Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC 2006)

Training the 21st Century Joint Force

Orlando, Florida, USA
4-7 December 2006

Volume 1 of 2

TRAINING

Session T-1   **Tuesday, 5 December 1330-1500**   **Room W304 C-D**
Training Effectiveness One
Session Chair: Thomas Mastaglio, Ph.D., MYMIC LLC
Deputy Chair: LtCol Ed Coyl, USMC, MARCORSYSCOM PM TRASYS

Combined Arms Planning Tool (CAPT) Training Fire Planning (2603) 📖
   Grady Roby, Encomium Research; Charles Pedersen, SRI International
The Marine Corps Deployable Virtual Training Environment Virtual Fire Support Trainer (DVTE-VFST) (2795)
   Brian Lyssy, Willie Munden, Alion Science and Technology, BMH Operations
Effective Training for Flight in Icing Conditions (2973) ✎
   Billy Barnhart, Bihrle Applied Research, Inc.; Thomas Ratvasky, NASA Glenn Research Center

Session T-2   **Tuesday, 5 December 1530-1700**   **Room W304 A-B**
Training Effectiveness Too: Is your Simulation Effective?
Session Chair: John Huddlestone, Ph.D., Cranfield University
Deputy Chair: Daniel Dwyer, Ph.D., NAVAIR Orlando

A Model-based Approach to Simulator Fidelity and Training Effectiveness (2794)
   Jamiel Estock, Amy Alexander, Ph.D., Kevin Gildea, Ph.D., Aptima, Inc.; Capt Michelle Nash, 2Lt Brenda Blueggel,
   Air Force Research Lab
Analysis of Simulator-based Training Effectiveness through Driver Performance Measurement (2850)
   Darrell Turpin, Reginald Welles, Applied Simulation Technologies
The Effectiveness of a PC-based C-130 : Crew Resource Management Aircrew Training Device (2807) 🎖 📖
   Robert Nullmeyer, Air Force Research Laboratory; Katharine Golas, Ryan Logan, Southwest Research Institute;
   V. Alan Spiker, Anacapa Sciences, Inc.; Larry Clemons, USAF Air Education and Training Command

Session T-3   **Tuesday, 5 December 1530-1700**   **Room W304 C-D**
Methodologies for Training
Session Chair: Mike Sims, U.S. Army PEO STRI
Deputy Chair: CAPT Jeff Miller, USN, Joint Staff J-7

Introducing Competency Based Training to the Royal New Zealand Navy (2497) ✈ 📖
   LT CDR Phil Wheadon, Royal New Zealand Navy
Training Design for Professional Development (2513) ✈ 📖
   Maud Stehouwer, TNO Defence, Security and Safety; Cdr Jeroen Stricker, LtCdr Wilbert van Gemeren, Royal
   Netherlands Navy
The Fidelity Matrix: Mapping System Fidelity to Training Outcome (2944)
   Peter Muller, Potomac Training Corporation, LCDR Joseph Cohn, USN, Ph.D., Naval Research Laboratory; CDR
   Dylan Schmorrow, USN, Office of Naval Research; Roy Stripling, Naval Research Laboratory; Kay Stanney, Laura
   Milham, David Jones, Design Interactive; Mary Whitton, University of North Carolina; Jennifer Fowlkes, CHI Systems

Session T-4   **Wednesday, 6 December 0800-0930**   **Room W304 C-D**
Training System Design
Session Chair: Charles Frye, Novonics Corporation
Deputy Chair: Capt Adam Kessel, USMC, College of Continuing Education

CDMTS: A Common User Interface for Multiple Training Environments (2774)
   Bela Joshi, Richard King, Brian Teer, Alion Science and Technology Corporation, BMH Operation
Domain Specific Knowledge Capture Interfaces for Behavior Modeling (2804)
   Todd Griffith, Ph.D., Discovery Machine, Inc.

- **The number in parentheses following Paper Title is the ID tracking number.**
- **Legend (One or more of the following may appear on this page.)**
🎖   **Nominated for "Best Paper" Award**   📖   **Continuing Education Units**
✎   **Honorable Mention for Best Paper Award**   🖳   **Standards-related Subject Matter**
✈   **International Author**   🕹   **Gaming-related Subject Matter**

Session T-5 **Wednesday, 6 December 1000-1130** **Room W304 C-D**
Deployable Virtual Solutions
Session Chair: Robert Wallace, 29TSS/TSB
Deputy Chair: Brian Teer, Alion Science and Technology

Deployable Virtual Maintenance Trainers: Case Studies on Using Interactive 3D Simulations to Replace Hard Trainers (2878)
Erik Kaas, NGRAIN Corporation ✈

Spiral Development of Virtual Solutions for Convoy Defense Training (2869)
Michael O'Bea, TRADOC Program Integration Office; Christina Bell, Jim Crabtree, U.S Army PEO STRI

ASW VAST MRT3: The Tip of the Virtual Spear (2563)
Arthur Gallo, Alion Science and Technology; Jonathan Glass, NAVAIR Orlando; Charlie Frye, NOVONICS Corporation; Robert Douglass, Chris Velez, Jack Buckley, Lucas Cipolla, Alion Science and Technology

Session T-6 **Wednesday, 6 December 1000-1130** **Room W307 C-D**
MEDIC!!
Session Chair: Warren Jones, Army Capabilities Integration Center
Deputy Chair: Leslie Dubow, U.S. Army PEO STRI

Evolution of On-line First Responder Training: Not Always Right, but Always Learning (2822) 📖
William Walsh, Terrell Fulbright, Roberta Gearhardt, Gerald Kastigar, Renee Barber, JXT Applications, Inc.

