 PM CONCURRENT SESSIONS D - K

| SESSION   | SESSION CHAIR   | 2:15 PM   | 2:40 PM  | 3:05 PM  |
|---|---|---|--|--|
| SESSION D<br>Suitability/<br>Reliability<br>Grand Salon G   | Dr. James<br>Strelein,<br>DOT&E, OSD                                | 11460 - Software Reliability Growth<br>Test Approach<br><br>Mr. Louis Gullo, <i>Raytheon Company</i>  | 11627 - Assessing System Reliability<br>Growth When Failure Modes are<br>Masked<br><br>Dr. Patricia Jacobs, <i>Naval Postgraduate<br/>School</i>       | 11650 - Realistic and Measurable<br>Suitability Requirements for Test<br><br>1st Lt Andrew Passey, USAF, <i>Air Force<br/>T&amp;E Center, Detachment 6</i> |
| SESSION E<br>How Re-Energized<br>DT&E Can Better<br>Support the Total<br>Acquisition Process<br>Grand Salon H | Mr. Tom Wissink,<br>Lockheed Martin                                 | 11563 - Integrated Test and<br>Independent Evaluation (IT&IE) and<br>T&E Using Experimental Design<br>Methodology<br><br>Mr. George Axiotis, <i>DDR&amp;E/DDT&amp;E</i> | 11665 - OSD Perspective of DT&E in<br>Navy Shipbuilding Programs<br><br>Mr. Patrick Clancy, <i>OUSD(AT&amp;L)<br/>DDR&amp;E/DDT&amp;E</i>              | 11656 - An Industry Response to the<br>Acquisition Changes<br><br>Mr. Steve Scukanec, <i>Northrop<br/>Grumman Aerospace Sector</i>                         |
| SESSION F<br>Mission-Based<br>Capability<br>Assessments<br>(MBT&E)<br>Grand Salon I                           | Dr. Paul Deitz,<br>AMSAA  | 11499 - Emerging Methodology for<br>Mission-Based Capability Assessments<br><br>Mr. William Landis, <i>ARL/SLAD</i>   | 11557 - Measures Development<br>Standard Operating Procedure (SOP)<br><br>Mr. John Smith, <i>Operational Test &amp;<br/>Evaluation Force</i>           | 11666 - Understand the Mission<br>— A “How-To” Guide for MBTE<br>Practitioners<br><br>Mr. Britt Bray, <i>DRC</i>   |
| SESSION G<br>T&E In Support of<br>Rapid Fielding for<br>Combat<br>Grand Salon J                               | CDR Ernest<br>Swauger, USN<br>(Ret.), <i>CM/HD<br/>Systems IPAT</i> | 11662 - Design Methodology for<br>Expedient, Low Cost UAV Runways<br><br>Mr. Lorenz Eber, <i>Naval Surface<br/>Warfare Center, Dahlgren</i>                             | 11679 - Overview of the Joint/<br>Coalition Mission Thread Measures<br>Development Standard Operating<br>Procedure<br><br>Mr. Max Lorenzo, <i>DISA</i> |  |

