

Ivar Oswalt, PhD
Simulation U Analytics, LLC
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Capability Summary

An experienced simulation-focused project lead, program director, and senior analyst. Have written large-scale implementation plans; used quantitative systems to answer analytic questions; developed innovative metrics to assess cost/benefit tradeoffs of process and technology options; conducted quality assessments of software applications; and managed a distributed division of analysts, application developers, and data engineers.

Currently, as President of Simulation U Analytics LLC and Senior Consultant to VisiTech Enterprises Inc., Dr. Oswalt supports the Navy's Modeling and Simulation Office and the Department of Defense Modeling and Simulation Coordination Office. He also leads the National M&S Coalition's Business Practices' Initiative on Application Domain Analysis.

Dr. Oswalt is a proven director of multi-disciplinary (contractor / government / academic) and diverse (local / distributed) teams of project performers. Develops and employs innovative analytic, process-oriented, and quality-focused techniques. Constructs and adheres to program plans and deliverable schedules. He understands contracting mechanisms, labor categories and charging criteria, and program performance evaluation measurement.

Employment History

Simulation U Analytics LLC. 2013-Present: As President:

SimVentions Inc., M&S Program Manager

- Developing an approach, in support of the DoD's M&SCO, specific to NATO MSG-100 activities, organizations, goals, and objectives.

VisiTech Enterprises Inc. 1999-Present: As Senior SME Consultant / Lead Studies and Analysis Division:

Navy Modeling and Simulation Office, Director

- Formulated an approach to accomplish DoD M&S Priority Objective 2.b – To promote standards...
- Analyzed options and implications of the use of Open Architectures in Navy M&S
- Drafted the Secretary of the Navy Instruction on Verification, Validation, and Accreditation
- Articulated an extension to the MSC-DMS that specifically includes policy and planning documents
- Provided policy analysis of Legislative and Statutory statements of M&S's role and contribution
- Revised a Net-Centric Data Effort Strategy to clearly state underlying rationale, goals, and next steps
- Reviewed Navy RDT&E Road Map drafts and provided inputs on structure and content
- Revised the Department of the Navy M&S Management Instruction
- Developed DoD and Navy-oriented chronology of M&S (management) Offices
- Conducted a policy analysis of the use of M&S earmarks by the Navy
- Provided formal written reviews of DoD draft instructions, directives, reports, plans, policies, etc.
- Wrote the most recent Navy Simulation Baseline Assessment and draft Navy M&S Master Plan

Department of Defense, Modeling and Simulation Office, Director

- Developed enterprise-wide M&S metrics, potential instantiations, and possible extensions

Department of Homeland Security, Deputy for Modeling and Simulation

- Defined the key features of M&S systems: results, risks, and costs
- Also described M&S acquisition considerations spanning capability needs and provider types

Defense Health Service, via the Office of Naval Research

- Designed a Decision Support System to assess the effectiveness of M&S-based medical training

Navy Director, Assessment Division and the Naval Research Laboratory

- Produced, as part of a collaborative team, a “Gold Standard” of DIME/PMESII M&S Requirements including measurement structures, relationships, and interactions

Center for Naval Analyses, Director Information, Technology, and Operations Team

- Contributed to the development of business models to advance the reuse of M&S resources

Office of Naval Research, Director of Operations Analysis

- Developed war game / seminar gaming-simulation event metrics to characterize M&S tools

Navy, Office of the Chief of Naval Operations, Force Protection Lead

- Determined Force Protection capability gaps and strengths of ships with organic capabilities
- Results successfully briefed to Director Assessment Division and VCNO

Department of Defense, Defense Modeling and Simulation Office

- Contributed insights on metrics to an effort that described M&S Investment Analyses

Navy, Program Executive Office Integrated Warfare Systems

- Developed an M&S Road Map that included a vision; enterprise-wide perspective; program specifics; software, standards, and architecture strategies, and an implementation approach

Naval Research Laboratory / Army

- Examined intelligence production and processing techniques used in operations conducted in Kosovo
- Determined needed technology improvements and other ways to enhance intelligence processing in asymmetric warfare operations

Department of Defense, Defense Modeling and Simulation Office

- Helped develop approaches to enable composability and advanced semantic-based interoperability

Navy, Modeling and Simulation Management Office

- Examined current use and potential duplication of Navy M&S, analyzed M&S in support of logistics operations, and developed C4ISR M&S measures of merit
- Examined M&S application in Information Warfare and Mine Counter Measures intermediate phase training, and described simulating unconventional warfare

Corporate Operations

- As Division Lead, responsible for business development, human resource planning and allocation, contract monitoring, performance assessments, technology investment, and client liaison

Kapos Associates Inc. 1995-1999: As Director of Modeling and Simulation:

Navy Modeling and Simulation Management Office, Director

- Defined requirements, assessed M&S utility, proposed design and development concepts, and evaluated M&S in acquisition, training, analysis, and operations support

Defense Advanced Research Projects Agency Maritime Systems Technology Office

- Formulated an approach to implement an Acoustic Warfare Defense Interactive Simulation System

National Missile Defense JPO System Deployment Directorate via Logistics Management Institute

- Derived a training M&S architecture that made best use of existing and planned NMD Systems

Assistant Secretary of the Navy – Research, Development, and Acquisition

- Provided a time-phased assessment of acquisition requirements and potential M&S contributions

Corporate Operations

- As Division Director, was responsible for business development, human resource planning and allocation, contract monitoring, performance assessments, technology investment, and client liaison

CACI Products Company. 1993-1995: As Simulation Projects Division Manager:

Corporate Operations

- Managed a distributed division (with offices in Spain, France, Texas, and Virginia)
- Responsible for business development and CACI-wide proposal strategies and submission
- Oversaw profit and loss statements, hired and fired, and signed for all division expenditures
- Conducted performance assessments and worked with Corporate Council on legal issues

Air Force Studies and Analysis Agency

- Provided a team of Thunder experts in analysis, database development, and software engineering

Commercial Clients – DuPont, Merck, Bayer, TRW, Motorola, and Others

- Delivered M&S applications support, systems analysis, and product / process improvements

CACI Product Development – SIMMOD, COMNET, MODSIM, SIMPROCESS, and similar

- Coordinated on simulation compiler requirements definition and integration
- Assessed user requirements, and developed applications area development approaches and strategies

Kapos Associates Inc. 1989-1993: As Command, Control, and Communications / Simulation Analyst:

Navy Command, Control, Space and Electronic Warfare Directorate

- Developed C³ architectures and measurement approaches, examined Navy C² structures
- Contributed to SBIR projects that developed advanced quantitative decision assessment approaches
- Developed pre-war game questionnaires and performed post-war game assessments

Education

Ph.D., Political Science, Claremont Graduate School, Claremont, CA, 1989

M.A., Government, Claremont Graduate School, Claremont, CA, 1988

B.A., Political Science, University of California, Santa Barbara, CA, 1984

Received PhD, with emphases in modeling and defense policy, after completing dissertation, “An Expected Utility Analysis of US Power Projection Conflicts: The Characterization of the Status Quo” which developed and then applied a decision model to analyze the optimality of conflict initiation in 3 power projection settings.

Continuing Education

Verification, Validation, and Accreditation, Tutorial, SISO SIW 3/2012

Healthcare Simulation Development Lifecycle, Tutorial, I/ITSEC 11/2011

Human Social Culture Behavior Modeling, Tutorial, SISO SIW 9/2010

Systems Analysis and Design Using the Unified Modeling Language, Learning Tree, 7/2009

Clearance

Top Secret (with prior Sensitive Compartmented Information access), Single Scope Background Investigation – September 2007, Defense Security Service

Articles, Presentations, and Technical Reports

An Enterprise Approach to Managing M&S Investments, contributor, The M&S Journal, Fall 2013.

Saving Your Simulation Dollar: Evaluating M&S Investments, co-presenter, Society for Simulation in Healthcare, International Modeling and Simulation in Healthcare Conference, January 2013.

Current Trends in Modeling and Simulation (M&S) Return on Investment (ROI) Calculation, co-author, The M&S Journal, Winter 2012.

Calculating Return on Investment for U.S. Department of Defense Modeling and Simulation, 2011 Research Paper Competition Winner and Hirsch Prize Recipient, lead author, Acquisition Research Journal, April 2011.

Modeling and Simulation Value Assessment and Procurement Strategies, lead author, Technical Report, Department of Homeland Security, February 2010.

M&S Procurement Strategies for Public Sector Consumers, lead author, Simulation Interoperability Standards Organization, Fall Simulation Interoperability Workshop, September 2009.

Identifying Requirements and Standards for Diplomatic, Informational, Military, and Economic (DIME)/ Political, Military, Economic, Social, Infrastructure, and Information Systems (PMESII) Modeling, contributing-author, presentation and paper, NATO Research and Technology Organization, March 2009 and *Requirements for a Government Owned DIME/PMESII Model Suite*, contributing-author, Office of the Secretary of Defense, Technical Report, July 2009.

Metrics for Modeling and Simulation (M&S) Investments, contributing author, Technical Report, Department of Defense Modeling and Simulation Coordination Office, November 2008.

Synchronizing Modeling and Simulation Plans across Navy Acquisition, lead presenter, National Defense Industrial Association Systems Engineering Conference, October 2008.

Vectors of Navy Simulation: A Compilation of Key Trends or “A Study of Studies” co-author, presentation and article, Spring Simulation Interoperability Workshop, April 2008.

On the Reuse of Intellectual Property in Modeling and Simulation: a Framework for Case Studies with Business Models, contributing author, Center for Naval Analyses Publication, February 2008.

Review of Department of Defense and Department of Navy Modeling and Simulation Directives, and Instructions, and Documents, presentation, Assistant Secretary of the Navy / Research Development and Acquisition, co-author, October 2007.

Characterizing Models, Simulations, and Games, co-author, presentation and article, Inter-service/Industry Training, Simulation and Education Conference (I/ITSEC), December 2006.

Models, Simulations, and Games: Definition, Structure, and Relationship Analysis, presentation, Office of Naval Research, co-author, December 2005.

Force Protection Integration Study, co-author, presentation and report, Force Protection / Anti-Terrorism Office (N701F) Navy, December 2004.

Semantic Descriptors of Models and Simulations, co-author, presentation and article, Spring Simulation Interoperability Workshop, April 2004.

Navy Simulation Baseline Assessment, Navy Modeling and Simulation Management Office, author, Project Technical Report, January 2003.

Modeling and Simulation Support to Fleet Training: Current Application, Requirements Addressed, and Utilization Potential, co-author, Technical Presentation, July 2002.

Analyzing the Role of Intelligence Support to US Operations in the Balkans, co-author, Technical Presentation, Navy Research Laboratory (NRL), February 2002.

Professional Associations

Simulation Interoperability Standards Organization (SISO), National Modeling and Simulation Coalition (NMSC), National Defense Industrial Association (NDIA), Society for Simulation in Healthcare (SSH)