Virtual Reality Simulation for Multicasualty Triage Training (2700) ✏
Paul Kizakevich, Robert Furberg, Rob Hubal, Geoff Frank, RTI International

The Virtual Operating Room (2711)
Mark Scerbo, Lee Belfore, Hector Garcia, Michael Jackson, Amber Nalu, Emre Baydogan, Old Dominion University; Leanord Weireter, Eastern Virginia Medical School

Session T-7 **Wednesday, 6 December 1330-1500** **Room W304 C-D**
Simulation Applications for Training
Session Chair: James Runk, AMC/A3TA
Deputy Chair: John Ruffner, Ph.D., DCS Corporation

Realistic Simulation of Meter and Sub-meter Synthetic Aperture Radar (2706)
Harry Heaton, James Hopper, Jennifer DeVilbiss, Science Applications International Corporation

Using Computational Fluid Dynamics for Model Development and Simulator Validation (2668) 📖
Thomas Moore, Christopher Freitas, Ryan Keedy, J. Brian Fisher, Southwest Research Institute

Computer Generated Imagery: Application to Military Force Protection (2604)
Gregory Gonos, NAVAIR Orlando

Session T-8 **Wednesday, 6 December 1330-1500** **Room W304 E-F**
Distributed AAR
Session Chair: Steve Monson, The Boeing Company
Deputy Chair: Daniel Abahazy, U.S. Joint Forces Command

Debrief Solutions for Mission Training & Simulation: Making Fighter Pilot Training More Effective (2689) 📖 ✈
Lesley Jacobs, TNO Defence, Security and Safety; Erik Cornelisse, Defense Staff, Air Force Requirements/Fighter Branch; Ornella Schavemaker-Piva, TNO Defense, Security and Safety

A Federating Protocol for Distributed After Action Review (2927)
Virginia Travers, William Ferguson, BBN Technologies; Timothy Langevin, MÄK Technologies

Visually Based Timeline Debrief Toolset for Team Training AAR (2962)
Randy Jensen, Stottler Henke Associates, Inc.; Margaret Nolan, Jacobs Sverdrup; Nancy Harmon, LtCol Gregory Caldwell, USMC, MARCORSYSCOM PM TRASYS

Session T-9 **Wednesday, 6 December 1530-1700** **Room W304 C-D**
Decision-based Training: Dynamic Solutions
Session Chair: Cyndi Turner, Rockwell Collins
Deputy Chair: Bob Johnson, NAVSEA Philadelphia

A New Generation of Tactical Action Officer Intelligent Tutoring Systems (ITS) (2678) ✏
   Richard Stottler, Stottler Henke Associates, Inc.; Susan Panichas, Northrop Grumman Corporation
Training to Avoid Characteristic Errors in Small-team Decision Making (2928) 📖
   Dennis Folds, Ph.D., Georgia Institute of Technology
Developing Adaptive Tactical Aggressors (2521)
   LT Ryan Scott Aleson, USN, Surface Warfare Officer School Command; Sushil Louis, Ph.D., University of Nevada
   Reno

Session T-10 **Thursday, 7 December 0800-0930** **Room W304 C-D**
Training: A Network-centric Approach
Session Chair: Carlee Bishop, Ph.D., Georgia Tech Research Institute
Deputy Chair: Mark Gerasch, General Dynamics

Transformation to Continuous, Embedded Training Paradigms for Network Centric Enterprises (2741)
   G. A. Wright, Ph.D., Dayne Gardner, Robert Morris, Georgia Tech Research Institute
The UK's Networked Enabled Training Capability (Land) Concept (2931) ✈
   Corinne Jeffrey, QinetiQ; Col Richard Clee, UK MoD, DEC(GM)
Network Centric Warfare Requirements: A Live Collective Training Perspective (2704) 📖 ✏
   Paul Dumanoir, U.S Army PEO STRI; Rich Keller, Morgan Research; Wayne Koenig, U.S. Army Training
   Support Center

Session T-11 **Thursday, 7 December 1000-1130** **Room W304 A-B**
Games & Learning Systems
Session Chair: Mike Proctor, Ph.D., University of Central Florida
Deputy Chair: Anne Sullivan, MARCORSYSCOM PM TRASYS

Integrating Simulations into Sharable Content Object Reference Model Learning Environments (2769) ♧
   Curtis Conkey, NAVAIR/NETC; Brent Smith, Chris DuBuc, ECS; Peter Smith, JHT
Realistic Training Using a Collaborative Simulation Environment (2614) ♧
   Kelly Ward, Denise Stevens, Ph.D., General Dynamics Information Technology; Susan Marshall, Dean Marvin,
   Joint ADL Co-lab
Using Multi-Player Games for Mission Planning and Rehearsal Exercises (3041) ♧
   Upul Obeysekare, Ryan Dingman, Kraig Mentor, Clyde Sphon, David Luciew, Angela Wells, Nancy Johnson,
   Concurrent Technologies Corporation

Session T-12 **Thursday, 7 December 1000-1130** **Room W304 C-D**
Embedded Training
Session Chair: Dan Hagan, AAI Corporation
Deputy Chair: John Jinkerson, CAE USA

Extending Training Capability Through the Use of Embedded Domain-specific Languages in Training Devices (2761) 📖
   John Aughey, The Boeing Company
Embedded Training: A Future Combat System Live Training Use Case (2534)
   Paul Dumanoir, Barbara Pemberton, U.S Army PEO STRI; Paul Walker, Lockheed Martin
Low Cost, Effective Embedded Training Methods for Future Soldier Systems (2765)
   Larry Stallman, Exponent, Inc.; Henry Marshall, Timothy Roberts, RDECOM; Gary Green, Institute for Simulation
   and Training, UCF

Training Paper Published, not Presented:
Applying a Systematic Approach to Making Training Requirements Decisions (2605)
   Stephen Parchman, David Ryan-Jones, Ph.D., NAVAIR Orlando
Challenges Future TES Face with Position/Location and Implementing Geometric Pairing (2479)
   George Burmester, Jim Grosse, U.S. Army PEO STRI
Federal Government LMS Experiences: Lessons from the Field (2864)
   Steven Kerschenbaum, VERTEX Solutions; Steven Larkin, Internal Revenue Service