# TUESDAY, MARCH 15, 2011

3:30 PM

AFTERNOON BREAK AND NETWORKING IN THE DISPLAY AREA - GRAND SALONS A-D

| SESSION  | SESSION CHAIR                                   | 3:45 PM   | 4:10 PM   | 4:35 PM  | 5:00 PM  |
|--|---|---|---|--|--|
| SESSION H<br>Test & Evaluation of Systems of Systems<br>Grand Salon G    | Dr. James Strelein,<br><i>DOT&amp;E, OSD</i>    | 11577 - Mission-Based Test Design for Complex Systems of Systems and Platforms<br><br>Mr. Joseph Tribble, <i>AVW Technologies</i>   | 11642 - Joint Command and Control Assessments: Rapid Fielding, Integrated Testing and Implications, Approaches and Lessons<br><br>Mr. Brian Eleazer, <i>SCRA/ATI</i>  | 12878 - DoD Strategic Planning for Test and Evaluation<br><br>Mr. Lee Schonenberg, <i>Whitney, Bradley and Brown Consulting</i>  | 11709 - Decoupled Test, Evaluation, and Certification of a System of Systems<br><br>Mr. Robin Murray, <i>JITC</i>  |
| SESSION I<br>Emerging T&E Range/Instrumentation Needs<br>Grand Salon H   | Mr. Dick Dickson, <i>Tybrin Corporation</i>     | 11564 - The CRIIS High Accuracy TSPI Architecture and Technical Maturity Demonstration Test Results<br><br>Dr. Sultan Mahmood, <i>Air Armament Center, AAC/EB</i>                           | End-to-End GPS Multi-Platform Integrated System Testing for MGUE<br><br>Dr. Sultan Mahmood, <i>Air Armament Center, AAC/EB</i>  | 11640 - Directed Energy Test Tri-Service Study 2011: Identifying Directed Energy Test & Evaluation Infrastructure Requirements<br><br>Mr. Doug Weatherford, <i>PM ITTS IMO</i> | 11645 - Holographic Radar Brings a New Dimension to Sensing and Instrumentation on T&E Ranges<br><br>Mr. Gary Kemp, <i>Cambridge Consultants</i>                     |
| SESSION J<br>Bigger Bang for the Dollar Invested - DT&E<br>Grand Salon I | Dr. Mark Kiemele, <i>Air Academy Associates</i> | 11467 - Guiding the Engineer Through the T&E Process<br><br>Mr. Allen Brailey, <i>Raytheon Company</i>  | 11483 - How to Frame a Robust Sweet Spot Via Response Surface Methods (RSM)<br><br>Mr. Mark Anderson, <i>Stat-Ease, Inc.</i>  | 11553 - MIL-PRF-XX613 and MIL-STD-X618: The Navy Gets Serious About Armor<br><br>Mr. Christopher Brown, <i>Naval Surface Warfare Center, Crane</i>                             | 11541 - Fragment Analysis for the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC)<br><br>Ms. Karen Pizzolato, <i>U.S. Army Research Laboratory</i> |
| SESSION K<br>Bigger Bang for the Dollar Invested - OT&E<br>Grand Salon J | Dr. Paul Deitz, <i>AMSAA</i>                    | 11516 - Mission-Based Test and Evaluation Strategy: Progress Towards Uniting Combat Developer, Materiel Developer and T&E<br><br>Mr. Christopher Wilcox, <i>U.S. Army Evaluation Center</i> | 11552 - Using Complementary Frameworks for Qualitative Data Collection During OT&E: Piggybacking on Operational Experiments<br><br>Ms. Chiesha M. Stevens, <i>Pacific Science &amp; Engineering Group, Inc.</i> | 11699 - Continuous Cost Reduction Feeds Back into Product Reliability<br><br>Mr. Jonathan Nikkel, <i>Raytheon Missile Systems</i>  | 11704 - Testing & Evaluating the Net-Ready Key Performance Parameter (KPP)<br><br>Ms. Danielle Koester, <i>JITC</i>  |

5:30 PM - 6:30 PM RECEPTION IN THE DISPLAY AREA - GRAND SALONS A-D

6:30 PM CONFERENCE ADJOURNED FOR THE DAY

# WEDNESDAY, MARCH 16, 2011

7:00 AM - 5:25 PM CONFERENCE REGISTRATION OPEN - 2ND LEVEL REGISTRATION

7:00 AM - 8:00 AM CONTINENTAL BREAKFAST IN THE DISPLAY AREA - GRAND SALONS A-D

8:00 AM INTRODUCTION AND OPENING REMARKS - GRAND SALONS E-F

- ▶ Mr. Sam Campagna, *Assistant Vice President, Operations, NDIA*

# WEDNESDAY, MARCH 16, 2011 — Continued

## SESSION L: A RE-ENERGIZED DT&E

Session L Chair: Mr. John Illgen, *Chairman, NDIA National Board; Northrop Grumman*

### 8:05 AM PANEL: T&E: SERVING THE WARFIGHTER IN A COST-CONSTRAINED ENVIRONMENT

Panel Moderator:

- ▶ Mr. Chris DiPetto, *Principal Deputy, Developmental Test & Evaluation*

Panelists:

- ▶ Mr. David K. Grimm, *Acting Director, Deputy Under Secretary of the Army, T&E Office*
- ▶ Mr. Steve Hutchison, *DISA T&E Executive*
- ▶ Mr. John Manclark, *Air Force T&E Executive*
- ▶ Ms. Amy Markowich, *Navy T&E Executive*
- ▶ Mr. Tom Wissink, *Director of Integration, T&E, Lockheed Martin*

### 9:00 AM

#### SPECIAL GUEST PRESENTATION: EVALUATION OF THE SINKING OF THE CHEONAN KOREAN NAVAL SHIP

- ▶ MG Jong Sung Yoon, *Republic of Korea Army (Ret), Leader of the International Investigation Team*

Rarely does one have the opportunity to fully investigate the circumstances leading up to the attack on and sinking of a warship and then be able to recover the ship and perform an extensive international investigation of the threat, the damage and casualties, the computer modeling of the damage and assessment of the causes and effects. MG Yoon led the international investigation team of which the US was an integral part into the sinking of the Republic of Korea's warship, the CHEONAN, this past year. His insights should be instructive and of great interest to the conference attendees. It is a privilege to welcome him to be a special part of our conference this year.

