



**A Roundtable on the Future of the  
Modeling and Simulation  
Profession, Industry,  
and Marketplace**

**Thursday, November 29  
9:00 - 11:00 AM  
Room W330A**



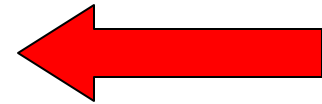
Observers welcome capacity permitting  
(Interested observers contact  
Bill Waite 256-527-9091  
bwaite@aegistg.com)





# Meeting Agenda

## I. Introduction



**A. Welcome and Introductions**

***B. SimSummit Review***

**C. Meeting Concept Review**

## II. Meeting Discussion Topics

***A. SimSummit Topic Agenda Overview***

**B. US Congressional Caucus**

**C. US DoD M&S Management**

***D. SimSummit Evolution?***

## III. ACTION



# Welcome from the Executive Committee

- National Training Simulation Association (NTSA)
- Modeling and Simulation Society International (SCS)
- Simulation Interoperability Standards Organization (SISO)



# Self-Introductions of Member and Observer Organizations

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- Individual Name
- Organization Represented



# *SimSummit* Concept

- What? - Round-table of preeminent M&S 'organizations'
- Who? – Interested organizations from Industry, Government and Academia ... facilitated by non-profit Societies
- When / Where? – Opportunistic overload of organized events
- Why? – Influence the future of the M&S Discipline, Profession, Industry, and Market
- How? – Collective, consensus-based discussion decision, and action



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# Power of a 'Topical Agenda'

## TOPICAL AGENDAS:

- Sensitize communities to significant shared issues and opportunities
- Frame the domain of debate, decision, and action
- Provide 'hooks' to which organizations and constituencies can subscribe (common) interest
- Provide loci for programmatic commitment and coordination of cooperative effort



# ‘Discovering’ and Using the M&S COP Topical Agenda

- The rough outline of a topical agenda for the M&S COP emerged from the initial *SimSummit* discussions
- Topics have been ‘tested’ in various contexts ... and have been found useful
- *SimSummit* participants aspire to educate and publish, and use a (working) ‘canonical’ version of the M&S COP topical agenda to influence the M&S discipline, profession, industry, and marketplace.





# TECHNOLOGY

- Research Agenda
- Conceptual modeling
- Composability
- Interoperability
- Data Management
- Architecture Management
- Standards



# Technology Activity

- Research Agenda
  - Workshop Planning
- Conceptual Modeling
  - NATO Study Group
- Composability, Interoperability, Architecture Management
  - US DoD LVC Study
  - SISO Study Group
  - Serious games and alternative implementation technologies
- Standards
  - *SimSummit* Program
  - DoD VV&A Tempest
  - Congressional Caucus action
  - Collaboration (NTSA, SISO, DoD, NATO, ETSA, NIST, ...)







# PROFESSIONAL / WORKFORCE DEVELOPMENT

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- Stakeholders
- Community-of-Practice
- WD Needs / Requirements
- Body of Knowledge Specification
- Curricular Management
- Professional Certification
- Code of Ethics



# Workforce Development Activity

- Body of Knowledge Specification
  - DoD Progress
  - *SimSummit* Program / prototype/ publication
- Curricular Management
  - SCS Program
  - Specific Initiatives 
  - Congressional Support 
- Professional Certification
  - NTSA CMSP Revitalization Program
- Code of Ethics
  - Re-emphasis and outreach






# INDUSTRIAL DEVELOPMENT

- Identity, recognition
- Scope (Internationality)
- Fragmentation versus Synergy
- Labor Classification Codes
- Industrial Classification Codes
- M&S Asset (life-cycle) Management
- Organizational Relations
- Event Coordination



# Industrial Development Activity

- Identity, recognition
  - *SimSummit* Broadcast Media Program
  - Community-of-practice cultivation
- Scope (Application Domain) 
  - Congressional Caucus Agenda
- Labor Classification Codes / Industrial Classification Codes
  - US DoD efforts
  - Congressional Agenda
- Organizational Relations 
  - Regional Collaboration
  - National Foundation
  - International Relations
- Event Coordination 
  - Schedule coordination
  - Specific events:
    - Congressional Leadership Summit Winter '08; SCS Spring Ottawa; SIW Spring Providence; Euro SIW and SCSC Edinburgh, etc