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✈	**International Author**	♧	**Gaming-related Subject Matter**

SIMULATION

Session S-1   **Tuesday, 5 December 1330-1500**   **Room W304 A-B**
Modeling the Real Contemporary Environment: Asymmetric, Non-kinetic, PMESII
Session Chair: COL Chris O'Connor, USA, HQ DA, G3-5-7
Deputy Chair: Johnnie Frame, MAGTF Staff Training Program

Sides, Force, and ROE for Asymmetric Environments (2592) ⚇
  Andy Ceranowicz, Alion Science and Technology; Mark Torpey, Lockheed Martin; Jack Hines, L-3 Communications
Joint Non-kinetic Effects Model (2995)
  Robert Chamberlain, Jet Propulsion Laboratory; Timothy Metivier, National Simulation Center
Simulating Synthetic Economies and Global Economic Interdependence within the EBO-DIME-PMESII Framework (2776)
  Alok Chaturvedi, Ph.D., Purdue University; Midh Mulpuri, Guillermo Pinczuk, Simulex, Inc.

Session S-2   **Tuesday, 5 December 1330-1500**   **Room W304 G-H**
A Boom, A Splash, and a Download: New Ways to Make and Manipulate the Environment
Session Chair: Stacy Pierce, Future Design & Engineering
Deputy Chair: Pierre Conley, NAVAIR PMA 205

Surf Zone Modeling for an EFV Trainer for the USMC (2816) 📖
  Lawrence Lachman, MultiGen-Paradigm
An Architecture to Support Realtime Manipulation of a Synthetic Environment (2734) 📖 ✎
  Michael Cosman, Robert Dawson, Rockwell Collins
Simulation Interface and Visualization with Existing Internet Technologies (2783)
  Jason Schutz, Christopher Markuck, Science Applications International Corporation

Session S-3   **Tuesday, 5 December 1530-1700**   **Room W304 G-H**
Big Data, Big Problems, Big Solutions
Session Chair: Bill Robinson, U.S. Joint Forces Command
Deputy Chair: Stacy Pierce, Future Design & Engineering

Incorporating High Energy Physics Data Capabilities into Joint Forces Simulations (2570)
  Julian Bunn, Ph.D., Thomas Gottschalk, Ph.D., California Institute of Technology
Hardware Assisted Realtime Simulation (2624) 📖
  Douglas Hodson, Capabilities Integration Directorate, WPAFB; Rusty Baldwin, Ph.D., Air Force Institute of
  Technology; John Weber, Ph.D., University of Dayton
Agile Data Logging and Analysis (2580)
  Ke-Thia Yao, Ph.D., University of Southern California

Session S-4   **Wednesday, 6 December 0800-0930**   **Room W304 G-H**
Joint Decisions: Wanna Make One?
Session Chair: Jim Godwin, TTGI
Deputy Chair: Larry Rieger, U.S. Army Capabilities Integration Center

Progressive, Multi-Resolution Course of Action Analysis (2542)
  David Pratt, Ph.D., Ellen Towers, Science Applications International Corporation; Dale Shires, Kelly Kirk, Army
  Research Laboratory
Developing a Joint Concept for C2 and M&S Systems (2696) ✈
  Wim Huiskamp, Tom van den Berg, TNO Defence, Security and Safety; Rombout Karelse, Royal Netherlands Armed
  Forces Simulation Expertise Center; Capt Marco Hulleman, Royal Netherlands Armed Forces C2 Support
Situational Awareness Objects (SAOs): A Collaborative Toolset for Players, Controllers and Analysts (2499)
  Michael Anhalt, Alion Science and Technology

Session S-5   **Wednesday, 6 December 1000-1130**   **Room W304 G-H**
Methods to the Madness: M&S for the 21st Century Joint Force
Session Chair: Kevin Roney, Science Applications International Corporation
Deputy Chair: Margaret Loper, Ph.D., Georgia Tech Research Institute

EQUIP: Analyzing Impacts on Squad Capability (2559)
    Jane Bachman, Thomas Holland, NSWDD-TEAMS; Mark Richter, MARCORSYSCOM
Creating a World War II Combat Simulator Using OneSAF Objective System (2571) 📖
    Kevin Kelly, Lockheed Martin STS; Craig Finch, David Tartaro, Shiva Jaganathan, University of Central Florida
Building Distributed Simulations Utilizing the EAAGLES Framework (2628)
    Douglas Hodson, Capabilities Integration Directorate, WPAFB; David Gehl, L-3 Communications Link
    Simulation & Training; Rusty Baldwin, Ph.D., Air Force Institute of Technology

Session S-6   **Wednesday, 6 December 1330-1500**   **Room W304 G-H**
Earth, Wind, and Wire in the 21st Century
Session Chair: Charles Koplik, Northrop Grumman Corporation
Deputy Chair: William Bickley, Ph.D., Air Force Research Laboratory

Global Elevation Models for Modeling and Simulation (2485) 📖
    George Lukes, Institute for Defense Analyses
State of the Art and Evolution of Weather Simulation Technology (2768) 📖
    Robert Reynolds, Northrop Grumman Corporation
Distributed Simulation in the 21st Century (3035) 📖
    Frank Hill, SDS International

Session S-7   **Wednesday, 6 December 1530-1700**   **Room W304 G-H**
The Federalist Papers
Session Chair: Maj Walt Yates, USMC, Marine Corps Air-Ground Combat Center
Deputy Chair: Juliana Slye, Autodesk, Inc.