In addition, MG Yoon will be joined by Dr. Young Shin, Professor, Naval Postgraduate School and visiting Professor, Korean Advanced Institute for Science and Technology, to discuss the efforts of the International Investigation Team addressing the CHEONAN sinking.



MG Jong-Sung Yoon was born on April 4th, 1975 in Inje-gun, Gangwon-do, Korea. In 1981, he received his B.S. from the Korea Military Academy (37th); in 1999, MG Yoon received his M.S. in Science of public administration from Dongguk University; in 2008, he received his Ph.D. in Politics from Myongji University.

### 10:00 AM MORNING BREAK AND NETWORKING IN THE DISPLAY AREA - GRAND SALONS A-D

## SESSION M: RESPONSIVE AND AGILE INFORMATION SYSTEMS T&E PANEL

Session M Chair and Panel Moderator: Dr. Steve Kimmel, *Chairman, NDIA C4ISR Division; Senior Vice President, Alion Science & Technology*

### 10:30 AM

#### PANEL

Panelists:

- ▶ Dr. Steven Hutchison, *Director T&E, DISA*
- ▶ Dr. James Streilein, *Deputy Director, Net-Centric and Space Systems, DOT&E*
- ▶ Ms. Darleen Mosser-Kerner, *Deputy Director, Capabilities Development, Office of the Director, DT&E*
- ▶ Mr. Eustace King, *Chief, Acquisition and Technology, DOD-CIO/NII*

# WEDNESDAY, MARCH 16, 2011

11:30 AM

## LUNCHEON - TESTER OF THE YEAR AWARDS - FLORIDA SALONS I-IV

This awards event is a highlight of our annual conference since it provides the opportunity to recognize outstanding achievement in test and evaluation by members of our armed forces, DoD civilians and DoD contractors. Furthermore, what makes these awards particularly noteworthy is that the selections are made by the organizations of those being recognized. Congratulations to all who are being recognized for their 2010 accomplishments.

## SESSION N: IMPROVING THE T&E PROCESS

Session N Chair: Dr. Lowell Tonnessen, *IDA*

1:15 PM

### T&E AND MISSION ASSURANCE

- ▶ Mr. James W. Wade, *Vice President, Raytheon Company*

1:45 PM

### SOCOM T&E PERSPECTIVES: SERVING THE WARFIGHTER

- ▶ LTC Kevin Vanyo, *USA, USSOCOM J8-O*
- ▶ Mr. Robert D. Werner, Jr., *Senior Test Officer, USSOCOM J8-O*

2:15 PM - 5:25 PM CONCURRENT SESSIONS O - V

| SESSION   | SESSION CHAIR   | 2:15 PM  | 2:40 PM   | 3:05 PM  |
|---|---|--|---|--|
| SESSION O<br>T&E M&S for Specific Applications<br>Grand Salon G   | RADM Bert Johnston,<br>USN (Ret), <i>Wyle Corporation</i> | 11560 - A Comprehensive Approach to Characterizing the Hazards of Explosive Countermeasures With Respect to Dismounted Troops<br><br>Mr. Stephen Swann, <i>U.S. Army Research Laboratory</i> | 11529 - Expanding Use of the Probability of Raid Annihilation (PRA) Test Bed Across the Ship Self-Defense Enterprise<br><br>Mr. Richard Lawrence, <i>AVW Technologies</i> |  |
| SESSION P<br>Approaches to Organizing an Effective M&S Program in Support of T&E<br>Grand Salon H             | Mr. Britt Bray, <i>DRS Corporation</i>                    | 11500 - Modeling and Simulation for Mission-Based Test and Evaluation (MBT&E)<br><br>Mrs. Beth Ward, <i>U.S. Army Research Laboratory</i>  | 11476 - A Paradigm for Modeling and Simulation in support of Mission-Based Test and Evaluation<br><br>Dr. James Walbert, <i>SURVICE Engineering Company</i>               |  |
| SESSION Q<br>T&E Instrumentation Infrastructure - Maximum Utilization of Available Resources<br>Grand Salon I | Mr. Dick Dickson, <i>Tybrin Corporation</i>               | 11497 - Joint Mission Environment Test Capability (JMETC): Improving Distributed Capabilities<br><br>Mr. Chip Ferguson, <i>JMETC</i>   | 11508 - U.S.N. RDTE Project Support Aircraft<br><br>Mr. Charles Myers, <i>U.S. Navy, NAWCAD</i>   | 11626 - Dugway Proving Ground as the MRTFB Chem Bio Activity<br><br>Ms. Jean Baker, <i>U.S. Army Dugway Proving Ground</i> |
| SESSION R<br>Applications of Design of Experiments (DoE) to T&E<br>Grand Salon J                              | Mr. Martin Woznica, <i>Raytheon Company</i>               | 11677 - Using Design of Experiments (DoE) to Integrate Developmental and Operational T&E<br><br>Dr. Mark Kiemele, <i>Air Academy Associates</i>  | 11549 - Probability Driven Experiments Design for Autonomous Systems<br><br>Mr. Troy Jones, <i>Charles Stark Draper Laboratory</i>  | 11532 - Design of Experiments: Managing Expectations<br><br>Mr. James Carpenter, <i>AVW Technologies, Inc.</i>             |

