NDIA
National Defense Industrial Association

PROMOTING NATIONAL SECURITY SINCE 1919

13TH ANNUAL SYSTEMS ENGINEERING CONFERENCE

"ACHIEVING ACQUISITION EXCELLENCE VIA EFFECTIVE SYSTEMS ENGINEERING"

OCTOBER 25-28, 2010

WWW.NDIA.ORG/MEETINGS/1870

HYATT REGENCY MISSION BAY ▸ SAN DIEGO, CA

EVENT #1870

CONFERENCE OVERVIEW

This conference is sponsored by the National Defense Industrial Association, Systems Engineering Division, with technical co-sponsorship by IEEE AES, IEEE Systems Council and the International Council on Systems Engineering, and is supported by the Office of Under Secretary of Defense for Acquisition, Technology and Logistics, Director, Defense Research and Engineering, and the Office of the DoD Chief Information Officer.

This conference seeks to create an interactive forum for Program Managers, Systems Engineers, Chief Scientists and Engineers and Managers from the Requirements, Design, Verification, Support, Logistics and Test communities from Government, Academia, and Industry. The conference will provide the opportunity to shape policy and procedures by exchanging innovative tactics and lessons learned.

BACKGROUND

The Department of Defense continues to work to improve the acquisition of military equipment and capability to assist the warfighter in protecting the U.S. and its allies, and help oppressed nations around the world, amidst continuously changing conditions and threats. The DoD seeks to improve the acquisition process and overall program execution of military systems, to provide greater, more effective and reliable warfighting capability, at affordable cost and within reasonable schedules. One of the primary and critically important areas of program acquisition and execution lies in the umbrella discipline of Systems Engineering, which is the overall integrating function in defense programs, from proper requirements definition and flowdown, effective and affordable design that integrates reliability, availability and maintainability considerations into the overall balance of design that emphasizes supportability and usage aspects along with overall performance, cost and schedule. Systems Engineering principles embody strong technical and risk management aspects, for both the acquiring program office as well as the executing defense prime and subcontractors. Strong emphasis on systems engineering throughout the life cycle of the program, from concept development through sustainment, is a key enabler of successful programs. The annual Systems Engineering Conference explores the role of systems engineering in defense programs from all aspects and perspectives, including the pragmatic, practical and academic viewpoints, and brings key practitioners together to work on effective solutions to achieving a successful warfighting force.

2011 CALL FOR PAPERS INFORMATION

The primary objective of the 14th Annual Systems Engineering Conference is to provide insight, information and lessons learned into how we can improve the overall performance of defense programs via a better, more focused application of systems engineering that will lead to more capable, interoperable and supportable weapon systems for the warfighter, with reduced total ownership costs, to help our military meet its current and new mission area and capabilities requirements. Technical and management presentations are a key tactic in achieving this objective. You are invited to submit a short (under 300 word) abstract of a presentation for a session (see topics on the website). Abstracts must fully describe the planned content and how the presentations will advance the objectives of the conference and session. All accepted presentations will be delivered at the conference in electronic format; full papers are optional and are not required.

Abstracts must include the following administrative information: presentation title, author's name, title, e-mail address, phone number, mailing address and organization and the conference session targeted. Abstracts must be submitted no later than Sunday, May 30, 2010 via the following web link:

http://application.ndia.org/abstracts/2870

Abstracts will only be accepted through this web link, and all required information must be completed. Upon completion of the required information, you will receive an e-mail confirmation.

**Conference presenters are not exempt from registration and conference fees.

CONFERENCE PROCEEDINGS

Proceedings will be available on the web through the Defense Technical Information Center (DTIC), and will be available one to two weeks after the conference. You will receive notification via e-mail once proceedings are posted and available on the web.

2010 LT GEN THOMAS R. FERGUSON, JR. SYSTEMS ENGINEERING EXCELLENCE AWARD

The National Defense Industrial Association's Systems Engineering Excellence Awards were established in 2003 to honor the memory of Lt Gen Thomas R. Ferguson, Jr., USAF, whose leadership embodied the highest ideals in Defense Systems development and deployment.

The awards are given to an individual and to a group demonstrating outstanding achievement in the practical application of Systems Engineering principles, promotion of robust systems engineering principles throughout the organization, or effective systems engineering process development during the previous year. Their systems engineering contributions should have demonstrably helped achieve significant cost savings due to new or enhanced processes procedures and/or concepts, increased mission capabilities, or substantially increased performance. The 2010 awardees are:

- Systems Engineering Individual Leadership Award: *Mr. Harold (Hal) Wilson*
- Systems Engineering Group Award: *MDA Airborne Laser TestBed Systems Engineering Division*
- Systems Engineering Group Award: *CECOM Second Generation Forward Looking Infrared Program*

PAST AWARD WINNERS:

2003:
- Systems Engineering Individual Leadership Award: *Mr. Robert Rassa*

2004:
- Systems Engineering Individual Leadership Award: *Honorable Mike Wynne*

2005:
- Systems Engineering Individual Leadership Award: *Mr. Mark Schaeffer*

2006:
- Systems Engineering Individual Leadership Award: *Mr. Kelly Milleru*
- Systems Engineering Individual Practitioner Award: *Mr. David Stribling*
- Systems Engineering Group Award: *NUWC Division Newport Critical Transducer Program Staff*

2007:
- Systems Engineering Individual Leadership Award: *Mr. Robert Skalamera*
- Systems Engineering Group Award: *Submarine Warfare Federated Tactical System Team*

2008:
- Systems Engineering Individual Leadership Award: *Honorable James Finley*
- Systems Engineering Group Award: *Tactical Direction Agent Team for LCS Mission Package Project*

2009:
- Systems Engineering Individual Leadership Award: *Mr. Brian Wells*
- Systems Engineering Group Award: *Center for Advanced Life Cycle Engineering*

CONTACTS

Technical Program Co-Chairs:
Mr. Steve Henry:
Manager, Systems Engineering and Program Support, Northrop Grumman Information Systems, stephen.henry@ngc.com, (703) 561-5724

Dr. Tom Christian,
ASC/EN,
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Conference Chair:
Mr. Bob Rassa,
Director, Engineering Programs, Space & Airborne Systems, Raytheon Company; Chair, Systems Engineering Division, NDIA, rcrassa@raytheon.com, (310) 985-4962

Meeting Planner:
Ms. Taryn Crowder,
NDIA, tcrowder@ndia.org,
(703) 247-2566

Conference Director:
Mr. Sam Campagna, Assistant Vice President, Operations,
NDIA, scampagna@ndia.org,
(703) 247-2544

ATTIRE

Appropriate dress for this conference is business casual for civilians and class B uniform for military. Badges must be worn at all conference functions.

CONTINUING EDUCATION UNIT CREDIT

NDIA is offering CEU credit options for the Systems Engineering Conference. Earn 1 unit per 10 hours for $45. For more information, please contact Ms. Taryn Crowder at (703) 247-2566 or tcrowder@ndia.org.

DEPARTMENT OF DEFENSE AND THE NATIONAL DEFENSE INDUSTRIAL ASSOCIATION 2009 DoD SYSTEMS ENGINEERING TOP 5 PROGRAM AWARDS

The Department of Defense Executive Agent for Systems Engineering and the Systems Engineering Division of the National Defense Industrial Association are pleased to announce the selections of the 2009 Top 5 Department of Defense Program Awards. The 2009 Program awardees are:

- Base Expeditionary Target & Surveillance System - Combined: *Department of the Army*
- Advanced Field Artillery Tactical Data System: *Department of the Army; Raytheon Company*
- C-17 Globemaster III Modernization: *Department of the Air Force; The Boeing Company*
- Defense Readiness Reporting System - Army: *Department of the Army; Lockheed Martin IS&GS Defense; Accenture National Security Services*
- Battlefield Airborne Communications Node Joint Urgent Operational Need: *Department of the Air Force; Northrop Grumman Information Systems*

The Awards are presented to both the DoD project office and the industry prime contractor in recognition of total program performance in a DoD/industry team effort.

