

Twenty-fifth International System Dynamics Conference
Boston, Massachusetts July 29-August 2, 2007



Volume 2 August 2007



CONFERENCE SPONSOR NOTES

AIMS
Advanced Integrated
Management Strategies, LLC. and

ConfluentC

Leading Thought. Leading Business.

FROM AIMS, llc. & ConfluentC, llc.:

It was our special pleasure to co-sponsor the 25th International System Dynamics Conference at Boston. We were delighted to see so many people from around the world converge and share the accumulation of new knowledge and critique new skills. A look ahead as to what the next 50 years of system dynamics should be from the great Prof. Jay Forrester provided a perspective and rendered tremendous energy and motivation.

We thank you all for being there and for supporting our cause. We move on to advocate the develop ourselves, integrating and always bringing the growing community together. Usman A. Ghani, Chairman



Amber Blocks, Ltd.

It was a great 50th Anniversary Celebration!

See you in Athens.

Allen Boorstein
President

535 Park Avenue, Suite 4A
New York City, New York 10065 USA
Phone: +1.212.593.3110
Fax: +1.212.755.3755



It was a pleasure to meet so many friends old and new in Boston.

We are excited about the publication of Kim Warren's new book "Strategic Management Dynamics" which will hit the bookshelves late 2007. Preparation of resources to accompany the book is underway and will mark our entry into the

provision of online games - watch our newsletter for information on these. (Sign up at www.strategydynamics.com/profile)

If you talked to us at the conference or browsed our materials and have any questions about our Microworlds, simulation software or other teaching materials we would be happy to hear from you—no obligation!

Global Strategy Dynamics creates and distributes business simulations for academic and corporate use. We also distribute the mystrategy[™] strategy planning software, which is an entry-level system dynamics software, and other materials that support the use of System Dynamics in Strategy.

Our business games include: Beefeater Restaurants Microworld, Brands Management Microworld, and Professional Services Microworld. Additionally, we are worldwide distributors for John Sterman's ever popular People Express. We also have other materials and publications available that support the approach.

Visit us at www.strategydynamics.com or email us. Christina Spencer Christina@strategydynamics.com

Christina Spencer | Global Strategy Dynamics Ltd

T: +44 1844 275518 | W: www.strategydynamics.com

* For a quick overview of our current product range see www.strategydynamics.com/flyer *

e-integrate

e-integrate was proud to be a sponsor of the
2007 System Dynamics conference.

We look forward to participating in many more.



GoldSim Technology Group (www.goldsim.com) began developing GoldSim, its probabilistic simulation platform, in 1990. GoldSim differs from traditional system dynamics approaches in that 1) it puts much greater emphasis on probabilistic simulation techniques to support representation of uncertain and/or stochastic systems; and 2) it provides a wide variety of specialized model

objects (beyond stocks, flows and converters) in order to make models less abstract (and hence more transparent) and help represent processes and events that cannot easily be represented using a traditional system dynamics approach. This includes specialized modules to support Risk and Reliability Analysis, Financial Modeling, and Mass Transport Modeling, as well as features to simultaneously represent continuous and discrete dynamics.

These differences are due to the fact that GoldSim has most commonly been used for engineering and scientific applications where quantitative probabilistic predictions of future performance have been required (e.g., by regulators and other stakeholders) in order to inform and defend policy and design designs.

Free, fully-functional academic licenses are provided for teaching purposes. You can request an academic license here: <http://www.goldsim.com/Content.asp?PageID=41>. For commercial applications, fully-functional 30-day evaluation versions are also available at the website.

If you were unable to attend our workshop at the conference, please contact us at support@goldsim.com and we would be happy to provide a web demo and/or answer any questions. A great way to learn more about GoldSim is to attend our annual GoldSim User Conference. This year's conference will be held in San Francisco, California October 25-26, 2007. Prior to the conference, we will offer both basic and advanced training sessions. Our annual conferences provide a terrific opportunity for you to see how others are using the software, learn more about GoldSim, and provide input for the future development of GoldSim. Learn more about the user conference at: <http://www.goldsim.com/Content.asp?PageID=544>.



HEALTH MARKET SCIENCE

The **Health Market Science (HMS)** Analytics Group is improving the performance of healthcare marketing systems, especially in pharmaceuticals, by applying dynamic modeling tools and techniques.

The tools and techniques of System Dynamics have generated 50 years of contributions to the success of many industries, including healthcare. As the next 50 years unfold, the members of HMS Analytics are pleased to be leaders in applying system dynamics to the increasingly important healthcare industry.

We are growing rapidly and offer career challenges for those people with high energy and a strong desire for success. If you are interested in contributing your dynamics modeling experience or your healthcare marketing knowledge to increasing the success of our clients, please visit www.healthmarketscience.com and investigate the career opportunities that are available.



We enjoyed meeting and celebrating the 50th anniversary with so many of you in Boston. It was a very special conference in many ways. We were especially pleased to present the first Barry Richmond Scholarship Award to Margarita Cruz, a recent PhD graduate from the University of Bergen. Through this annual \$1,000 cash award, it is our

hope to encourage participation in the conference and keep alive the legacy of our company founder, Barry Richmond. It is inspiring to know that the mission that Barry set forth and continues to drive our company is being carried out through the good work of others like Margarita. Stay tuned to the Society and isee systems web sites for information and links to apply for next year's scholarship.

We appreciate the feedback and enthusiasm you shared with us about the new **isee NetSim** web publishing wizard and upcoming releases of our **STELLA** and **iThink** software, including a fully-translated Japanese version. We look forward to continuing to be a resource for tools, training and teaching materials that enable people to increase their capacity to think, learn, communicate, and act more systemically.

