

2008 isee User Conference



Conference Schedule

Wednesday, October 8, 2008	
5:00–7:00 PM	Registration (Hotel Lobby)
Thursday, October 9, 2008	
7:30–8:30 AM	Registration (Diamond Foyer) and Breakfast (Emerald I)
8:30–9:45 AM	Opening Remarks and Keynote Presentation Eureka — Maximizing Insights from Dynamic Models (Emerald II) <i>by Mark Paich, Lexidyne LLC</i>
9:45–2:45 PM	isee Lab (Amphitheater) Staffed by members of the isee development team, the lab will be open for demonstrations of the latest software developments and to ask specific questions about software features and operations.
Breakout Sessions 10:00–11:00 AM	A System Dynamics Model of the Counterinsurgency Manual (Emerald II) <i>by CAPT Brett Pierson, Joint Staff, Warfighting Analysis Division</i> As part of an effort to develop tools for the analysis of Irregular Warfare, we constructed a System Dynamics model that represents the concepts and theories expressed in the recently revised Counterinsurgency Manual. The purpose of the model was to engender a different way of thinking about complex systems, aid decision making and acknowledge the reality that in a complex system, everything affects everything and nothing happens in isolation. The author was selected for the 2007 DoD Modeling and Simulation Award for Excellence - Individual Category for his work developing and using this STELLA model to support Irregular Warfare analysis.
	Application Fish and Ships, A Simple Model for Understanding Fishery Dynamics (Diamond I) <i>by John Morecroft, London Business School</i> The long-term sustainability of fisheries depends on maintaining the appropriate balance of fish and ships. John will explore the puzzling dynamics of fisheries management with a small system dynamics model of a harvested fishery. The model represents the interaction of the fish stock, regeneration, ships at sea, investment and the resulting formulations for an endogenous investment policy. Simulations examine whether, and under what circumstances regulation can bring about sustainable and economically viable futures for fisheries.
	Using STELLA/iThink Hierarchy to Verify the Dynamic Hypothesis in Complex Models (Diamond II) <i>by Khalid Saeed, WPI and Karim Chichakly, isee systems</i> A system dynamics model represents an explicit theory that explains observed behavioral patterns. A dynamic hypothesis is an aggregate mental model of this theory. For a simple model, there is often no need to formulate an aggregate dynamic hypothesis, but for complex models it is difficult to connect the model structure to its behavior without knowing the underlying aggregate feedback structure. The hierarchy capabilities of iThink/STELLA allow us to create model architecture that provides views at various levels of aggregation, thus helping to verify the aggregate feedback structure or the dynamic hypothesis in complex models. This session will use a case to explore this process.

Breakout Sessions 11:15–12:15 PM	<p>“Chalk Talk” on Switching Grids and Array Tricks (Emerald II) <i>by Mark Paich and Steve Peterson, Lexidyne LLC</i></p> <p>The array functionality of <i>iThink</i>/STELLA gives modelers the ability to effectively add detail complexity in the form of segmentation. Increasingly models are incorporating sub-groupings in order to disaggregate a generic structure into more detailed components. Array features and built-in functions can be employed to efficiently implement dynamic complexity. Concepts such as switching grids (sometimes referred to as change matrices and/or Markov processes), aging structures, and even development "main chains" can benefit from implementing array capabilities in a consistent fashion. This session will lead you through some real-world examples of how this technology can be utilized.</p>
	<p>Building Organizational Capacity in System Dynamics (Diamond I) <i>by Peter Lacey, The Whole Systems Partnership</i></p> <p>This session will introduce a range of approaches that have been adopted by WSP (a specialist health and social care consultancy group in the UK) to introduce System Dynamics (SD) and to build SD capacity in local organisations. It will explore the benefits anticipated and will seek to evaluate outcomes based on the experience of a range of clients. The challenges and barriers to extensive adoption of SD methodologies will be discussed with possible pointers for the future identified.</p>
	<p>Nuclear Business Studies: An Example of an Integrated System Dynamics Based Assessment Tool (Diamond II) <i>by Luc Van Den Durpel, LISTO bvba</i></p> <p>The assessment of nuclear energy systems demands an interdisciplinary approach covering technical, economic, environmental and socio-political aspects. The presentation will provide a brief overview on the motivation to use system dynamics and specifically <i>iThink</i> for the development of DANESS and will detail the various advanced features used by DANESS including the interaction between the <i>iThink</i>-model as such and the various components of the DANESS-toolbox.</p>
12:15–1:45 PM	Lunch and Roundtable Discussions (Emerald I)
Breakout Sessions 1:45–2:45 PM	<p>Fleet Planning with an Air Force Case Study (Emerald II) <i>by Mark Heffernan, Evans & Peck</i></p> <p>The availability of all fleets and military aircraft in particular, is determined by the balance between operational requirements and maintenance resources. This presentation will show how system dynamics principles can be applied to a fleet of aircraft to determine availability at a generic level. It will go on to show how to apply both airframe hours-based lifing and calendar-based lifing constraints to individual aircraft. As an extension, Mark will demonstrate how the understandings gained through model building were translated into a board game designed to teach pilots and maintainers about the system within which they operate.</p>
	<p>Applications to Landscape Modeling (Diamond I) <i>by Bob Costanza, University of Vermont</i></p> <p>Whether you're a city planner making a decision about land use, a farmer deciding what to grow or a business person deciding which resources to use, your decisions about the environment affect and are affected by landscapes. Understanding and modeling the spatial patterns of landscape change over time is critical to effective environmental management. In this session, Bob will describe how landscape modeling studies at local, regional and global scales provide a common framework for understanding the linkages between ecological and economic systems and help to develop effective policies.</p>