# WEDNESDAY, MARCH 16, 2011 — *Continued*

3:30 PM

AFTERNOON BREAK AND NETWORKING IN THE DISPLAY AREA - GRAND SALONS A-D

| SESSION   | SESSION CHAIR  | 3:45 PM  | 4:10 PM   | 4:35 PM   | 5:00 PM   |
|---|--|--|---|---|---|
| SESSION S<br>T&E M&S for Specific Applications (Cont...)<br>Grand Salon G   | Mr. Britt Bray, <i>DRS Corporation</i>                   | 11538 - Personnel Injury Analysis of Reflective Spall<br><br>Mrs. Rebecca VanAmburg, <i>U.S. Army Research Laboratory</i>            | 11539 - Analytical Approach Using MUVES-S2/ORCA Modeling in Support of the Joint Cargo Aircraft (JCA)<br><br>Mr. Richard Moyers, <i>U.S. Army Research Laboratory</i>   | 11674 - Utilization of Model and Simulation for Network Waveform Characterization and Validation<br><br>Mr. Scott Rediger, <i>Rockwell Collins</i>  | 11708 - A Proposal for Robotic Entity Safety Release<br><br>Dr. Jeffrey Mosley, <i>OptiMetrics, Inc.</i>                          |
| SESSION T<br>Approaches to Organizing an Effective M&S Program in Support of T&E (Cont...)<br>Grand Salon H             | CDR Ernest Swauger, <i>USN (Ret), CM/HD Systems IPAT</i> |  | 11676 - Model Based Systems Engineering and M&S Adding Value to T&E<br><br>Mr. Larry Grello, <i>High Performance Technologies, Inc.</i>   | 11554 - The Impact of High Accuracy Target Geometry in Modeling and Simulation to Support Live Fire Test and Evaluation<br><br>Mr. Scott Hornung, <i>U.S. Army Research Laboratory/SLAD</i>                     |   |
| SESSION U<br>T&E Instrumentation Infrastructure — Maximum Utilization of Available Resources (Cont...)<br>Grand Salon I | Dr. Suzanne Beers, <i>MITRE Corporation</i>              | 11638 - Army Testing in a Services Oriented Architecture (SOA) Environment<br><br>Mr. Michael Phillips, <i>Mantech International</i> | 11639 - The Test and Training Enabling Architecture (TENA) Enabling Technology for the Joint Mission Environment Test Capability (JMETC) in Live, Virtual, and Constructive (LVC) Environments<br><br>Mr. Gene Hudgins, <i>TENA/JMETC</i> | 11682 - Advanced Range Data System (ARDS) Service Life Extension Program (SLEP) - “Ensuring GPS Based TSPI Remains a Viable T&E Range Instrumentation Asset”<br><br>Mr. Dick Dickson, <i>TYBRIN Corporation</i> | 11698 - Target Systems in Support of Test and Evaluation<br><br>Mr. James Schwierling, <i>U.S. Army Targets Management Office</i> |
| SESSION V<br>Developmental Testing & Operation Testing Challenges<br>Grand Salon J                                      | Mr. Chuck Larson, <i>SURVICE Engineering</i>             | 11524 - Ready for Scrum?<br><br>Dr. Steven Hutchison, <i>DISA</i>  | 11649 - Affordable Test and Evaluation in a Complex World<br><br>Mr. Thomas Wissink, <i>Lockheed Martin</i>   | 11710 - Testing U.S. Systems for Coalition Interoperability<br><br>LTC Tim Timmons, <i>USA, JITC</i>  | 11659 - Impacts of the Learning Curve — Operational Test & Evaluation<br><br>Ms. Shannon Krammes, <i>MCOTEA</i>                   |