PAST AWARD WINNERS:

2005 Top 5 Department of Defense Programs:

- Centaur
- Integrated Exploitation Capability
- P-8A Multi Mission Maritime Aircraft
- Mission INtegration & Development
- Tomahawk Weapons System Program PMA-280

2006 Top 5 Department of Defense Programs:

- Advanced Extremely High Frequency Mission Control System
- Advanced Field Artillery Tactical Data System
- DDG 1000 MK57 Vertical Landing System
- Portable Excalibur FCS

2007 Top 5 Department of Defense Programs:

- Effects Management Tool
- MH-60 R/S Link 16
- Mortar Fire Control System - Dismounted

2008 Top 5 Department of Defense Programs:

- Wideband Global SATCOM
- Joint Light Tactical Vehicle
- STRYKER Modernization
- Broad Area Maritime Surveillance Unmanned Aircraft
- Aviation Maintenance Training Continuum System

CONFERENCE AGENDA

SUNDAY, OCTOBER 24, 2010

5:00 pm - 7:00 pm	**REGISTRATION FOR TUTORIALS AND GENERAL CONFERENCE IN THE BAYVIEW FOYER**

MONDAY, OCTOBER 25, 2010

7:00 am - 6:00 pm	**REGISTRATION IN THE BAYVIEW FOYER**
7:00 am - 8:00 am	**CONTINENTAL BREAKFAST ON THE BAYVIEW TERRACE (TUTORIAL ATTENDEES ONLY)**
8:00 am - 12:00 pm	**TUTORIAL TRACKS -** *Please refer to the following pages for session schedule*
9:45 am - 10:15 am	**MORNING BREAK ON THE BAYVIEW TERRACE (TUTORIAL ATTENDEES ONLY)**
12:00 pm - 1:00 pm	**LUNCH IN THE REGATTA PAVILION (TUTORIAL ATTENDEES ONLY)**
1:00 pm - 5:00 pm	**TUTORIAL TRACKS CONTINUED -** *Please refer to the following pages for session schedule*
2:45 pm - 3:15 pm	**AFTERNOON BREAK ON THE BAYVIEW TERRACE (TUTORIAL ATTENDEES ONLY)**
5:00 pm - 6:00 pm	**RECEPTION IN THE REGATTA PAVILION - OPEN TO ALL CONFERENCE ATTENDEES**

TUESDAY, OCTOBER 26, 2010

7:00 am - 5:15 pm	**REGISTRATION IN THE BAYVIEW FOYER**
7:15 am - 8:15 am	**CONTINENTAL BREAKFAST IN THE REGATTA PAVILION**
8:15 am - 8:30 am	**INTRODUCTION & OPENING REMARKS** ▸ Mr. Sam Campagna, *Assistant Vice President, Operations, NDIA* ▸ Mr. Bob Rassa, *Director, Engineering Programs, Space & Airborne Systems, Raytheon Company*; *Chair, Systems Engineering Division, NDIA*
8:30 am - 9:30 am	**KEYNOTE ADDRESS** ▸ Lt Gen Richard Scofield, USAF (Ret), *former Commander, Aeronautical Systems Center and Wright Patterson Air Force Base*
9:30 am - 10:00 am	**MORNING BREAK IN THE REGATTA PAVILION**
10:00 am - 12:00 pm	**PLENARY SESSION 1 - CHIEF SYSTEMS ENGINEERS PANEL** ***Engineering Complex Systems of the Future*** **Moderator:** Mr. James Thompson, *Director, Major Program Support, Systems Engineering Directorate, Office of the Director, Defense Research and Engineering* ▸ Mr. Terry Edwards, *Office of the Secretary of the Army for Acquisition, Logistics and Technology* ▸ Mr. Ricardo Cabrera, *Office of the Assistant Secretary of the Navy for Research, Development and Acquisition* ▸ Col Shawn Shanley, USAF, *Office of the Deputy Assistant Secretary of the Air Force for Science, Technology, and Engineering*
12:00 pm - 1:30 pm	**LUNCH WITH SPEAKER IN THE REGATTA PAVILION** ▸ Mr. Stephen Welby, *Director, Systems Engineering, Office of the Director, Defense Research and Engineering*

TUESDAY, OCTOBER 26, 2010 - CONTINUED

1:30 pm - 3:00 pm — **PLENARY SESSION 2 - PROGRAM MANAGER PANEL**

Systems Engineering Discipline: Foundation for Program Success?

Moderator: Col Leslie Blackham, USAF, *Military Assistant, Systems Engineering Directorate, Office of the Director, Defense Research and Engineering*

- Dr. Gary Notte, *Product Director, Fire Support Command and Control, U.S. Army*
- LTC Todd Lamb, USA, *Product Manager, Stryker Development*
- CAPT Michael E. Jabaley, Jr., USN, *Program Manager, VIRGINIA Class Submarines (PMS 450)*
- CAPT Rick Muldoon, USN, *Program Manager, H-53 Heavy Lift Helicopters (PMA-261)*
- Col Janet L. Kasmer, USAF, *Deputy Director, Global Reach Programs (SAF/AQQ)*
- Col Donald W. Robbins, USAF, *Commander, Wideband SATCOM Group*

3:00 pm - 3:15 pm — **AFTERNOON BREAK IN THE REGATTA PAVILION**

3:15 pm - 5:15 pm — **PLENARY SESSION 3 - INDUSTRY EXECUTIVES PANEL**

Challenges of Complex Systems: Need for Systems Engineering

Moderator: Mr. Bob Rassa, *Director, Engineering Programs, Space & Airborne Systems, Raytheon Company*

- Mr. Brian Wells, *Vice President, Engineering, Raytheon Company*
- Mr. Paul Zavidniak, *Technical Fellow, Director, Technology and Strategy, Airborne and Maritime Systems, Northrop Grumman*
- Mr. Patrick Goggin, *Vice President, Development Program Excellence, Chief Engineer SoCal Regional Engineering Boeing Defense, Space & Security*

5:15 pm - 6:30 pm — **RECEPTION IN THE REGATTA PAVILION**

WEDNESDAY, OCTOBER 27, 2010

7:00 am - 5:15 pm — **REGISTRATION IN THE BAYVIEW FOYER**

7:00 am - 8:00 am — **CONTINENTAL BREAKFAST IN THE REGATTA PAVILION**

8:00 am - 12:00 pm — **CONCURRENT SESSIONS -** ***Please refer to the following pages for session schedule***

9:45 am - 10:15 am — **MORNING BREAK IN THE REGATTA PAVILION**

12:00 pm - 1:30 pm — **NDIA/DoD AWARDS LUNCH IN THE REGATTA PAVILION**

- DoD Systems Engineering Top 5 Program Awards
- NDIA Lt Gen Thomas Ferguson Awards for Group and Individual Excellence in Systems Engineering

1:30 pm - 5:15 pm — **CONCURRENT SESSIONS -** ***Please refer to the following pages for session schedule***

3:15 pm - 3:30 pm — **AFTERNOON BREAK IN THE REGATTA PAVILION**

5:15 pm — **WEDNESDAY SESSION ADJOURNS**

THURSDAY, OCTOBER 28, 2010

7:00 am - 3:30 pm — **REGISTRATION IN THE BAYVIEW FOYER**

7:00 am - 8:00 am — **CONTINENTAL BREAKFAST IN THE REGATTA PAVILION**

8:00 am - 12:00 pm — **CONCURRENT SESSIONS -** ***Please refer to the following pages for session schedule***

9:45 am - 10:15 am — **MORNING BREAK IN THE REGATTA PAVILION**

12:00 pm - 1:30 pm — **LUNCH WITH SPEAKER IN THE REGATTA PAVILION**

Systems 2020

- Ms. Kristen Baldwin, *Director, Systems Analysis, Systems Engineering Directorate, Office of the Director, Defense Research and Engineering*

1:30 pm - 3:30 pm — **CONCURRENT SESSIONS -** ***Please refer to the following pages for session schedule***