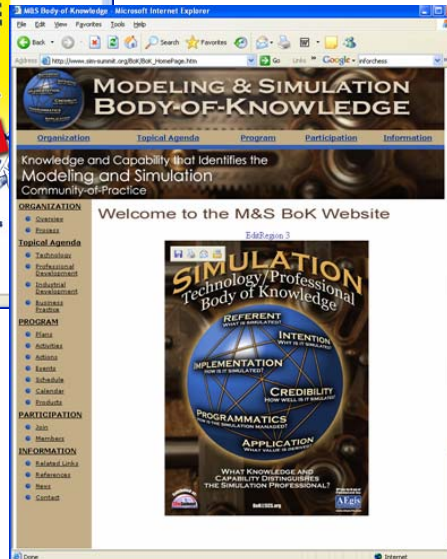
# ACTION: Establishing Visibility - Cultivating the COP -

## Root Level

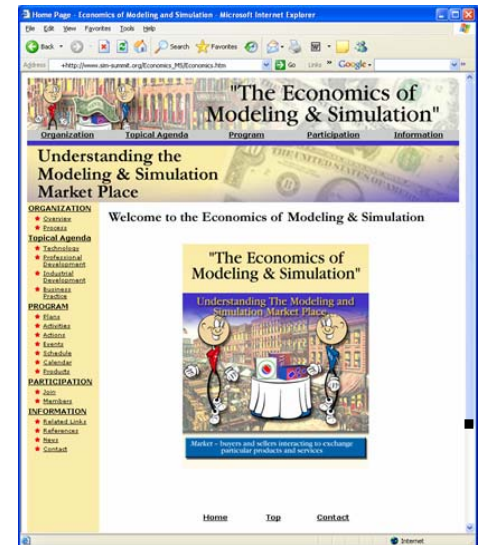
Executive Committee will provide:

- Web collaborative environment template pages,
- Population support.
- Wiki pages upon request and ftp site

## First Tier



## Second Tier



# Domain

# Standing

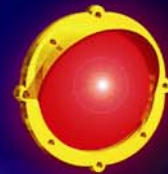
International



National



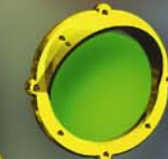
Inter-regional



Regional

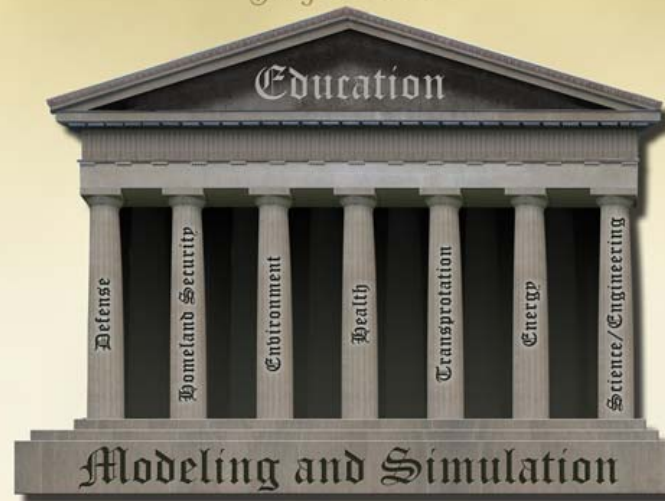


Organizational



# M&S Industrial Development Environment

*H. Res. 487  
In the House of Representatives, U. S.,  
July 16, 2007*



**-EDUCATION-  
ENABLING MODELING AND SIMULATION,  
A NATIONAL CRITICAL TECHNOLOGY**

**FEBRUARY 11, 2008  
SITE TBD**

*"... the House of Representatives ... recognizes  
modeling and simulation as a National Critical Technology ...  
[to] contribute to the prosperity and security of the United States..."*