5:25 PM

CONFERENCE ADJOURNED FOR THE DAY

# THURSDAY, MARCH 17, 2011

7:00 AM - 12:00 NOON CONFERENCE REGISTRATION OPEN - 2ND LEVEL REGISTRATION

7:00 AM - 8:00 AM CONTINENTAL BREAKFAST IN THE DISPLAY AREA - GRAND SALONS A-D

8:00 AM INTRODUCTION AND OPENING REMARKS - GRAND SALONS E-F

- ▶ Mr. Sam Campagna, *Assistant Vice President, Operations, NDIA*

# THURSDAY, MARCH 17, 2011 — *Continued*

## SESSION W: TEST DESIGN, TEST CURRICULA AND STANDARDS

Session W Chair: Dr. Paul Deitz, *former Technical Director, AMSAA*

- 8:05 AM**                    **SYSTEMS ENGINEERING PLANS: HOW TO RECOGNIZE PROBLEMS, SET GOALS AND IMPLEMENT IMPROVEMENTS**
- ▶ Dr. Don McKeon, *Defense Acquisition University*
- 8:30 AM**                    **11690 - DOING MORE WITHOUT MORE - SCIENTIFIC T&E DESIGN METHODOLOGIES (STED IN DoD WEAPONS SYSTEMS AQUISITION)**
- ▶ Ms. Darleen Mosser-Kerner, *Deputy Director, Capabilities Development, Office of the Director, DT&E*
- 8:55 AM**                    **WHAT ARE WE TEACHING OUR PMs AND ACQUISITION PROFESSIONALS ABOUT T&E?**
- ▶ Col Michael Bohn, USMC (Ret), *Faculty, Defense Acquisition University*
- 9:10 AM**                    **REPORT ON STANDARDS FOR DT&E**
- ▶ CDR Ernest Swauger, USN (Ret), *JPEO-CBD/Chief, CM/HD Systems IPAT*
- 9:35 AM**                    **11663 - EFFECTIVE COMBAT DATA COLLECTION & APPLICABILITY TO T&E**
- ▶ LtCol Michael Kennedy, USMC, *Expeditionary Test Division, MCOTEA*
- 10:00 AM**                    **MORNING BREAK AND NETWORKING IN THE DISPLAY AREA - GRAND SALONS A-D**
- 10:30 AM - 2:00 PM**   **BREAKDOWN OF DISPLAYS**

## SESSION X: CONFERENCE SYNOPSIS FORUM

Session X Chair: Dr. Paul Deitz, *former Technical Director, AMSAA*

- 10:30 AM**                    **11651 - TEST & EVALUATION ISSUES FOR SYSTEMS OF SYSTEMS (SoS): CREATING SLEEP AIDS FOR THOSE SLEEPLESS NIGHTS**
- ▶ Dr. Beth Wilson, *Principal Engineering Fellow, Raytheon Company*
- 10:55 AM**                    **11569 - T&E - GUARDING THE REQUIREMENTS INTENT**
- ▶ Mr. Steve Scukanec, *Senior Test Engineer, Northrop Grumman Aerospace Sector*
- 11:25 AM**                    **CONFERENCE SYNTHESIS PANEL**
- ▶ Dr. Suzanne Beers, *T&E Group Leader, MITRE Corporation*
  - ▶ Mr. Britt Bray, *Military Analyst and Department Manager, DRC Corporation*
  - ▶ Mr. Brian Simmons, *Executive Technical Director/Deputy to the Commander, U.S. Army Test and Evaluation Command*
  - ▶ Dr. James Streilein, *Deputy Director, OSD, DOT&E*
  - ▶ Dr. Catherine Warner, *Science Advisor, OSD, DOT&E*
- 11:55 AM**                    **CLOSING REMARKS**
- ▶ Mr. James O'Bryon, *Chairman, NDIA T&E Division; The O'Bryon Group*
- 12:00 NOON**                    **CONFERENCE ADJOURNS**