3:30 pm — **CONFERENCE ADJOURNS**

MONDAY, OCTOBER 25, TUTORIAL SESSIONS

Tutorial Sessions A-B and C-D are continuous

TRACK	8:00 AM SESSION A	10:15 AM SESSION B	1:00 PM SESSION C	3:15 PM SESSION D
TRACK 8 Palm II	10803 - 1A8 - Tutorial: NCOIC Systems, Capabilities, Operations, Programs, and Enterprises (SCOPE) Model Mr. Hans Polzer, Lockheed Martin	10803 - 1B8 - Tutorial: NCOIC Systems, Capabilities, Operations, Programs, and Enterprises (SCOPE) Model Mr. Hans Polzer, Lockheed Martin	10770 - 1C8 - Tutorial: NCOIC's Network Centric Analysis Tool (NCAT TM) Dr. Todd Schneider, Raytheon Company	10770 - 1D8 - Tutorial: NCOIC's Network Centric Analysis Tool (NCAT TM) Dr. Todd Schneider, Raytheon Company
TRACK 7 Palm I	10895 - 1A7 - Tutorial: How to Design Lean Systems Engineering Processes and Procedures Mr. Tim Olson, Lean Solutions Institute, Inc.	10895 - 1A7 - Tutorial: How to Design Lean Systems Engineering Processes and Procedures Mr. Tim Olson, Lean Solutions Institute, Inc.	10894 - 1C7 - Tutorial: How to Achieve Measurable ROI Using Best-In-Class Early Defect Detection and Defect Prevention Mr. Tim Olson, Lean Solutions Institute, Inc.	10894 - 1D7 - Tutorial: How to Achieve Measurable ROI Using Best-In-Class Early Defect Detection and Defect Prevention Mr. Tim Olson, Lean Solutions Institute, Inc.
TRACK 6 Mission III	10748 - 1A6 - Tutorial: Risk Management and Beyond Mr. Al Florence, The MITRE Corporation	10748 - 1B6 - Tutorial: Risk Management and Beyond Mr. Al Florence, The MITRE Corporation	10749 - 1C6 - Tutorial: Life Cycle Configuration Management Mr. Al Florence, The MITRE Corporation	10749 - 1D6 - Tutorial: Life Cycle Configuration Management Mr. Al Florence, The MITRE Corporation
TRACK 5 Mission II	10984 - 1A5 - Tutorial: Systems Engineering Integration Effectiveness: Reducing the Uncertainties of Integration Mr. Gary Langford, Naval Postgraduate School	10984 - 1B5 - Tutorial: Systems Engineering Integration Effectiveness: Reducing the Uncertainties of Integration Mr. Gary Langford, Naval Postgraduate School	10941 - 1C5 - Tutorial: Development of Requirements for Reliable Software Systems — Guidance and Pitfalls Mr. William Bail, The MITRE Corporation	10941 - 1D5 - Tutorial: Development of Requirements for Reliable Software Systems — Guidance and Pitfalls Mr. William Bail, The MITRE Corporation
TRACK 4 Mission I	10805 - 1A4 - Tutorial: Seven Mentoring Fundamentals to Support Systems Engineering Workforce Development Mr. Nicholas Torelli, ODDR&E/SE	10805 - 1B4 - Tutorial: Seven Mentoring Fundamentals to Support Systems Engineering Workforce Development Mr. Nicholas Torelli, ODDR&E/SE	11055 - 1C4 - Tutorial: Transitioning Technology to the Warfighter Mr. William Decker, Defense Acquisition University	11055 - 1D4 - Tutorial: Transitioning Technology to the Warfighter Mr. William Decker, Defense Acquisition University
TRACK 3 Bayview I	11094 - 1A3 - Tutorial: An Introduction to the Use of Modeling and Simulation Throughout the Systems Engineering Process Dr. James Coolahan, Johns Hopkins University Applied Physics Laboratory	11094 - 1B3 - Tutorial: An Introduction to the Use of Modeling and Simulation Throughout the Systems Engineering Process Dr. James Coolahan, Johns Hopkins University Applied Physics Laboratory	10709 - 1C3 - Tutorial: Systems of Systems: Answering the Organizational Implications Dr. Stan Rifkin, U.S. Air Force Office of Scientific Research	10709 - 1D3 - Tutorial: Systems of Systems: Answering the Organizational Implications Dr. Stan Rifkin, U.S. Air Force Office of Scientific Research
TRACK 2 Bayview II	10834 - 1A2 - Tutorial: Improved Acquisition Processes Through Incremental Commitments Dr. Barry Boehm, University of Southern California	10834 - 1B2 - Tutorial: Improved Acquisition Processes Through Incremental Commitments Dr. Barry Boehm, University of Southern California	11090 - 1C2 - Tutorial: Software Technology Readiness Assessment — Defense Acquisition Guidance Dr. Peter Hantos, The Aerospace Corporation	11090 - 1C2 - Tutorial: Software Technology Readiness Assessment — Defense Acquisition Guidance Dr. Peter Hantos, The Aerospace Corporation
TRACK 1 Bayview III	10480 - 1A1 - Tutorial: Universal Architecture Description Framework Mr. Jeffrey Grady, JOG System Engineering, Inc.	10480 - 1B1 - Tutorial: Universal Architecture Description Framework Mr. Jeffrey Grady, JOG System Engineering, Inc.	10844 -1C1 - Tutorial: CONOPS Development and Architectures Dr. Steven Dam, SPEC Innovations	10844 -1D1 - Tutorial: CONOPS Development and Architectures Dr. Steven Dam, SPEC Innovations

WEDNESDAY, OCTOBER 27, CONCURRENT SESSIONS

TRACK	SESSION CHAIR	8:00 AM	8:35 AM	9:10 AM	TRACK	SESSION CHAIR	10:15 AM	10:50 AM	11:25 AM
TRACK 10 Logistics Supportability and Sustainment Crown Point	Mr. Joel Moorvitch, *Raytheon Company*	10592 - Engineering Design Analysis (Physics of Failure) Mr. Gary Drake, U.S. Army Materiel Systems Analysis Activity	10926 - Design For Reliability (DFR) Methodology Applied to Stryker NBCRV Program Dr. Dmitry Tananko, GDLS	10780 - NDIA Life Cycle Affordability Project Mr. Joel Moorvitch, Raytheon Company	TRACK 10 Logistics Supportability and Sustainment Crown Point	Mr. Joel Moorvitch, *Raytheon Company*		10836 - Logistics Demonstrations: A Strategy to Reduce Cost, Maintain Schedule, and Mitigate Risks to Achieve Performance Goals Mr. Jeffrey Gilbert, U.S. Army Evaluation Center	11071 - Sustaining and Upgrading the Air Force's Legacy Mobility Fleet: Addressing Issues Using SE Enterprise Approach Mr. Ray Flores, USAF Air Mobility Directorate, Aeronautical System
TRACK 9 Human Systems Integration Mariner Point	Ms. Elaine Thorpe, *The Boeing Company*	11077 - Driving HSI into Common Industry Practice Dr. Noreen McQuinn, The Boeing Company	10724 - Systems Engineering and User Needs — Strategies and Tactics for the Evolving System Acquisition Environment Dr. William Reese, Northrop Grumman Electronic Systems	10851 - Assessment of Human Systems Integration in Air Force Acquisition Mr. John Maziarz, Booz Allen Hamilton	TRACK 9 Human Systems Integration Mariner Point	Ms. Elaine Thorpe, *The Boeing Company*	11082 - HSI Translation of Capability Requirements to Acquisition Ms. Lisa Kaminski, Booz Allen Hamilton	10957 - Human Systems Integration Support for Rapidly Fielded Systems Mrs. Elaine Thorpe, The Boeing Company	11010 - Human Systems Integration Approaches for Developmental Testing Dr. Matthew Risser, Pacific Science & Engineering Group
TRACK 8 Test & Evaluation in Systems Engineering Palm II	Dr. Beth Wilson, *Raytheon Company* Darlene Mosser-Kerner, *ODDR&E/DT&E*	10604 - Test and Evaluation Issues for Systems of Systems: Sleepless Nights to Sominex Dr. Beth Wilson, Raytheon Company	10911 - (JMETC) Effective T&E by Improving Distributive Test Capabilities Mr. Ryan Norman, Joint Mission Environment Test Capability, Lead Systems Engineer	10733 - 2010 Strategic Plan for DoD T&E Resources Dr. Suzanne Strohl, OSD AT&L Test Resource Management Center	TRACK 8 Test & Evaluation in Systems Engineering Palm II	Dr. Beth Wilson, *Raytheon Company* Darlene Mosser-Kerner, *ODDR&E/DT&E*	10903 - Guarding the Intent of Requirements Throughout the Test Execution Cycle Mr. Stephen Scukanec, Northrop Grumman, Aerospace Sector	10741 - Defining, Implementing and Testing Non-Functional Requirements on Agile Programs: Lessons Learned Mrs. Dorothy Acton, Lockheed Martin	10783 - Evolution of the Tomahawk Land-Attack Missile Operational Test Launch Methodology Mrs. Angelica Lilly, JHU/APL
TRACK 7 Enterprise Health Management Palm I	Mr. Howard Savage, *SCI* Mr. Chris Reisig, *The Boeing Company*		11056 - Unmanned Ground Vehicle Integrated Diagnostics Mr. Larry Osentoski, DRIVE Developments, Inc.	11059 - Diagnostic Improvement of Complex Systems Through Enhanced Information Usage Mr. Darrell Bartz, The Boeing Company	TRACK 7 Enterprise Health Management Palm I	Mr. Howard Savage, *SCI* Mr. Chris Reisig, *The Boeing Company*	11032 - Using Commercial-Off-The-Shelf (COTS) Business Intelligence Software Tools to Support Aircraft and Automated Test System (ATS) Maintenance Environments Mr. Steven Head, The Boeing Company	10967 - Enterprise Health Management Technology Transition Issues and Path Forward Mr. Chris Reisig, The Boeing Company	
TRACK 6 Workforce Development Mission III	Dr. Don Gelosh, *ODDR&E/SE* Dr. Arthur Pyster, *Stevens Institute of Technology*	10932 - BKCASE: Body of Knowledge and Curriculum to Advance Systems Engineering Dr. Arthur Pyster, Stevens Institute of Technology	11068 - GRCSE and GswE2009: Educational Advancements to Support Government and Industry Ms. Nicole Hutchison, Analytic Services, Inc.	11078 - Curriculum for the Life Cycle of the Systems Engineer Dr. Carlee Bishop, Georgia Tech Research Institute	TRACK 6 Workforce Development Mission III	Dr. Don Gelosh, *ODDR&E/SE* Dr. Arthur Pyster, *Stevens Institute of Technology*	10933 - Panel: In Search of the Principles of Systems Engineering (BKCASE) Mr. Richard Adcock, Cranfield University		