Integration of OneSAF Objective System into Existing Virtual Programs (2620)
    Peggy Hughley, Science Applications International Corporation; Jon Watkins, Dignitas Technologies; Jim Moerk,
    Science Applications International Corporation; Angela Chang, U.S. Army PEO STRI
Design of a Simulation Framework for Tactical Training in a Synthetic Battlefield (2911) ✈
    Chan Gon Yoo, Seong Kee Lee, Jae Hyeon Park, Jeong Chan Park, Ho Sang Yoon, Cheol Ho Kim, Republic of
    Korea Agency for Defense Development
JEWEL: M&S Environment for the SAF (2913) ✈
    Thio Seng Joo, Kong Siew Theng, Tan Siew Fang, Yeo Loon Chew, Defence Science & Technology Agency Singapore

Session S-8   **Thursday, 7 December 0800-0930**   **Room W304 E-F**
Asymmetic Warfare: Can You Decide?
Session Chair: Bruce McDonald, Ph.D., McDonald Research Associates
Deputy Chair: Jim Godwin, TTGI

Modeling and Simulation of Sensor Systems to Experiment Against Contemporary Asymmetric Urban Threats (2750) 📖
    Paul Castleberg, Ph.D., Philip Colon, John Berger, Ph.D., Toyon Research Corporation
Combining Sensors and Simulation for Realtime Decision Support (2707)
    John Sokolowski, Ph.D., Virginia Modeling, Analysis and Simulation Center; Daniel Snyder, Booz Allen Hamilton
Application of Proven Parallel Programming Algorithmic Design to the Aggregation/De-aggregation Problem (2567)
    Thomas Gottschalk, Ph.D., California Institute of Technology; Dan Davis, University of Southern California

Session S-9   **Thursday, 7 December 0800-0930**   **Room W304 G-H**
Can't We All Just Get Along? Integrating DIS to HLA to TENA
Session Chair: Patrick Imlay, USAF Training Systems Product Group
Deputy Chair: Michael O'Connor, ITT Corporation

Integrated Middleware for Flexible DIS and HLA Interoperability (2701)   📖
     Lawrence Rieger, US Army ARCIC; Jennifer Lewis, Science Applications International Corporation
Dead Reckoning in a Mixed HLA/DIS Environment (2787)
     Tony Valle, Ph.D., SPARTA, Inc.; Benjamin Leppard, Christopher Santora, Northrop Grumman Corporation
LVC Interoperability via Application of the Base Object Model (BOM) (2967)   📖
     Dannie Cutts, JFCOM ATT Group; Paul Gustavson,Sim Ventions, Incorporated; John Ashe, AEgis Technologies Group

Session S-10   **Thursday, 7 December 1000-1130**   **Room W304 G-H**
Living in a Material World: Texture, Classification and Portability
Session Chair: Bob Chapman, Alion Science and Technology
Deputy Chair: Bart Scherschel, CAE USA

Virtual Texture: A Large Area Raster Resource for the GPU (2509)   📖
     Anton Ephanov, Ph.D., Chris Coleman, MultiGen-Paradigm
Material Classification Pragmatics: Creating and Evaluating Geo-Specific Material Assignments (2939)   ✎ 📖
     Scott Davidson, MultiGen-Paradigm
Building Cross-platform Portable Sensor Databases: The Portable Source Initiative (2646)   📖
     W. Kent Nichols, NAVAIR

Session S-11   **Thursday, 7 December 1330-1500**   **Room W304 A-B**
Is It Real or Is It Memorex? A Review of Existing Games and Lessons Learned From The Theatre
Session Chair: Maj James McDonough, USMC, TECOM
Deputy Chair: David Navari, Vertex Solutions, Inc.

Factors Affecting the Adoption of a Training Game (2814)   🔔
     Bruce Roberts, David Diller, Ph.D., David Schmitt, BBN Technologies
Lessons Learned from Evaluating Training Games for Infantry Leaders (2471)   🔔
     Scott Beal, Ph.D., U.S. Army Research Institute
Characterizing Models, Simulations and Games (2954)   🔔
     Ivar Oswalt, Ph.D., Stephen Kasputis, Ph.D., VisiTech, Ltd.

Session S-12   **Thursday, 7 December 1330-1500**   **Room W304 G-H**
3D for the 21st Century
Session Chair: Pamela Woodard, NAVAIR Orlando
Deputy Chair: Eric Anschuetz, NAVAIR Orlando

Easing the Pain of Urban Modeling (2811)   ✎ 📖
     John Mann, Applied Research Associates, Inc.; Latika (Bonnie) Eifert, U.S. Army RDECOM-STTC
A Framewok for Generating High Fidelity, Interoperable Urban Terrain Databases (2722)
     Chuck Campbell, Kevin Wertman, Applied Research Associates, Inc.; Julio de la Cruz, U.S. Army RDECOM-STTC
XML-Based 3D Models for High Fidelity End Game Methodology (2720)   📖
     Jeff Lyons, David Fisher, Ph.D., Matt Kraus, Applied Research Associates, Inc.

EDUCATION

Session E-1 **Tuesday, 5 December 1330-1500** **Room W307 A-B**
Development and Discovery
Session Chair: Jennifer Rochetti, Science Applications International Corporation
Deputy Chair: Capt Peter Reddan, USAF, AETC/A3F
Empowering the SME: Implementing a Sustainable Model of a Rapid Content Development for ADL (2488) ✈
   Major Tony Charles, Major Chris Edwards, Directorate for Individual Training (Army), UK MOD
Scenario-based Multi-level Learning for Counterterrorism Intelligence Analysis (2767)
   Sowmya Ramachandran, Ph.D., Emilio Remolina, Ph.D., Stottler Henke Associates, Inc.; Chad Barksdale,
   Imedia.it, Inc.
The ADL Registry Client: Solving the Currency Issue of Content Reuse (2848)
   Angela Lindsey, Kenneth Pisel, Ph.D., Joint Forces Staff College; William Pike, Joint ADL Co-laboratory

Session E-2 **Tuesday, 5 December 1530-1700** **Room W307 A-B**
Media in Overdrive: Engaging Technology
Session Chair: David Devol, BGI LLC
Deputy Chair: Rebecca Palmore, USCG Performance Technology Center
Technology Based Training: Making the Correct Choice (2470) ✈
   John Huddlestone, Ph.D., Jonathan Pike, Cranfield University, UK
Educational Extensions of Large-scale Simulations Enabled by High Performance Computing (2562)
   Dan Davis, University of Southern California; Laurel Davis, Apple Tree Services; Summer Allen, Science
   Applications International Corporation
Embedded Multi-modal Unmanned System Training (2698)
   Peter Drewes, Ph.D., CESI; Tim Roberts, Nicole Coeyman, Troy Dere, Pat Garity, U.S. Army RDECOM-STTC;
   Ben Tirabassi, Technology Engineering Research, Inc.

