

SISO European Simulation Interoperability Workshop 2007

(EURO SIW 2007)

Genoa, Italy
18-20 June 2007

ISBN: 978-1-61567-170-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2007) by SISO - Simulation Interoperability Standards Organization
All rights reserved.

Printed by Curran Associates, Inc. (2009)

For permission requests, please contact SISO - Simulation Interoperability Standards Organization
at the address below.

SISO - Simulation Interoperability Standards Organization
1 Donovan Drive
Bedford, MA 01730

Phone: (781) 271-9872
Fax: (781) 271-9874

Siso-help@sisostds.org

TABLE OF CONTENTS

Simulation as an IT Service	1
<i>R. Smith</i>	
Dynamic Terrain Modelling and Simulation.....	12
<i>G. Gang, X. Gang, W. Min, L. Ge</i>	
Key Factors for Successful International Distributed Simulation Exercises	18
<i>M. Mason, C. Best, P. Clark, S. Hasenbosch, P. Ryan, M. Skinner</i>	
Investigation into the Usability of MSDL in South African C2 Tactical Simulations	29
<i>W. Roux</i>	
Rapidly Compose Simulations and Simulation Environments by BOM-based Simulation Model Components.....	39
<i>G. Jianxing, L. Haozhi, C. Yequan, H. Kedi</i>	
The Transformational Potential of Modeling and Simulation Technology When Applied Across the Lifecycle of Large Scale Systems of Systems (SoS) Enterprises.....	44
<i>P. Lowe, M. Riecken, P. Watson</i>	
Research on Joint Training System Based on KD-FBT.....	55
<i>L. Haozhi, C. Yequan, H. Chao</i>	
Aerodrome 3D Tower Simulator	60
<i>S. Marcovaldi</i>	
Design and Test of the Propulsion Control of the Aircraft Carrier “Cavour” Using Real-Time Hardware in the Loop Simulation.....	67
<i>M. Altosole, M. Figari, A. Bagnasco, L. Maffioletti,</i>	
Towards a Web Implementation of Standards for the Validation and Verification of Defence Based Modelling and Simulation	75
<i>E. Rajabally, C. Andrews,</i>	
High Fidelity Dynamic Time Step Synchronization for Moving Object Simulation.....	86
<i>M. Shiraishi, A. Ozaki, S. Watanabe, M. Furuichi</i>	
Modelling & Simulation: “Enabling methodology to support development of Italian Air Force Missile and Air Defence capability”	94
<i>A. Pellegrini, G. Argiolas, R. Ambra</i>	
An Approach for Integrating Space-based Entities into Force-on-Force Military Simulations	104
<i>S. Fox, S. McNully</i>	
Virtual Prototyping with EADSIM	109
<i>W. Jordan, A. Cooper, M. McAnally, M. Binner</i>	
Simulating Communication through Satellite Capabilities.....	117
<i>V. Collins</i>	
Joint Battle Management Language (JBML) - US Contribution to the C-BML PDG and NATO MSG-048 TA	124
<i>A. Tolk, C. Blais, M. Pullen, M. Hieb, S. Levine</i>	
A Method of Process Centric Integration of M&S Resources.....	135
<i>T. Ishii, T. Yamaoka, A. Ishihara</i>	
HLA Simulation of Agent-Based Bacterial Models.....	142
<i>J. King, B. Logan, M. Lees</i>	
Optimizing Dead Reckoning with Classifier Systems	153
<i>S. Torki, P. Torquet, C. Sanza</i>	
Use Cases for the HLA Evolved Modular FOMs	162
<i>B. Moller, B. Lofstrand</i>	
Interfacing Simulations with Training Content	169
<i>G. Frank, B. Smith, B. Dargue</i>	
A Framework for Integrating Command and Control Systems, Geographic Information Systems and Simulations	178
<i>M. Hieb, M. Pullen, D. Swann, G. Scofield, K. Pedersen, J. Muguira, M. Powers</i>	
Lessons Learned on NATO Experiments on C2/M&S Interoperability	190
<i>A. Tolk, J. Boulet</i>	
Data, Models, Federations, and Conceptual Links via Common Reference Models.....	199
<i>A. Tolk, S. Diallo, C. Turnitsa</i>	
Software Technologies for the Interoperability and Reusability of Distributed Simulators	210
<i>A. D'Ambrogio, D. Gianni, G. Iazeolla</i>	