TRACK 5 Modeling & Simulation Mission II	**Dr. James Coolahan,** *Johns Hopkins University Applied Physics Laboratory*	11436 - Panel: Overview of CREATE — Physics Based Modeling and Simulation Mr. Oscar Goldfarb Mr. Doug Post Dr. Bob Meakin			TRACK 5 Modeling & Simulation Mission II	**Dr. James Coolahan,** *Johns Hopkins University Applied Physics Laboratory*	10828 - Understanding the Increasingly Important Role M&S Plays in Department of Defense Acquisition Ms. Philomena Zimmerman, ODDR&E/SE	10958 - Results of a Study on the Management of Broadly-Needed Modeling and Simulation Tools Dr. James Coolahan, JHU/APL	10735 - Best Practices for the Development of Models and Simulations Dr. Katherine Morse, JHU/APL
TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	10944 - Development Planning Update: Policy Evolution from a Technical Perspective Mr. Michael Duffey, ODDR&E/SE	10766 - Findings and Recommendations from the NDIA/OSD Development Planning Working Group Mr. John Lohse, Raytheon Company	10790 - A Better-Informed Materiel Development Decision for USAF Programs Mr. Jeff Loren, Alion Science & Technology	TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	10786 - Early Systems Engineering to Achieve MS B Mr. Michael Gaydar, NAVAIR	11011 - Systems Engineering in Development Planning and Science & Technology Dr. Kenneth Barker, U.S. Air Force	11015 - Developing a Mission Solution: From Mission Gap Analysis to Preferred System Concept Ms. Elizabeth M. O'Keefe, Raytheon Company
TRACK 3 Systems of Systems Bayview III	**Dr. Judith Dahmann,** *The MITRE Corporation* **Mr. John R. Palmer,** *The Boeing Company*	10913 - Update on SoS SE: SoS SE Artifacts and A Practitioner View Dr. Judith Dahmann, The MITRE Corporation	10806 - Key System of Systems Engineering Artifacts to Guide Engineering Activities Dr. Jo Ann Lane, University of Southern California	10598 - Systems Engineering Processes Improvement Using the CMMI in Large System of Systems Space Programs Mrs. Revital Goldberg, Israel Aerospace Industries	TRACK 3 Systems of Systems Bayview III	**Dr. Judith Dahmann,** *The MITRE Corporation* **Mr. John R. Palmer,** *The Boeing Company*	10838 - The Joint Land Component Constructive Training Capability: An SoS Success Story Ms. Laura Feinerman, The MITRE Corporation	10908 - Mission Thread Workshop — Lessons Learned in End-to-End Capability and Quality Attribute Specification for SoS Architecture Development Mr. Mr. William Wood, Software Engineering Institute	11047 - A Compliance Case for Interoperability in Systems of Systems Mr. James Smith, Carnegie Mellon Software Engineering Institute
TRACK 2 Net-Centric Operations/ Interoperability Bayview II	**Mr. Jack Zavin,** *ASD (NII)* **Mr. Hans Polzer,** *Lockheed Martin*	10849 - Principles of Net-Centricity Mr. Hans Polzer, Lockheed Martin	10768 - Mission Engineering for Warfighting Integration of Net-Centric Systems Ms. Eileen Bjorkman, U.S. Air Force	11064 - Consolidated Findings and Approaches to SoS Interoperability Challenges: Insights from the Field Dr. Carol Sledge, Software Engineering Institute	TRACK 2 Net-Centric Operations/ Interoperability Bayview II	**Mr. Jack Zavin,** *ASD (NII)* **Mr. Hans Polzer,** *Lockheed Martin*	11122 - Interoperability Specifications: Characteristics and Processes for Better Achieving Interoperability Among Independently Developed Systems Dr. Carol Sledge, Software Engineering Institute	10852 - Interoperability by Design Mr. Ken Hafner, SPAWARSYSCOM	10839 - Modernization of the JADOCS Program Mr. Steve Kovalak, Raytheon Company NCS/ CSS
TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	10912 - Systems Engineering Policy and Guidance Implementation of the Weapon Systems Acquisition Reform Act (WSARA) of 2009–One Year Later Ms. Sharon Vannucci, ODDR&E/SE	11003 - GAO Observations on DoD Implementation of the 2009 WSARA Mrs. Cheryl Andrew, U.S. Government Accountability Office	10951 - DoD Synergy with International Standards Dr. Karen J. Richter, Institute for Defense Analyses	TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	10853 - Value of Systems Engineering Ms. Kerri Polidore, ARDEC	11087 - Improvement Initiatives at C-17 Mr. Sivam Paramanathan, The Boeing Company	11106 - Practical Agile Requirements Engineering Mr. Philip Matuzic, The Boeing Company

WEDNESDAY, OCTOBER 27, CONCURRENT SESSIONS CONTINUED

Any track listed below that contains 4 presentations will be allotted equal presentation lengths of about 25 minutes each