Session E-3 **Wednesday, 6 December 0800-0930** **Room W307 A-B**
Learning Objects: Challenges and Solutions
Session Chair: Chris Olson, Alion Science and Technology
Deputy Chair: Keith Anderson, SI International
An Integrated Model for Learning Object Reuse (2469) ✈
   John Huddlestone, Ph.D., Jonathan Pike, Cranfield University, UK
SCORM® Reuse: Current Reality, Challenges, and Best Practices (2908) 📖
   Jennifer Brooks, Paul Jesukiewicz, Institute for Defense Analyses
SCO Sighs: Why ADL Won't Say How Big SCOs Should Be (2943) 📖
   Eric Roberts, Ph.D., William Blackmon, Ph.D., Advanced Distributed Learning Co-Lab

Session E-4 **Wednesday, 6 December 1000-1130** **Room W307 A-B**
Old School - New School: Know Your Audience and Adapt to be Effective
Session Chair: Maj Atis Lozano, USMC, College of Continuing Education
Deputy Chair: Jonathan Woods, Ph.D., Navy Human Performance Center
Teaching Simulation to Non-Engineering Undergraduates: Systems Engineering and the West Point Way (2549)
   MAJ Ernest Wong, LTC Brigitte Kwinn, United States Military Academy
Effects of Age and Media Packaging on Designing Training Systems (2705) ✎ 🖥 📖
   W. Randall Koons, Modeling and Simulation Information Analysis Center
The Boomer-Millennial Convergence: Designing Instruction for the Learners of Tomorrow (2986)
   Janice Ware, Rosemary Craft, Vertex Solutions, Inc.

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   ✈ **International Author** ⌂ **Gaming-related Subject Matter**

Session E-5 **Wednesday, 6 December 1330-1500** **Room W307 A-B**
Analyze to Design
Session Chair: Jonathan Woods, Ph.D., Navy Human Performance Center
Deputy Chair: Jim Hadley, JHT Inc.

Communicating Complex Instructional Designs to Different Stakeholders (2682) 📖 ✈
    Eddy Boot, Ph.D., TNO Human Factors Department of Training and Instruction; Lieutenant Jan Kremer, Royal Netherlands Air Force

Using the Meaning Equivalence Method to Assess and Enhance Learning Outcomes (2922)
    Kavita Seeratan, Ph.D., Pedagogical Science, LLC

Team Training Task Analysis: A Practical Expression of a Complex Problem (3044) ✈
    David Hutchings, Steve Hartley, VEGA Group plc, UK

Session E-6 **Wednesday, 6 December 1530-1700** **Room W304 A-B**
Applications of Game Technology
Session Chair: Jeff Wilkinson, Ph.D., U.S. Army RDECOM
Deputy Chair: Matthew Caffrey, AFRL/XRO

Simulation Experience Design Methods for Training the Forces to Think Adaptively (2672) 📖 ♘
    Elaine Raybourn, Sandia National Laboratories

Serious Games by Serious Instuctional Designers (2779) ♘
    Jaime Henderson, Valerie Hainley, Imedia.it, Inc.

Harnessing Experiential Learning Theory to Achieve Warfighting Excellence (2974) ♟ 📖 ♘
    Ellen Menaker, Ph.D., Susan Coleman, Ph.D., Joe Collins, Marci Murawski, Ed.D, Intelligent Decision Systems, Inc.

Session E-7 **Wednesday, 6 December 1530-1700** **Room W307 A-B**
Adaptive Education for Medical Applications
Session Chair: Mary Trier, San Diego Research Center
Deputy Chair: Edward Degnan, Ed.D., AFAMS

Interagency Collaboration Produces Sharable Training (2587)
    David Twitchell, Ph.D., U.S. Department of Veterans Affairs

Distributed Medical Curricula Architecture (2907)
    Judith Riess, Ph.D., Education and Training Solutions; Eric Allely, M.D., American Medical Diagnostics; H. Barbara Sorensen, Ph.D., Air Force Research Laboratory

Surgical Educators Incorporating Surgical Simulation Take Lessons from Flight Training (2972) ✎
    Marvin Fried, M.D., Babak Sadoughi, M.D., Albert Einstein College of Medicine's Montefiore Medical Center; Conrad Bills, Ph.D., CPT, Lockheed Martin STS

Session E-8 **Thursday, 7 December 0800-0930** **Room W307 A-B**
Leveraging SCORM ® for Adaptive Learning
Session Chair: Lisa Holt, Ph.D., Soar Technology, Inc.
Deputy Chair: Mike Freeman, Ph.D., OSD Readiness and Training

Implementing an Adaptive Learning Model through Dynamic Content Object Assembly (2702)
    Cheryl Lowry, Ted Kula, Lee Kraus, ManTech

Simulation Representation using SCORM ® (2868)
    Patrick Gallagher, Hasan Altalib, Science Applications International Corporation

Mapping Intelligent Tutoring System Constructs to SCORM ®2004 Data Structures (2982) 📖
    Michael Anthony, SRA International; Alan Ashworth, Ph.D., USAF Research Laboratory

Session E-9   **Thursday, 7 December 1000-1130**   **Room W307 A-B**
Managing Knowledge: From Novice to Expert
Session Chair: Amy Jenison, U.S. Army Combined Arms Support Command
Deputy Chair: Steven Tourville, Ph.D., Lockheed Martin STS