## ADDITIONAL AUTHORS

| Abstract ID | Abstract Title   | Additional Authors  |
|-------------|--|---|
| 11499       | Emerging Methodology for Missions-Based Capability Assessments   | Mr. Kevin Agan  |
| 11529       | Expanding Use of the Probability of Raid Annihilation (PRA) Testbed Across the Ship Self-Defense Enterprise            | Mr. Chris Hauser<br>Mr. Steve Mulleavy  |
| 11532       | Design of Experiments: Managing Expectations   | Mr. Chris Hauser<br>Mr. Steve Mulleavy<br>Mr. Kenneth Culpepper                 |
| 11538       | Personnel Injury Analysis of Reflective Spall  | Mr. Robert Kinsler  |
| 11539       | Analytical Approach using MUVES-S2/ORCA Modeling in Support of the Joint Cargo Aircraft (JCA)                          | Mrs. Penny Willard  |
| 11549       | Probability Driven Experimental Design for Autonomous Systems  | Mr. Stephen York<br>Dr. Nicholas Borer<br>Mr. Scott Ingleton                    |
| 11552       | Using Complementary Frameworks for Qualitative Data Collection during OT & E: Piggybacking on Operational Experiments  | Ms. Chiesha Stevens   |
| 11560       | A Comprehensive Approach to Characterizing the Hazards of Explosive Countermeasures With Respect to Dismounted Troops  | Mr. Stephen Swann<br>Mr. Gregory Dietrich                                       |
| 11563       | Integrated Test and Independent Evaluation (IT&IE) and T&E using Experimental Design Methodology                       | Col Mickey Quintrall, USAF (Ret)  |
| 11564       | The CRIIS High Accuracy TSPI Architecture and Technical Maturity Demonstration Test Results                            | Mr. Michael Flinn<br>Mr. Emmanuel Piniero<br>Mr. Gary Green<br>Mr. Larry Vallot |
| 11569       | T&E - Guarding the Requirements Intent   | Mr. Eric Kaplan   |
| 11627       | Assessing System Reliability Growth when Failure Modes are Masked  | Dr. Donald Gaver  |
| 11638       | Army Testing in a Services Oriented Architecture (SOA) Environment   | Dr. Philip Hammonds<br>Mr. Frank Vitoria<br>Mr. Malcolm Lee                     |
| 11640       | Directed Energy Test Tri-Service Study 2011: Identifying Directed Energy Test & Evaluation Infrastructure Requirements | Mr. Minh Vuong  |
| 11642       | Joint Command and Control Assessments: Rapid Fielding, Integrated Testing and Implications, Approaches and Lessons     | Mr. Steve Reeder  |
| 11651       | Test and Evaluation Issues for System of Systems: Creating Sleep Aids for Those Sleepless Nights                       | Ms. Darlene Mosser-Kerner<br>Mr. Tom Wissink                                    |
| 11656       | An Industry Response to the Acquisition Changes  | Mr. Steve Scukanec  |
| 11659       | Impacts of the Learning Curve — Operational Test & Evaluation  | Ms. Brittney Cates  |
| 11663       | Effective Combat Data Collection & Applicability to T&E  | Mr. Mark Flannery   |
| 11665       | OSD Perspective of DT&E in Navy Shipbuilding Programs  | Mr. Michael Melvin<br>Mr. Joseph Terlizzese, Jr.                                |



## ADDITIONAL AUTHORS

| Abstract ID | Abstract Title  | Additional Authors                         |
|-------------|---|--|
| 11676       | Model Based Systems Engineering and M&S adding value to T&E   | Mr. Frank Salvatore<br>Mr. Richard Swanson |
| 11703       | Ships Are Different   | Ms. Megan Vanderberry<br>Mr. Jeff Bobrow   |
| 11705       | Defense Information Systems Agency Joint Interoperability Test Command Interoperability Support for the Afghanistan Mission Network | Mr. Byron Baker<br>Mr. Todd Rissinger      |
| 11709       | Decoupled Test, Evaluation, and Certification of a System of Systems  | Mr. Harold Maynard                         |
|             | Report on Standards for DT&E  | Dr. Juan Vitali                            |

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Raytheon Company, with 2009 sales of \$25 billion, is a technology and innovation leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning 88 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Mass., Raytheon employs 75,000 people worldwide.



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## THANK YOU FOR ATTENDING! WE LOOK FORWARD TO SEEING YOU NEXT YEAR:

March 12-15, 2012  
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