TRACK	SESSION CHAIR	1:30 PM	2:05 PM	2:40 PM	TRACK	SESSION CHAIR	3:30 PM	4:05PM	4:40 PM
TRACK 10 Logistics Supportability and Sustainment Crown Point	Mr. Joel Moorvitch, *Raytheon Company*	10753 - Systems Engineering and the WSARA Product Support Assessment CAPT Basil Gray, USN (Ret), PRTM	10774 - PLM for Systems Engineering Support within ECSS Mrs. Segrid Harris-Wright, Air Force Logistics Transformation Organization	11458 - The Art of Affordability — Getting the Best Value for Total Ownership Cost Ms. Lee-Ann Sharpe Seeling, Raytheon Company	TRACK 10 Architecture Crown Point	Ms. Barbara Sheeley, *The Boeing Company*	10771 - First Steps in the Development of an Architecture Framework for a Product Development Process Mr. Jeffrey Williams, Southern Methodist University	10842 - The Interaction of CONOPS and Architecture Dr. Steven Dam, SPEC Innovations	10584 - Enterprise Architecture Model-Driven Simulation Mr. Robert Byrd, Serco, Inc. 10841 - The Role of Enterprise Architecture Updates in Guiding Decentralized Organizations Mr. John Schatz, SPEC Innovations
TRACK 9 Human Systems Integration Mariner Point	Ms. Elaine Thorpe, *The Boeing Company*	10971 - A-10, Thunderbolt II — a Study of Human Systems Integration Dr. David Jacques, Planned Systems International	10937 - Advanced Use of Prototyping in Human Computer Interface Development Mr. Andy Orzechowski, Department of the Navy		TRACK 9 System Safety-ESOH Mariner Point	Mr. Sherman Forbes, *SAF/AQRE*	11130 - Acquisition ESOH— Follow Through After the Policy is Printed Mr. David Asiello, Office Deputy Under Secretary of Defense (I&E)	10907 - A Case Study of an Evolving ESOH Program — One Company's Perspective Mr. Michael Parulis, Electric Boat Corporation	11120 - Addressing Environmental Safety and Occupational Health (ESOH) in Systems Engineering Across the Entire Acquisition Life Cycle Mr. Ted Grady, USAF - Aeronautical Systems Center
TRACK 8 Test & Evaluation in Systems Engineering Palm II	Dr. Beth Wilson, *Raytheon Company* Darlene Mosser-Kerner, *ODDR&E/DT&E*	10831 - T&E Methodology for Business Systems Dr. Aaron Drew, Defense Business Transformation Agency	10935 - Strategic Enterprise Test and Evaluation Process Approach Ms. Harriette Tullos-Banks, Naval Surface Warfare Center, Dahlgren Division	10865 - Engineering for Integration Mr. Richard Shelton, Northrop Grumman Corporation	TRACK 8 Joint Cyber/SW Intensive Palm II	Mr. Paul Croll, *CSC*	10918 - Rationalizing Governance, Engineering Practice, and Engineering Economics in the System and Software Assurance Trade Space Mr. Paul Croll, CSC	11042 - Cyber Security and Systems Engineering Dr. Raju Patel, U.S. Air Force	
TRACK 7 Technology Maturity Palm I	Mr. Bill Nolte and Dr. James Malas, *Plans and Programs Directorate*	11060 - GAO's Annual Assessment of Selected Weapons Programs Mr. Travis Masters, U.S. Government Accountability Office	10875 - Integrating the Technology and Systems Development Lifecycles to Mature Technology for Transition Mr. Troy Peterson, Booz Allen Hamilton	10715 - Australia's Experience in Technical Risk Assessment for Defence Acquisitions Dr. David Wood, Department of Defence	TRACK 7 Technology Maturity Palm I	Mr. Bill Nolte and Dr. James Malas, *Plans and Programs Directorate*	10736 - Adapting Systems Engineering Best Practices to Technology Development in Applied Research Mr. Jeff Craver, Defense Acquisition University	11095 - The Role of Architecture Standards and Tools in Identifying Software-Critical Technology Elements Dr. Peter Hantos, The Aerospace Corporation	11099 - Performing Software Feasibility Analysis on Major Defense Acquisition Programs Mr. Jim Thompson, ODDR&E/SE
TRACK 6 Workforce Development Mission III	Dr. Don Gelosh, *ODDR&E/SE* Dr. Arthur Pyster, *Stevens Institute of Technology*	10939 - Improving the Department of Defense and Industry Systems Engineering Workforce Dr. Don Gelosh, ODDR&E/SE Mr. Doug Westphal and Dr. John Snoderly, DAU	10651 - Realizing the Vision: Innovative Practices to Enhance the Capability of the Systems Engineering Workforce Dr. Janice Ziarko, The MITRE Corporation	11123 - 7 Secrets to Develop a Great SE Training Program Mr. Jimmy Thai, SAIC	TRACK 6 Workforce Development Mission III	Dr. Don Gelosh, *ODDR&E/SE* Dr. Arthur Pyster, *Stevens Institute of Technology*	10883 - Undergraduate Systems Engineering Programs in the United States Dr. Arthur Pyster, Stevens Institute of Technology Dr. Don Gelosh, ODDR&E/SE	11006 - Leveraging Remote Online Education for SE Competency Development Ms. Alice Squires, Stevens Institute of Technology	11445 - The Use of Navy Warfare Centers as Lead System Integrators: Lessons Learned from Mission Module Development Mr. Rich Volkert, SSC Pacific

TRACK 5 Modeling & Simulation Mission II	**Dr. James Coolahan,** *Johns Hopkins University Applied Physics Laboratory*	10591 - Military Modeling & Simulation Systems Oriented Architecture (SOA) Concepts Pilot Dr. Gary Allen, Joint Training Evaluation and Integration Center	10891 - Leveraging LVC Simulation Capabilities for Systems Analysis Dr. Douglas Hodson, WPAFB	10922 - The Modeling and Simulation Catalog for Discovery, Knowledge and Reuse Mr. Steve Hunt, Alion Science and Technology 10827 - Supporting Weapon Systems Assessments with Realistic Synthetic Environment Representations —Where to Go for Authoritative Data Ms. Philomena Zimmerman, ODDR&E/SE	TRACK 5 Modeling & Simulation Mission II	**Dr. James Coolahan,** *Johns Hopkins University Applied Physics Laboratory*	10813 - Systems Engineering Initiatives for Verification, Validation, and Accreditation of DoD Models and Simulations Ms. Philomena Zimmerman, ODDR&E/SE	10959 - NDIA Model Based Engineering (MBE) Subcommittee Report Mr. Frank Salvatore, HPTI	11063 - Best Practices in Contracting for Models, Simulations, and Associated Data Subcommittee Report Mr. Dennis Shea, Center For Naval Analyses 11091 - Deployment of MBSE Processes Using SysML Mr. Timothy Tritsch, HPTI
TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	10507 - Developing a Net-Centric Mission Architecture: From Mission Analysis to Executable Model Mr. James Sierchio, Raytheon Missile Systems	11466 - Applying NATO's Distributed Networked Battle Labs (DNBL) Initiative to Early Systems Engineering Mr. Hans Polzer, Lockheed Martin	10784 - Suitability Impacts on Rapid Development Mr. Michael Gaydar, NAVAIR	TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	11131 - The Case for Considering Acquisition Program Executability Prior to Materiel Development Decision (MDD) Mr. Gregory Laushine, SAIC	10810 - Improving Success with Technology Using an Organizational Epistemology — A Conceptual Decision Framework for Early Systems Engineering Dr. Chris Powell, HPTI	11083 - Early Systems Engineering for Tech Base Projects Mr. Richard Swanson, HPTI
TRACK 3 Systems of Systems Bayview III	**Dr. Judith Dahmann,** *The MITRE Corporation* **Mr. John R. Palmer,** *The Boeing Company*	10887 - Army System-of-Systems Engineering Processes Mr. Terry Edwards, ASA (ALT) SoSE	10888 - Army System-of-Systems Architecture Developments Mr. David Poole, ASA (ALT) SoSE	10890 - Systems-of-Systems Engineering for Army Transport Mr. Terry Edwards, ASA (ALT) SoSE	TRACK 3 Joint Net-Centric/SOS Bayview III	**Mr. Jack Zavin,** *ASD (NII)* **Dr. Judith Dahmann,** *The MITRE Corporation*	10955 - Network Centric Patterns for System Interoperability Mr. Mark Bowler, The Boeing Company	10754 - Understanding the Limits of Systems of Systems Dr. Elwin Ong, Booz Allen Hamilton	11065 - Mission Level Engineering Ms. Helene Anderson, ASN(RDA) CHSENG
TRACK 2 Net-Centric Operations/ Interoperability Bayview II	**Mr. Jack Zavin,** *ASD (NII)* **Mr. Hans Polzer,** *Lockheed Martin*	10829 - Battle Command and Simulation Interoperability Using Common Geospatial Representations Mr. Thomas Stanzione, VT MAK	10799 - Procure-2-Pay Portal Pilot: Integrated Feasibility Assessment (IFA) Ms. Lien Dinh, Defense Business Transformation Agency	11114 - Panel: Systems Engineering Management and the Relationship of Systems Engineering to Project Management and Software Engineering Dr. Raymond Madachy, Naval Postgraduate School	TRACK 2 Program Management Bayview II	**Mr. Hal Wilson,** *Northrop Grumman Information Systems* **Ms. Dona Lee,** *SAIC*	10934 - The Evolving Operational Environment as a Unifying Foundation for Systems Engineering and Acquisition Decision Making Mr. Vincent Roske, Institute for Defense Analyses	11073 - Advancing Systems Engineering Through Use of Collaborative Space Mr. George Richard Freeman, U.S. Air Force	10796 - Valuing System Flexibility via Total Ownership Cost Analysis Dr. Barry Boehm, University of Southern California
TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	10773 - NDIA Top 5 Software and Systems Engineering Issues - 2010 Mr. Harold Wilson, Northrop Grumman Information Systems, DSD	10819 - Systems Engineering Program Metrics Mr. Jim Thompson, ODDR&E/SE	11089 - Naval Systems Engineering Technical Review Process Mr. Paul Dube, ASN(RDA) CHSENG	TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	10850 - System Engineering Effectiveness Mrs. Kalyani Tripathi, U.S. Army - ARDEC	10755 - A Framework for Evaluating U.S. DoD Systems Engineering Principles Against Defense System Quality Dr. Nazanin Azizian, Marine Corps Systems Command	10787 - The MITRE Systems Engineering Guide: Practical Guidance for FFRDC Systems Engineers Mr. George Rebovich, The MITRE Corporation