Learning and Knowledge Management; Story Telling for Knowledge Capture (2487)
    Marcia Gibson, Ed.D., National Institute of Aerospace
Discovering the Invisible: Using Tacit Knowledge to Develop Agile and Adaptive Leaders (2524)
    Holly Baxter, Ph.D., Lisa Stevens, Applied Research Associates; LTC Joseph Koskev, USA, Battle Command
    Knowledge System
Training Novices and Experts: A Common Assessment Mechanism for Knowledge, Skills, and Abilities (2737)
    Mary Ann Pigora, Theresa Tamash, Holly Baxter, Ph.D., Applied Research Associates

Session E-10   **Thursday, 7 December 1000-1130**   **Room W307 C-D**
Moving from Novice to Expert: A Focus on Cognitive Processes
Session Chair: Kevin Moore, Ph.D., Tier 1 Performance Solutions
Deputy Chair: Brent Smith, Engineering & Computer Simulations, Inc.

Realistic Methods for Automated Coaching (2782)
    Scott Shadrick, James Lussier, U.S.Army Research Institute; Gene Wilson, Northrop Grumman Corporation
Cognitive Transformation Theory: Contrasting Cognitve and Behavioral Learning (2500) 📖
    Gary Klein, Ph.D., Holly Baxter, Ph.D., Applied Research Associates, Inc.
Using Deliberate Practice to Train Military-Civilian Interagency Coordination (2785) ✐
    Jeffrey Beaubien, Michael Paley, Sibyl Badugu, Aptima, Inc.; Scott Shadrick, U.S. Army Research Institute;
    Charles Ennis, Steve Jacklin, MPRI, Inc.

Education Papers Published, not Presented:
A Front-end Analysis Design for a Multi-position, Multi-function Platform (2899)
    Wendy Weeks, Frederick Stafford, The Boeing Company
Instructional Strategies for Exercise Manipulation in Distributed Mission Training (2546)
    Susan Eitelman, Jerry Owens, Jennifer Fowlkes, CHI Systems, Inc.; Melisa Nelson, NAVAIR Orlando;
    Beth Atkinson, JHT, Inc.
The Use of an Open Source CMS in Military Maintenance Training (2644) ✈
    Dr. Willem Hylkema, Major Inge Hopland, Royal Norwegian Air Force
Understanding Adult Resistance to Learning (2522)
    Patricia Froggett

HUMAN PERFORMANCE

Session H-1 **Tuesday, 5 December 1330-1500** **Room W307 C-D**
Human Performance Issues in Distributed Simulation
Session Chair: Edward Schifferns, Northrop Grumman Corporation
Deputy Chair: Mike Singer, Ph.D., Army Research Institute

Performance-based Advancement Using SCORM® 2004 (2697)
   Elizabeth Biddle, Ph.D., Bruce Perrin, Ph.D., The Boeing Company; William Pike, Dean Marvin, Joint Advanced
   Distributed Learning Co-laboratory
Use of Pilot Modeling Techniques to Define Deployable Simulator Metrics (2601) 📖
   Gary George, Ph.D., P.E., GeorgeCo Enterprises; Peter Crane, Ph.D., U.S. Air Force Research Laboratory;
   Frank Cardullo, SUNY Binghamton; Roy Latham, CGSD Corp.
Fidelity Trade-offs for Deployable Training and Rehearsal (2840)
   Brian Schreiber, Lumir Research Institute; Winston Bennett, Jr., U.S. Air Force Research Laboratory;
   Sara Elizabeth Gehr, The Boeing Company

Session H-2 **Tuesday, 5 December 1530-1700** **Room W307 C-D**
Human Performance in Unmanned Vehicles
Session Chair: Hershel Pryor, Corsair Engineering
Deputy Chair: Judith Converso, Ph.D., Computer Sciences Corporation

Effect of Tactile Feedback on Unmanned Aerial Vehicle Landings (2849)
   Donald Aretz, Terence Andre, Brian Self, Christopher Brenaman, United States Air Force Academy
Effects of Interface Design and Input Control Method on Unmanned Aerial System Operator Performance (2882)
   John Neumann, University of Central Florida; Paula Durlach, U.S. Army Research Institute

Session H-3 **Wednesday, 6 December 0800-0930** **Room W307 C-D**
Team Interaction
Session Chair: Bobbi Gearhardt, JXT Applications
Deputy Chair: Don Sine, Ph.D., Booz Allen Hamilton

Mobile Performance Support: e-Learning for British Army Recovery Mechanics (2688) ✈
   Steve Jarvis, VEGA Group plc; Dr. David Swift, Directorate of Individual Training (Army) UK
*Information Distribution to Improve Team Performance in Military Helicoptor Operations: An Experimental
Study* (2859) ✏ 📖
   Brian Sperling, Ph.D., United States Military Academy; Amy Pritchett, Ph.D., Georgia Institute of Technology
Human Performance Modeling and Simulation for Launch Team Applications (3014)
   Cary Peaden, Stephen Payne, Richard Hoblitzell, Jr., NASA Kennedy Space Center; Nils LaVine, Timothy
   Bagnall, Alion Science and Technology

Session H-4 **Wednesday, 6 December 1000-1130** **Room W304 A-B**
Human Performance Models & Methods
Session Chair: Katrina Ricci, Ph.D., NAVAIR Orlando
Deputy Chair: Gerald Dreggors, Northrop Grumman Corporation

*An Information Processing Taxonomy for Conducting Task Analysis for Emerging Command and Control
Systems* (2618) 📖
   David Olsen, Dynamics Research Corporation; Chris Graves, Human Resources Research Organization; Judith
   Converso, Ph.D., Carla Hutchinson, Ph.D., Computer Sciences Corporation
Representing Context in Simulator-based Human Performance Measurement (2856) ⚱
   Webb Stacy, Ph.D., Aptima, Inc.; Danielle Merket, NAVAIR Orlando; Maj Matt Puglisi,
   USMCR, Craig Haimson, Ph.D., Aptima, Inc.
Culture Representation in Human Reliability Analysis (2897) 📖
   David Gertman, Ph.D., Steven Novack, Julie Marble, Ph.D., Idaho National Laboratory