Towards a Methodology for Validating Emergent Behavior Simulations	220
<i>L. Moya, E. Weisel</i>	
A Distributed Crowd Behavior Model Using Game Technology	230
<i>E. Weisel, L. Moyal, F. McKenzie, Q.A. Nguyen, M. Petty</i>	
Towards an Architecture for Distributed Component-Based Simulation	238
<i>E. Weisel, L. Moya</i>	
NATO and NATO/PfP Nations HLA Compliance Certification: History, Lessons Learned and Proposed Enhancements	245
<i>J.L. Igarza, R. Mauget, M. Adelantado, R. Saunders, R. Scrudder</i>	
TADIL TALES: Modeling Tactical Data Links for Command and Control Training.....	257
<i>J. Sorroche</i>	
Directed Energy Modeling and Simulation Experiment Results	267
<i>J. Sorroche, R. Rainey</i>	
Human Factor Evaluation in Operational Ship Scenario Simulations.....	281
<i>A. Guagnano, F. Perra, M. Sanguineti, V. Rossi, D. Tozzi, R. Rovelli, I. Iorini</i>	
Virtual Ship Simulation: An Interoperability & Reusability Based Approach.....	286
<i>A. Lommi, A. Zini, D. Tozzi, M. Peverero, S. Simone</i>	
Semantically Rich Interfaces for Simulation Interoperability	291
<i>A.E. Rizzoli, H. Li, I. Athanasiadis, F. Marechal</i>	
The Synthetic Environment as a Major Instrument of the Modern Aeronautical Simulation Centre.....	300
<i>M. Allocca, C. Montrucchio</i>	
Towards a European Distributed Experimentation Capability: MBDA Experiences and Perspectives	316
<i>F. Monjanel, M. Priestley, A. Spano</i>	
Simulation Interoperability for SoS and Large Systems Capabilities Validation	323
<i>R. Colombari, M. Palazzi, A. Longo, D. Recchia</i>	
A UAV Link Simulator in Defence SATCOM Operations based on a Processing Satellite Payload.....	327
<i>G. Tomasichio, A. Carletti, E. Ricciardi</i>	
A Modeling and Simulation of Course of Action (COA) Consequences in Stability and Support Operations	338
<i>A. Bruzzzone, F. Momen, S. Saetta, J. Rozenblit</i>	
UAVs and Simulation: an Experience on MAVs.....	344
<i>E. Capello, G. Guglieri, F. Quagliotti</i>	
Layer Modelling for National Wide Homeland Security Crisis.....	356
<i>A. Bruzzzone, M. Massei, D. Modula, L. Pierfederici</i>	
Cooperative Training in Intermodal Terminal Logistics	362
<i>E. Bocca, M. Brandolini, S. Poggi</i>	
Interoperable Simulation Integrating Biomedical Devices for Improving Training Effectiveness.....	367
<i>P. Fadda, G. Fancello, M. Massei, E. Briano, A. Rocca, A. Tremori</i>	
An Enhanced VISION for Interoperable Naval Simulations.....	372
<i>A. Guagnano, F. Perra, F. Sciarra</i>	
State of Art and Future Trend on CGF	378
<i>J. Caussanel, C. Frydman, N. Giambiasi, R. Mosca, A. Rocca, M. Brandolini</i>	
SIMBASE: Making M&S a Fully Integrated Plug-in of the Acquisition Process	391
<i>C. Batini, R. Colaci, E. Datamat, J. Haenisch, T. King</i>	
Airport Terminal Management using Web-based Simulation.....	397
<i>D. Curcio, F. Longo, G. Mirabelli</i>	
Critical Issues and Potentials Of SCORM & HLA Integration For Supporting Training Simulation Interoperability	403
<i>M. Brandolini, F. Longo</i>	
Experiences of use of Modelling and Simulation in International and Inter-agency Exercises based on Civil Emergencies/Disaster Relief Operations Scenarios	408
<i>W. David</i>	
Author Index	