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TRACK 10 Architecture Crown Point	**Ms. Barbara Sheeley,** *The Boeing Company*		10869 - Proposed Functional Architecture and Associated Benefits Analysis of a Common Ground Control Station for Unmanned Aircraft Systems Mr. Douglas Mousseau, NAVAIR	11004 - Defining Factors Needed to Develop a Qualitative Approach to Assessing a Program Architecture Ms. Eileen McConkie, GWU and Naval Surface Warfare Center, Dahlgren Division	TRACK 10 Architecture Crown Point	**Ms. Barbara Sheeley,** *The Boeing Company*	10720 - High Availability and Fault Management in Objective Architecture Systems Mr. Stephen Mills, GoAhead Software	10760 - Organizing For Success: Improving Our Engineering Team Architectures Mr. James Smith, Lockheed Martin Missiles & Fire Control	10713 - Scenario Based Evaluation of Evolution Roadmaps for Agility and Architectural Consistency Mr. William Wood, Software Engineering Institute
TRACK 9 System Safety-ESOH Mariner Point	**Mr. Sherman Forbes,** *SAF/AQRE*	11132 - Including ESOH Requirements in JCIDS Documents Mr. Jefferson Walker, Booz Allen Hamilton	10721 - Developmental Environment, Safety and Occupational Health Evaluation: A Risk Assessment Tool for Early Evaluation of Environment, Safety, and Occupational Health Impacts Mr. Thomas Bush, Hughes Associates, Inc.	10950 - Can Environmental Sustainability be Factored into DoD Acquisition Programs? Mr. Paul Yaroschak, Office of the Secretary of Defense	TRACK 9 System Safety-ESOH Mariner Point	**Mr. Sherman Forbes,** *SAF/AQRE*	11129 - Environmental Hazard Analysis — Task 210 in the Change to Military Standard 882D, DoD Standard Practice for System Safety — ESOH Risk Management Mr. Sherman Forbes, SAF/AQRE	10725 - Safety in Systems Engineering Technical Reviews Ms. Karen Gill, Booz Allen Hamilton	
TRACK 8 Software-Intensive Systems Palm II	**Mr. Paul Croll,** *CSC* **Mr. Mike McLendon,** *ODDR&E/SE*	11138 - The Critical Role for Software Engineering in Development Planning and Sustainment Mr. Michael McLendon, ODDR&E/SE	10698 - Systems Assurance in the Age of Open Source Technology Mr. Edward Beck, MSE, LLC	10742 - The Future of Open Source Software (OSS) in DoD Dr. Charles Byler, Whitfill CTSF	TRACK 8 Software-Intensive Systems Palm II	**Mr. Paul Croll,** *CSC* **Mr. Mike McLendon,** *ODDR&E/SE*	11115 - Application of Lean Process to Software Engineering via Value-Stream Mapping Dr. Shawn Rahmani, The Boeing Company	10763 - Considerations for Using Agile in DoD Acquisition Ms. Mary Ann Lapham, CMU/Software Engineering Institute	10997 - Software Reliability Growth Approach Mr. Louis Gullo, Raytheon Company
TRACK 7 Technology Maturity Palm I	**Mr. Bill Nolte** and **Dr. James Malas,** *Plans and Programs Directorate*	11074 - Keeping Legacy Systems Viable — Introducing RDT&E Processes to the O&S Phase Ms. Karen Metz, Johns Hopkins University - Applied Physics Laboratory	10840 - Assessment of Integration Risk Within the Department of Defense for Major Acquisition Programs Mr. Jim Thompson, ODDR&E/SE		TRACK 7 Technology Maturity Palm I	**Mr. Bill Nolte** and **Dr. James Malas,** *Plans and Programs Directorate*	10745 - The Trouble with the System Readiness Level (SRL) Index for Managing the Acquisition of Defense Systems Dr. Edouard Kujawski, Naval Postgraduate School	10823 - System of Systems Technology Analysis and Selection Methodology Mr. Lance Harper, Northrop Grumman	11070 - Status of the Development of an International Standards Organization (ISO) Definition of the Technology Readiness Levels (TRL) and Their Criteria of Assessment Mr. William Nolte, Air Force Research Laboratory, Plans and Programs Branch
TRACK 6 Workforce Development Mission III	**Dr. Don Gelosh,** *ODDR&E/SE* **Dr. Art Pyster,** *Stevens Institute of Technology*	10985 - Panel: Organizing Technical Knowledge in the SEBOK - BKCASE Track Dr. John Snoderly, Defense Acquisition University Dr. Don Gelosh, ODDR&E/SE Mr. Gary Roedler, Defense Acquisition University Mr. Michael Krueger, Defense Acquisition University			TRACK 6 Workforce Development Mission III	**Dr. Don Gelosh,** *ODDR&E/SE* **Dr. Art Pyster,** *Stevens Institute of Technology*	11052 - Graduate Systems Engineering Programs: Report on Outcomes and Objectives Ms. Alice Squires, Stevens Institute of Technology		11022 - Lead Systems Integrator Role for Government Mr. Donald Young, Naval Air Systems Command

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TRACK 5 Modeling & Simulation Mission II	**Dr. James Coolahan,** *Johns Hopkins University Applied Physics Laboratory*	10861 - Use of a Model-Based Approach to Minimize System Development Risk and Time-to-Field for New Systems Mr. Kerry Wagner, U.S. Army ARDEC Software Engineering Directorate	10722 - A Game Loop Architecture for the Modeling and Simulation of Mission Threads Mr. Thomas Tanner, SAIC	10874 - Model-Based Systems Architecting Dr. Robert Cloutier, Stevens Institute of Technology 10739 - Integrating the Architectural Model with the Engineering Analysis Models Mr. John Watson, Lockheed Martin	TRACK 5 Requirements Development Mission II	**Mr. Gene Rosenbluth,** *Northrop Grumman Mission Systems*	10434 - A Simple Prescription for Requirements Success Mr. Jeffrey Grady, JOGF System Engineering, Inc.	11036 - 360° Architecture/ Requirements Traceability Mr. Peter Forsch, Northrop Grumman Aerospace Systems	10988 - Air Force Requirements Traceabilty Tool Mr. Gil Wagner, U.S. Air Force
TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	10792 - "The Conversation," Applying Systems Thinking to the Science and Technology Phase of Acquisition Mr. Robert Rapson, Materials and Manufacturing Directorate	10795 - Recapturing System Decomposition Techniques for Improved S&T Development of Future Warfighter Capabilities Dr. James Malas, Plans and Programs Directorate	10732 - R&D Transition Interface with Early Systems Engineering: SEALION and Open Systems Case Studies Mr. Michael Bosworth, Naval Sea Systems Command SEA 05T	TRACK 4 Early Systems Engineering Mission I	**Mr. John Lohse,** *Raytheon Company* **Mr. Jeff Loren,** *Alion Science & Technology*	11446 - Lessons Learned in the Application of System Readiness Level to the Development of Systems of Systems for the Mission Modules Program Office Mr. Rich Volkert, SSC Pacific	11012 - Tester's Early Involvement in the Systems Engineering Process Dr. William Bell, The MITRE Corporation	10877 - Creating a Graphical CONOPS Dr. Robert Cloutier, Stevens Institute of Technology
TRACK 3 Joint Net-Centric/SOS Bayview III	**Mr. Jack Zavin,** *ASD (NII)* **Mr. Hans Polzer,** *Lockheed Martin* **Dr. Judith Dahmann,** *The MITRE Corporation*	11048 - Data Interoperability for Systems of Systems: An Integrated Software Engineering Perspective Mr. James Smith, Carnegie Mellon Software Engineering Institute	10889 - System-of-Systems Engineering for Army Battle Command Convergence Ms. Hillary Richardson, The MITRE Corporation	10730 - AT&L and DOT&E IA Cross Walk Improving Information Assurance in Systems Acquistion and Testing Mr. Peter Christensen, The MITRE Corporation	TRACK 3 Net-Centric Operations/ Interoperability Bayview III	**Mr. Jack Zavin,** *ASD (NII)* **Mr. Hans Polzer,** *Lockheed Martin*	11033 - The View from Here — Human Views in Architecture Models Mr. Tim Bowden, Jenius LLC	10996 - DoD Delivering the Architecture of the Future Mr. Alan Golombek, Architecture & Infrastructure Directorate	10901 - Enhancing the Usability of the Human Machine Interface on the Handheld Interagency Identity Detection Equipment (HIIDE) Mr. John J. Howard, Southern Methodist University
TRACK 2 Program Management Bayview II	**Mr. Hal Wilson,** *Northrop Grumman Information Systems* **Ms. Dona Lee,** *SAIC*	10927 - Lifecycle Management Cost Optimizer Mr. Jerry Cothran, Lockheed Martin	10910 - Rapid Affordability and CAIV Exploration (RACE) Tool Mr. James Fieber, Lockheed Martin	10802 - Systems Engineering Influence on Life Cycle Cost Dr. Elizabeth Rodriguez-Johnson, ODDR&E/SE	TRACK 2 Program Management Bayview II	**Mr. Hal Wilson,** *Northrop Grumman Information Systems* **Ms. Dona Lee,** *SAIC*	10820 - Enhancing Performance Management via Metrics Mr. Peter Nolte, ODDR&E/SE	11135 - A Decision-Focused Model for DoD Development Planning—A Step Toward Uncovering and Targeting the Real Program Shapers Mr. Gregory Laushine, SAIC	
TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	11440 - SE Effectiveness Study Redux Mr. Joseph Elm, Software Engineering Institute	10812 - Introduction to the DoD Systems Requirements Analysis Guide Ms. Sharon Vannucci, ODDR&E/SE	10867 - Defining and Quantifying System Complexity Mr. John Seel, GWU and Naval Surface Warfare Center, Dahlgren Division	TRACK 1 Systems Engineering Effectiveness Bayview I	**Mr. Al Brown,** *The Boeing Company* **Ms. Dona Lee,** *SAIC*	10881 - A Systems Engineering & Integration Methodology for Complex Systems Mr. Frederick Samson, Booz Allen Hamilton	11053 - Are Rapid Fielding and Good Systems Engineering Mutually Exclusive? Mr. William Decker, Defense Acquisition University	