Session H-5   **Wednesday, 6 December 1330-1500**   **Room W307 C-D**
Better Instructors, Better Boots?
Session Chair: Scott Beal, Ph.D., Army Research Institute
Deputy Chair: Chuck Moler, Science Applications International Corporation

Automated Feedback and Situation Awareness in Net-centric C3 Systems at Varying Difficulty Levels (2606)
    John Barnett, Ph.D., Larry Meliza, Ph.D., U.S. Army Research Institute; Jennifer Ross, Ph.D., University of
    Central Florida
Next Generation Aircraft Training: Good Pilot -- Good Instructor? (2629) ✐ ✈
    Tam Gipson, David Bowman, Air Affairs (UK) Ltd; Wg Cdr Ian BraynSmith, RAF Cranwell
Undergraduate Boot Camp: Getting Experimental Populations Up To Speed (2976)
    Roberto Champney, Laura Milham, Ph.D., Meredith Carroll, Kay Stanney, Ph.D., David Jones, Design Interactive;
    K.C. Pfluger, Trestles, Inc.; LCDR Joseph Cohn, USN, Ph.D., Naval Research Laboratory

Session H-6   **Wednesday, 6 December 1530-1700**   **Room W307 C-D**
Picture This!
Session Chair: Maj Ray Pursel, USMC, Marine Corps Warfighting Laboratory
Deputy Chair: Sherrie Jones, Ph.D., MARCORSYSM PM TRASYS

Near-eye Augmented Reality Tower Controller Displays: Human Performance Issues (2518)
    John Ruffner, Ph.D., Roger Labbe, DCS Corporation; Steve Hoyt, NVIS, Inc.
Training Wayfinding Using Mixed Reality (2581)
    Ruthann Savage, University of Central Florida; Jason Daly, Glenn Martin, Institute for Simulation and Training,
    University of Central Florida
High Availability 3D Finally Arrives (2684) 📖
    John Brabbs, Mark Sokolik, David Korpalski, Electronic Data Systems

Session H-7   **Thursday, 7 December 0800-0930**   **Room W307 C-D**
Performance Support
Session Chair: René Thomas-Rizzo, PEO IWS
Deputy Chair: Geoffrey Barbier, U.S. Air Force Research Laboratory

Automating Metadata Tagging: Combining Man/Machine Input for Optimal Output (2483) 📖
    Katrina Ricci, Ph.D., John Hodak, Sandra Hughes, NAVAIR Orlando
Animation in Performance Support: Use It or Lose It (2602)
    John Hodak, Katrina Ricci, Ph.D., Tyson Griffin, NAVAIR Orlando; Anna Connelly, Kaegen Corporation
EPSS: Calling for Content Analysis and Information Design! (2914)
    Jay Winstead, Lynne Monson, Ph.D., Mary Gehres, Dynamics Research Corporation

Human Performance Papers Published, not Presented:
Networked Voice Communications Audio Balancing (2665)
    Nathaniel Napoletano, Lockheed Martin STS
PC-based Desktop Display versus Immersive Head-mounted Display Flight Simulator Performance (2600)
    Chris McClernon, Rhoshonda McGruder, Katrina Mumaw, Terence Andre, USAF Academy
User Interface Lessons Learned from Distributed Simulations (2844)
    Noah Evens, Brooke Whiteford, Geoff Frank, Rob Hubal, RTI International

POLICY, STANDARDS, MANAGEMENT AND ACQUISITION

Session P-1   **Tuesday, 5 December 1530-1700**   **Room W304 E-F**
Getting to Joint
Session Chair: Skip Vibert, ODUSD(R)/RTPP
Deputy Chair: Maj Stu Muladore, USMC, MARCORSYSCOM PM TRASYS

Assessing Training Transformation: Moving from Concept to Reality (2636)
　　Annie Patenaude, Fred Hartman, Office of the Secretary of Defense (USD (P&R))
The Joint National Training Capability Mitigation Management Program (2846)
　　Lt Col Jeffrey Flory, USAF, David Carter, US. Joint Forces Command; John Kearley, Dynamics Research Corporation
Creating the Joint Training Global Environment (2738)
　　Robert Hinger, Booz Allen Hamilton; Col Daniel Henkel, USAF, USJFCOM/JWFC

Session P-2   **Wednesday, 6 December 0800-0930**   **Room W304 E-F**
Home on the Range
Session Chair: Jerry Stahl, Cypress International
Deputy Chair: John Dzenutis, The Boeing Company

Performance-based Financial and Budget Models (2468)
　　Michael McDevitt, Brian Kudrna, CACI Dynamic Systems, Inc., Michael O'Donnell, NAVAIRSYSCOM
Achieving Standardized Live-Virtual Test and Training Interactions via TENA (2900)
　　Joseph Testa, DRS Training & Control; Mike Aldinger, Northrop Grumman Corporation, Kris Wilson, DRS
　　Training & Control
Joint Urban Operations Training to Achieve Full Spectrum Dominance (2933)
　　LTC Michael Whetstone, USA, USJFCOM / JWFC

Session P-3   **Wednesday, 6 December 1000-1130**   **Room W304 E-F**
Learning from Home, or Not
Session Chair: Traci Jones, U.S. Army PEO STRI
Deputy Chair: Mike Papay, Ph.D., Northrop Grumman Corporation

COCOMO and SCORM®: Cost Estimation Model for Web-based Training (2474) ✎
　　Mike Garnsey, Lacey Edwards, Sparta, Inc., Kelly Ward, General Dynamics; Dean Marvin, Joint ADL Co-laboratory
Norwegian Defense ADL Regulations: Good Directions or Just Plain Distractions (2607) ✈
　　LtCdr Geir Isaksen, Major Arne Broberg, Norwegian Defense ADL Section
Assessment Integrity: The Dark Side of Distributed Learning (2744) ✎ 📖
　　Kirk McCullough, Marsha Jurewicz, Computer Sciences Corporation