Congressional

**Modeling and Simulation Caucus**

Congressman J. Randy Forbes, Founder & Chairman  
Congressman Solomon Ortiz, Co-Chairman




# BUSINESS PRACTICE

- Economics of M&SM&S
- Market Description
- M&S-based Enterprise
- Business case specification
- Acquisition / Procurement Application
- M&S Investment (Technology / Asset / Application) and ROI
- Reuse of M&S assets
- Cost of ... M&S asset devel, ues, etc.Value of ...  
Economic Impact



# Economics of M&S Activity

- *SimSummit* M&S Management Survey for US DoD
- SISO SSG on the Economics of M&S 
- DoD M&S ROI study in progress
- Further 'Econ of M&S' study tasking in process
- DoD Acquisition Community Master plan
- National Economic Impact Study prospects?
- NATO MSG Study on Econ of M&S in final review
- International economic status prospects?



# SimSummit Evolution

- Operations to-date
  - ~ 22 Transactions between 2002-2007
  - Persistent mission
  - Single CONOPS
  - Traction achieved – influence felt
  - So...?
- Participation
  - Geographic
    - Liaphant
  - Type
- Working Meeting, 1.5 day, Spring '07?



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# US DoD M&S Management

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SEE: Briefing / Document



# Conceptual Modeling (SISO)

## Terms of Reference (TOR) For the SISO Study Group on: “Simulation Conceptual Modeling”

### **Standing:**

Proposed to SISO EXCOM on 5 Dec 2002

### **Rationale:**

The Simulation Conceptual Modeling Study Group is to be formed in order to conduct a preliminary investigation on the best practices of simulation conceptual modeling and to establish recommendations for pursuit of the topic within the scope of the SISO, if appropriate. A simulation conceptual model is an abstraction from either the existing or a notional physical world that serves as a frame of reference for further simulation development by documenting simulation-independent views of important entities and their key actions and interactions. A simulation conceptual model describes what the simulation will represent, the assumptions limiting those representations, and other capabilities needed to satisfy the stakeholder's requirements. It bridges between these requirements, and simulation design.

# Conceptual Modeling (NATO)



Activity	MSG-058	Conceptual Modelling for M&S										2007	
Activity REF. Number	RTG-038	Conceptual Modelling for M&S										June 2007 IS	
Principal Military Requirements	2											UU	May 2010
Military Functions				4									
Panel and Coordination	MSG					IST							
Location and Dates	Multiple										P-I		
Publication Data	TR			2010			50			UU			
Keywords	M&S			Interoperability			M&S Re-use			VV&A			

## I. Background and Justification:

Current M&S standards have provided a first step to interoperability and a state-of-the-art way to interconnect simulations and tools to build distributed systems of simulation but it is recognized that existing standards are not meant for exchange of semantics and concepts. The final objective of the TG is to achieve a common understanding and use of information exchanged between simulations for better satisfying military requirements for education, training and operational support. Conceptual models are key to the transformation of user needs and requirements to M&S design, and eventually implementation. The purpose of this NMSG TG is to develop a guidance document on Conceptual Models, which can be used in the future by NATO to support M&S requirements.

## II. Objective(s):



# Standards (NTSA)

**DRAFT of**  
**Terms of Reference (TOR)**  
**for the**  
**NTSA Standing Committee on**  
**“Standards” (SSC)**



# Economics of M&S (SISO)

**[Terms of Reference (TOR)  
for the  
SISO Standing Study Group  
on  
Economics of Modeling and Simulation (M&S)**

**- Analysis of Cost-Benefit (CB) and Return-on-Investment (ROI) -**

**Standing:**

The original Economics of Simulation Study Group completed its tenure in accordance with the Terms of Reference (TOR) submitted for that group. A revised TOR was submitted in 2002, and the Study Group completed its extended tenure, satisfying the revised TOR. The original Study Group members continue to receive requests for data and analysis results, and decision makers continue to ask for Economics of M&S information. This new TOR document is a request for approval of a new Standing Study Group for the Economics of M&S to update the data call, establish terminology and standards, advertise the need for new data, and post findings on a “permanent”, accessible web site.