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TRACK 9 System Safety-ESOH Mariner Point	Mr. Sherman Forbes, *SAF/AQRE*	10837 - Joint Service Safety Testing Standards Dr. Elizabeth Rodriguez-Johnson, ODDR&E/SE	11133 - ESOH — Lessons Learned from DoD Acquisition Systems Engineering Program Support Reviews Mr. William Thacker, Booz Allen Hamilton	10848 - System Safety Engineering in a System of Systems Environment Ms. Janet McKinney, Naval Surface Warfare Center, Dahlgren Division
TRACK 8 Software-Intensive Systems Palm II	Mr. Paul Croll, *CSC* Mr. Mike McLendon, *ODDR&E/SE*	11080 - Top Ten Reasons for Software-Reliant Acquisition Program Failure Mr. William Novak, Software Engineering Institute	11117 - Software Engineering Strengths and Weaknesses in System Engineers Dr. Paul Shebalin, Naval Postgraduate School	
TRACK 7 Technology Maturity Palm I	Mr. Bill Nolte and Dr. James Malas, *Plans and Programs Directorate*	11041 - DoD Manufacturing Policy and Technical Maturity Issues Challenging Affordability Dr. Michelle Atchison, Lockheed Martin	11072 - An Integrated Approach to Managing Technology Maturation Costs Dr. Deganit Armon, Advatech Pacific, Inc.	10974 - Evaluating the Readiness of Federations-of-Models for Use in Simulation-Based Concept Development of Advanced Warfighting Capabilities Mr. Bryan Herdlick, GWU and JHU/APL
TRACK 6 Workforce Development Mission III	Dr. Don Gelosh, *ODDR&E/SE* Dr. Art Pyster, *Stevens Institute of Technology*	10822 - DAU's New Continuous Learning Module on Human Systems Integration Dr. Fran Greene, Planned Systems International	11034 - Applying Systems Engineering to Workforce Development Mr. Ken Mosteller, The Center for Systems Management	10866 - Design Considerations in Building a Corporate Systems Engineering Training and Development Program Dr. Philip Trudeau, The MITRE Corporation
TRACK 5 Requirements Development Mission II	Mr. Gene Rosenbluth, *Northrop Grumman Mission Systems*	11098 - Services Based Requirements: Acquiring "Right Sized" Systems Ms. Ronda Henning, Harris Corporation	11079 - MRAP Requirements Management Process Ms. Jennifer Johnson, PEO CS&CSS, PM MRAP	
TRACK 4 Early SE/Test Mission I	Mr. John Lohse, *Raytheon Company* Mr. Jeff Loren, *Alion Science & Technology*	10798 - Early Integration of Test and Evaluation Subject Matter Experts in the Acquisition Life Cycle Mr. Robert Kennedy, Johns Hopkins University Applied Physics Laboratory	11002 - Enhancing T&E and SE Alignment Using Database Driven Documentation Ms. Sue O'Brien, The University of Alabama in Huntsville	10611 - Cost Estimation of System of Systems at Early Development Planning Mr. Kishore Gagrani, PRICE Systems, LLC
TRACK 3 Specialty Engineering Bayview III	Mr. Joel Moorvitch, *Raytheon Company*	10586 - New Army and DoD Reliability Scorecard Mrs. Marguerite Shepler, U.S. Army Materiel Systems Analysis Activity		
TRACK 2 Program Management Bayview II	Mr. Hal Wilson, *Northrop Grumman Information Systems*		10785 - Risk Management in the TACOM LCMC Ms. Lisa Graf, U.S. Army - TARDEC	10940 - EVM Method for LOE Projects Mr. Lynwood Townsend, GWU and Naval Surface Warfare Center, Dahlgren Division
TRACK 1 Systems Engineering Effectiveness Bayview I	Mr. Al Brown, *The Boeing Company* Ms. Dona Lee, *SAIC*	11107 - Panel: SE Standards: Status & Needs Moderator: Ms. Sharon Vannucci, ODDR&E/SE Ms. Cheryl Jones, Quality Engineering & System Assurance Sciences Group, RDECOM-ARDEC Mr. Joel M. Manary, Engineering Process Office, SSC Pacific Air Force Mr. Chris Ptachik, SAF/AQRE Mr. Garry Roedler, Lockheed Martin Engineering Process Improvement Center		

ADDITIONAL AUTHORS

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10507	Developing a Net-Centric Mission Architecture: From Mission Analysis to Executable Model	Ms. Elizabeth O'Keefe
10586	New Army and DoD Reliability Scorecard	Ms. Nancy Welliver
10591	Military Modeling & Simulation Systems Oriented Architecture (SOA) Concepts Pilot	Ms. Anita Zabek Mr. Richard Crutchfield Mr. William Beebe
10598	Systems Engineering Processes Improvement Using the CMMI in Large System of Systems Space Programs	Mrs. Sarit Assaraf
10604	Test and Evaluation Issues for Systems of Systems: Sleepless Nights to Sominex	Dr. Judith Dahmann
10713	Scenario Based Evaluation of Evolution Roadmaps for Agility and Architectural Consistency	Dr. Ipek Ozkaya
10715	Australia's Experience in Technical Risk Assessment for Defence Acquisitions	Mr. Jim Smith Dr. Nigel McGinty
10721	Developmental Environment, Safety and Occupational Health Evaluation: A Risk Assessment Tool for Early Evaluation of Environment, Safety, and Occupational Health Impacts	Mr. Noah Lieb
10724	Systems Engineering and User Needs — Strategies and Tactics for the Evolving System Acquisition Environment	Dr. Conrad Monson
10725	Safety in Systems Engineering Technical Reviews	Ms. Kristin Thompson
10730	AT&L and DOT&E IA Cross Walk Improving Information Assurance in Systems Acquistion and Testing	Mr. Robert Smith Mr. Ralph Harris Ms. Darlene Mosser-Kerner Ms. Susan May
10733	2010 Strategic Plan for DoD T&E Resources	Mr. Rick Thomas Mr. Ashton Burke
10736	Adapting Systems Engineering Best Practices to Technology Development in Applied Research	Mr. Hossam Ahmed Mr. Mike Ellis
10745	The Trouble with the System Readiness Level (SRL) Index for Managing the Acquisition of Defense Systems	Dr. Edouard Kujawski
10755	A Framework for Evaluating U.S. DoD Systems Engineering Principles Against Defense System Quality	Mr. Nazanin Azizian
10763	Considerations for Using Agile in DoD Acquisition	Mr. Ray Williams Dr. Charles Hammons Mr. Daniel Burton Mr. Alfred Schenker
10768	Mission Engineering for Warfighting Integration of Net-Centric Systems	Mr. Timothy Menke
10770	NCOIC's Network Centric Analysis Tool (NCAT TM)	Mr. Hans Polzer
10771	First Steps in the Development of an Architecture Framework for a Product Development Process	Dr. Jerrell Stracener
10773	NDIA Top 5 Software and Systems Engineering Issues - 2010	Mr. Geoff Draper
10774	PLM for Systems Engineering Support within ECSS	Mr. Ed Kincaid Mr. Ron Krugman Mr. Steven Pavick
10780	NDIA Life Cycle Affordability Project	Mr. Bruce Pieper Mr. Jerry Cothran
10785	Risk Management in the TACOM LCMC	Mr. Michael Olsem Ms. Cheryl Rassette Ms. Barb Dmoch
10792	"The Conversation," Applying Systems Thinking to the Science and Technology Phase of Acquisition	Mr. Bryan DeHoff Ms. Carol Ventresca