<p>Breakout Sessions (continued)</p> <p>1:45–2:45 PM</p>	<p>Conversational Systems Thinking (Diamond II) <i>by Chris Soderquist, Pontifex Consulting</i></p> <p>Most of the skills necessary to build effective models and generate client/stakeholder impact can yield tremendous learning even without a computer simulation. These skills can be taught to a much wider audience than modeling skills, and have the potential to improve the broader public's ability to be more effective at work and more engaged, systems-informed citizens. This session will name and describe these Systems Thinking skills, and will provide a framework you can use to facilitate what Barry Richmond referred to as Conversational Systems Thinking.</p>
<p>3:00–4:00 PM</p>	<p>Keynote Presentation Modeling the Environment: A Call for Interdisciplinary Modeling (Emerald II) <i>by Andy Ford, Washington State University</i></p>
<p>5:00–7:00 PM</p>	<p>Poster Presentations and Cocktails/Appetizers (Emerald I)</p>

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Conference Schedule

Friday, October 10, 2008	
7:30–8:30 AM	Breakfast (<i>Emerald I</i>)
8:30–9:45 AM	Opening and Keynote Panel Discussion Bringing STELLA to the K-12 Classroom (<i>Emerald II</i>) <i>by Lees Stuntz, Creative Learning Exchange, Steve Roderick, Lincoln-Sudbury Regional High School and Greg Orpen, Innovation Academy Charter School</i>
9:45–1:45 PM	isee Lab (<i>Amphitheater</i>) Staffed by members of the isee development team, the lab will be open for demonstrations of the latest software developments and to ask specific questions about software features and operations.
Breakout Sessions 10:00–11:00 AM	Modeling Soft Variables and Other Valuable Trade Secrets (<i>Emerald II</i>) <i>by Kevin Austin, Enzyme International</i> Developed from years of experience consulting for both the private and public sectors, Kevin will share creative techniques and methodologies used to model those soft variables that are critical to understanding business issues. How do you create indices to measure and quantify things like customer value or staff morale and staff attrition drivers? How do you integrate and interconnect soft variables into an existing model? How do you create a model that learns? These questions and more will be addressed in this interactive session.
	Using Models in Technology Marketing (<i>Diamond I</i>) <i>by Michael Kelly, Techtel Corporation</i> After 20 years of using simple models for measuring and reporting technology sales pipeline effectiveness, Techtel Corporation began using system dynamics and <i>iThink</i> software. They discovered models created with <i>iThink</i> could often lead to startling insights not seen before. Michael will present case applications from his work with technology companies, including SAP and Roxio that are proving or disproving long-held marketing and market research beliefs. He will discuss new ways they have found for making technology marketing measurable and more effective by using SD models. He will also have a wish list for SD applications and education.
	Quantifying the Non-Quantifiable: The Stanford Prison Experiment—Part 1 (<i>Diamond II</i>) <i>by Steve Peterson, Lexidyne LLC</i> Thirty-seven years ago Philip Zimbardo of Stanford University conducted the Stanford Prison Experiment. The experiment cast ordinary college students into the role of prisoner or guard, observing the interactions between the two groups. Very quickly, the situation devolved to a situation characterized by sadistic guards and depressed, psychologically distressed prisoners. In this session Steve will use the experiment as context for exploring the value-added of dynamic modeling in “non-quantifiable” topic areas. Participants will view Zimbardo’s original slide show documenting the experiment and develop and explore a model of interactions in the Stanford Prison Experiment.

Breakout Sessions 11:15–12:15 PM	The Application of Dynamic Simulation Modeling in Water Resources Management (Emerald II) <i>by Richard Palmer, University of Massachusetts Amherst</i> Richard has been using STELLA to evaluate water resources since the early 1990s. Together with Bill Werick (then of the USACE's Water Resources Institute) he developed the field of Shared Vision Modeling to aid in the resolution of water resources conflicts, making extensive use of public participation. In this session, Richard will describe a number of water resource conflicts that have been modeled using STELLA including applications in the Columbia River Basin, the Snake River basin, the water supplies of Boston, Seattle, and Portland, as well as international projects in Egypt, Mexico, and Korea.
	Things You Might Not Know You Can Do With iThink/STELLA (Diamond I) <i>by Chris Soderquist, Pontifex Consulting</i> Sure, you can build models with iThink/STELLA software, but like the historic Ronco commercials of the 70s, "wait, there's more." This session will cover the "more." Many features in the software, including some of the more recent versions, allow you to develop sophisticated models and learning tools. Some of the topics covered in this session will include how to use the software to develop multi-player simulations, handle unique discrete modeling challenges, link models to organizational "scorecards", and build student models with built-in reports. Participants will come away from this session having said at least once, "Wow, I didn't know I could to that!"
	Quantifying the Non-Quantifiable: The Stanford Prison Experiment—Part 2 (Diamond II) <i>by Steve Peterson, Lexidyne LLC</i> A continuation of The Stanford Prison Experiment
12:15–1:45 PM	Lunch (Emerald I)
1:45–3:00 PM	Keynote Presentation and Closing Remarks The Challenge of Communicating Feedback Systems Thinking (Emerald II) <i>by John Morecroft, London Business School</i>
4:00–5:30 PM	Lake Cruise & Refreshments (Meet in Hotel Lobby at 3:15 PM for transportation to dock)