Session P-4   **Wednesday, 6 December 1330-1500**   **Room W304 A-B**
How Secure Are You?
Session Chair: Mike Powell, NAVAIR Orlando
Deputy Chair: Rich Grohs, HQ ACC/A8AT

Taking the Mystery out of Information Assurance for the 21st Century (2611) ♉ 📖
　　William Kaczor, Craig Thornley, MTS Technologies; Buddy Guynn, NAVAIR Orlando
A DMON Cross Domain Solution (CDS) for Recurring Team Training (2775)
　　Bonnie Danner, CISSP, Northop Grumman Corporation, Tony Valle, Ph.D., Sparta; Bruce McGregor, Northrop
　　Grumman Corporation
Accredition Policy and Practice for Immersive Warfighter Simulators (2999) ✎ 📖
　　Robert Chapman, USAF Headquarters Air Combat Command

Session P-5 Wednesday, 6 December 1530-1700 **Room W304 E-F**
Down the Road
Session Chair: Bob Heinlein, EDS
Deputy Chair: Rick Copeland, U.S. Army PEO STRI

The Theater Air Ground System Synthetic Battlespace (2552)
    Ricky Ales, HQ ACC; Steven Buhrow, HQ USAF
Inserting Science and Technology in the Systems Acquistion Process (2937) ✐ 📖
    CDR Dylan Schmorrow, USN, Office of Naval Research; LCDR Joseph Cohn, USN, Ph.D., Naval Research
    Laboratory; Amy Bolton, Strategic Analysis, Inc.
Advancing Simulation Reusability: Report on NATO MSG-042 Findings (2685) ✈
    LCdr Angel San Jose, France; Robert Elliott, Canada; Stefan Franzen, Germany; Bernardo Martínez Reif, Spain;
    Wanda Wharton, USA; Lt. Sabas Gonzalez-Godov, Spain; LtCol Xavier Lecinq, France; Wim Huiskamp, The
    Netherlands; David Edmondson, UK; Lana McGlynn, USA

Policy, Standards, Management and Acquisition Paper Published, not Presented:
Joint Automated Modeling and Simulation Standards Vetting and Repository Tool (2481)
    William Oates, Don Johnson, Air Force Agency for Modeling and Simulation; Donna Groden, Northrop
    Grumman Corporation

RESEARCH AND DEVELOPMENT

Session R-1   **Tuesday, 5 December 1330-1500**   **Room W304 E-F**
Automate Me: Crunch Time
Session Chair: Steve Gordon, Ph.D., Georgia Tech Research Institute
Deputy Chair: Susann LuperFoy, Ph.D., Tilted Axis Corporation

High Resolution Environment Information for Urban Operations (2482) 📖 ✈
   Simon Ahlberg, Dr.Ulf Söderman, Swedish Defence Research Agency
An Automated Short-Free-Text Scoring System: Development and Assessment (2675)
   Ohad Bukai, Bob Pokorny, Ph.D., Jacqueline Haynes, Ph.D., Intelligent Automation, Inc.
CPU Architectures & Network Protocol Offload in a Simulation Environment (2805) ✏ 📖
   Jeremy Buboltz, Jacob Engel, Taskin Kocak, University of Central Florida; Matthew Jemtrud, Northrop Grumman
   Corporation

Session R-2   **Wednesday, 6 December 0800-0930**   **Room W304 A-B**
Performance Steroids Through Evaluation
Session Chair: Doug Peters, Applied Research Associates, Inc.
Deputy Chair: Robert Dixon, U.S. Army PEO STRI

Automatic Performance Evaluation and Lessons Learnt (APELL) for MOUT Training (2494)
   Hui Cheng, Ph.D., Rakesh Kumar, Ph.D., Thomas Germano, Chris Meng, Sarnoff Corporation
Calculating Error Tradeoffs in Weapon Simulation for Live Training (2515) 📖
   Robert Hall, AT&T Labs Research; Matthew Janisz, Applied Research Associates, Inc.
Knowledge Tracing and Prediction of Future Trainee Performance (2992) ♝ 📖
   Tiffany Jastrzembski, Florida State University; Kevin Gluck, Ph.D., Glenn Gunzelmann, Ph.D., U.S. Air Force
   Research Laboratory

Session R-3   **Thursday, 7 December 0800-0930**   **Room W304 A-B**
Requirements, Interoperability, and Effectiveness for Gaming Technology
Session Chair: LtCol Greg Caldwell, USMC, MARCORSYSCOM PM TRASYS
Deputy Chair: Ba Duong, MARCORSYSCOM PM TRASYS

Effective Analysis of Learner Groups for Serious Games Development (2742) ✈ 🔔
   Sara de Freitas, Ph.D., University of London; Steve Jarvis, Vega Group plc
Human Behavior Model Interoperability for Training in Virtual Worlds (2838) 📖 🔔
   David McDonald, Ph.D., Richard Lazarus, BBN Technologies
Videogame Play and the Effectiveness of Virtual Environments for Training (3001) 🔔
   Rebecca Tortell, Jacquelyn Ford Morie, University of Southern California

Research and Development Papers Published, not Presented:
Distributed Scheduling for Wireless Mesh Networks in Realistic RF Environments (2635)
   Hua Zhu, David Tang, Bo Ryu, San Diego Research Center, Inc.; Ajay Gummala
Successful Deployment of Mesh Routers for Trans-continental Urban Resolve Experiments (2569)
   Thomas Gottschalk, Ph.D., California Institute of Technology; Robert Lucas, Ph.D., Gene Wagenbreth, John Tran,
   University of Southern California; William Helfinstine, Lockheed Martin STS