10795	Recapturing System Decomposition Techniques for Improved S&T Development of Future Warfighter Capabilities	Mr. Robert Rapson Ms. Carol Ventresca Mr. Thomas Archer Mr. Bryan DeHoff
10796	Valuing System Flexibility via Total Ownership Cost Analysis	Dr. Jo Ann Lane Dr. Raymond Madachy
10798	Early Integration of Test and Evaluation Subject Matter Experts in the Acquisition Life Cycle	Mr. Roy Emanuel, II
10799	The Realization of Service Oriented Architecture (SOA) Through Design Patterns via the Defense Business Mission Area (BMA) Strategy and Roadmap	Dr. Aaron Drew
10800	SEP Preparation Guide 3.0 — It's here!	Ms. Sharon Vannucci
10803	NCOIC Systems, Capabilities, Operations, Programs, and Enterprises (SCOPE) Model	Dr. Todd Schneider
10806	Key System of Systems Engineering Artifacts to Guide Engineering Activities	Dr. Judith Dahmann Mr. George Rebovich Mr. Ralph Lowry
10812	Introduction to the DoD Systems Requirements Analysis Guide	Mr. Stuart Booth
10819	Systems Engineering Program Metrics	Mr. Peter Nolte Ms. Laura Dwinnell
10820	Enhancing Performance Management via Metrics	Ms. Laura Dwinnell Mr. Ryan Sinclair
10822	DAU's New Continuous Learning Module on Human Systems Integration	Mr. James Campbell
10823	System of Systems Technology Analysis and Selection Methodology	Mr. Art Van Nostrand Mr. William Algoso
10831	T&E Methodology for Business Systems	Mr. Keith Seaman
10834	Improved Acquisition Processes Through Incremental Commitments	Dr. Jo Ann Lane
10838	The Joint Land Component Constructive Training Capability: An SoS Success Story	Mr. Met Metivier Dr. Richard Weatherly Mr. Mike Wright Ms. Anita Zabek
10840	Assessment of Integration Risk Within the Department of Defense for Major Acquisition Programs	Mr. Lawrence Gresko Mr. Ray Lowe
10849	Principles of Net-Centricity	Dr. Todd Schneider
10851	Assessment of Human Systems Integration in Air Force Acquisition	Mr. Steven Deal Ms. Sarah Orr Lt Col Valerie Martindale Mr. Adrian Salinas Col Larry Kimm
10852	Interoperability by Design	Mr. Dave Leedom Mr. Kevin Pugh
10861	Use of a Model-Based Approach to Minimize System Development Risk and Time-to-Field for New Systems	Mr. Barry Gosnell Mr. Robert Loesh Mr. Tim Brockwell Mr. Luke Daniels
10864	Semantic Web Tools and Technologies in Systems Development	Mr. Jeffrey Wallace Mr. Alex Hoover Mr. Terrell McCloud
10869	Proposed Functional Architecture and Associated Benefits Analysis of a Common Ground Control Station for Unmanned Aircraft Systems	CDR Michael Supko Mr. Gregory Miller
10875	Integrating the Technology and Systems Development Lifecycles to Mature Technology for Transition	Mr. Troy Peterson
10877	Creating a Graphical CONOPS	Mr. Peter Korfiatis
10881	A Systems Engineering & Integration Methodology for Complex Systems	Mr. Troy Peterson
10883	Undergraduate Systems Engineering Programs in the United States	Dr. Donald Gelosh
10887	Army System-of-Systems Engineering Processes	Mr. Terry Edwards

10888	Army System-of-Systems Architecture Developments	Ms. Hillary Richardson Mr. Scott Lee
10889	System-of-Systems Engineering for Army Battle Command Convergence	Dr. Mark Matthews Dr. Michael Kwinn
10890	Systems-of-Systems Engineering for Army Transport	Mr. David Poole
10901	Enhancing the Usability of the Human Machine Interface on the Handheld Interagency Identity Detection Equipment (HIIDE)	Ms. Kelly Faddis
10903	Guarding the Intent of Requirements Throughout the Test Execution Cycle	Mr. Eric Kaplan
10907	A Case Study of an Evolving ESOH Program — One Company's Perspective	Mr. Ricky Milnarik
10908	Mission Thread Workshop — Lessons Learned in End-to-End Capability and Quality Attribute Specification for SoS Architecture Development	Mr. Michael Gagliardi
10910	Rapid Affordability and CAIV Exploration (RACE) Tool	Mr. David Anderson
10926	Design For Reliability (DFR) Methodology Applied to Stryker NBCRV Program	Dr. Dmitry Tananko Mr. Sharad Kumar Mr. Carl Elliott Mr. Michael Staniszewski
10927	Lifecycle Management Cost Optimizer	Mr. Philip Fahringer
10932	BKCASE: Body of Knowledge and Curriculum to Advance Systems Engineering	Dr. David Olwell
10935	Strategic Enterprise Test and Evaluation Process Approach	Ms. Eileen McConkie
10937	Advanced Use of Prototyping in Human Computer Interface Development	Mrs. Colleen Johnson Mrs. Robin Ross
10940	EVM Method for LOE Projects	Dr. Thomas Mazzuchi Dr. Shahram Sarkani
10951	DoD Synergy with International Standards	Mr. Edward Bauer
10957	Human Systems Integration Support for Rapidly Fielded Systems	Dr. Matthew Risser
10958	Results of a Study on the Management of Broadly-Needed Modeling and Simulation Tools	Dr. Katherine Morse Mr. Randy Saunders Mr. Stephen Kay Mr. Christopher Erdman
10959	NDIA Model Based Engineering (MBE) Subcommittee Report	Mr. Jeff Bergenthal Ms. Sandy Friedenthal Mr. Mark Rupersburg Mr. Greg Pollari
10971	A-10, Thunderbolt II — a Study of Human Systems Integration	Mr. Larry Carr
10974	Evaluating the Readiness of Federations-of-Models for Use in Simulation-Based Concept Development of Advanced Warfighting Capabilities	Dr. Shahram Sarkani Dr. Thomas Mazzuchi
10988	Air Force Requirements Traceabilty Tool	Mr. Hugh Griffis
11002	Enhancing T&E and SE Alignment Using Database Driven Documentation	Dr. Dawn Sabados Mr. Lance Warden
11003	GAO Observations on DoD Implementation of the 2009 WSARA	Mr. Mike Sullivan
11004	Defining Factors Needed to Develop a Qualitative Approach to Assessing a Program Architecture	Dr. Thomas Mazzuchi Dr. Shahram Sarkani
11010	Human Systems Integration Approaches for Developmental Testing	Ms. Alisha Belk
11011	Systems Engineering in Development Planning and Science & Technology	Mr. Jeff Loren
11033	The View from Here — Human Views in Architecture Models	Dr. Jennifer Narkevicius Ms. Sue Archer
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