To learn more, visit www.iseesystems.com, email support@iseesystems.com or call us at (603) 448-4990.

The International Society for the Systems Sciences



Along with the System Dynamics Society, the International Society for the Systems Sciences (ISSS) is among the oldest organizations devoted to interdisciplinary inquiry into the nature of complex systems. The Society was initially conceived in 1954 at the Stanford Center for Advanced Study in the Behavioral Sciences by Ludwig von Bertalanffy, Kenneth Boulding, Ralph Gerard, and Anatol Rapoport.

The next conference will be the 52nd Annual Meeting of ISSS and it will be held at the University of Wisconsin in Madison, WI, 13-18 July 2008. The theme of this year's conference is *Systems that Make a Difference*, a title that borrows from Gregory Bateson's definition of information as "a difference that makes a difference." The question for systems researchers and practitioners is, "what difference are we making?"

The ISSS 2008 conference will bring together professionals who are developing the cutting edge of systems ideas with leaders who face real-world complexities and "messes" daily. While

we must continue to make systems research ever more rigorous, we must also connect that work with the dilemmas in the world for which people are seeking solutions. The intent of this conference is to further build the bridges between rigor and relevance in systems work. Speakers and authors are invited who can address any part of this spectrum, from better methods for systems research to clarifying the nature of real-world problems in need of resolution.

For further information, please consult the ISSS website: <http://www.iss.org/conferences> or contact the ISSS office at 2008cnf@dsl.pipex.com. We look forward to meeting you there.

PA Consulting Group

It was a pleasure to connect with so many of you at this year's conference and we look forward to the next event.

PA Consulting Group We are an independent, employee-owned, global firm of 3,000 talented individuals, operating from offices across the world, in Europe, North America, Latin America, and Asia. We have won numerous awards for delivering complex and highly innovative assignments. We have a technology development capability that few firms can match, deep expertise across industries, and a unique breadth of skills from strategy to IT to applied technology.

PA – a force for transformation At PA, we focus on **transforming** the performance of organizations. We tackle the most complex problems facing our clients, working with leaders and to deliver strategic change in the private and public sectors. Clients call on us when they want:

- an **innovative** solution: counter-intuitive thinking and groundbreaking solutions
- a highly **responsive** approach: we listen, and then we act quickly with a tailored solution
- **delivery** of tangible and sustainable results: we get the job done, often trouble-shooting where previous initiatives have failed.

PA and System Dynamics PA has a long and strong track-record of performing ground-breaking System Dynamics work, with over four decades of experience dating back to 1963 (via our acquisition of Pugh-Roberts Associates). In PA we use System Dynamics as part of an overall analysis process and we focus on finding practical, executable solutions to help our clients work through difficult challenges. Examples of our System Dynamics work include: strategic analysis and insight; policy assessment and lessons-learned; process improvement; and major program analysis & advice.

We continue to be interested in talking with sharp, well-rounded, analytical people who are committed to solving our clients' challenges. If you want to be part of our growing team please contact careers@paconsulting.com.



Thanks to all of you who made this year's conference a great event on the 50th anniversary of the field. We hope you found our user's group meeting and exhibitor demonstration useful in your modeling work. For those of you who attended the Studio workshop session, please feel

free to send your follow-up questions to solutions@powersimsolutions.com. We enjoyed connecting with so many of you and we look forward to working with you in the future. For more information about our SD-based simulation tools and modeling services, visit us at www.powersimsolutions.com. Hope to see you in Athens next year!



Project Performance International (PPI) takes this opportunity to thank the Systems Dynamics Society for the opportunity to sponsor this exceptional conference.

Promoting the use of system dynamics as a valuable, logical modelling tool in problem domain analysis and solution development, PPI offers leading edge training in systems engineering – a systems approach to the engineering of systems. Courses are offered publicly on six continents. On-site training is also provided worldwide, to some of the best companies around the globe. Course presenter and managing director of PPI, Mr Robert Halligan, having an outstanding record of leadership in this field, brings an abundance of knowledge and experience to every course.

For more information about the training and consulting provided by PPI, please visit our website at www.ppi-int.com, or contact Joshua Freeman at jfreeman@ppi-int.com.



A Department of Energy
National Laboratory

Sandia National Laboratories would like to thank the Society for the opportunity to serve as one of the sponsors of the 2007 ICSDS. All of us who attended the conference in Boston had a fruitful and fun experience. The conference was a great opportunity to revive old friendships and begin new ones. We also appreciated being able to start new collaborations. We especially want to thank all the visitors to our display and hope to see all of you in Albuquerque, New Mexico when we host the 2009 ICSDS. Please don't hesitate to contact the 2009 Committee via Len Malczynski and/or Aldo Zagonel.



Thanks for a great conference.

We hope you keep coming back for the next 50 years.

www.vensim.com



Worcester Polytechnic Institute wants to thank its students, alumni, friends, and the System Dynamics Society for informing people about our online courses and programs. The 2007 conference was a very busy time for WPI – meeting and assisting current students and discussing the possibility of studies with a number of conference attendees.

In 2003, WPI began offering graduate level courses in System Dynamics over the Internet. More than 150 students have furthered their knowledge with these courses. Over 50 students have been admitted into these part time, online programs for professionals who want to further their ability to integrate system dynamics tools into their professional environment.

System Dynamics Offerings. The online program offers three semesters per year starting in September, January and May. Our programs consist of Online Courses, a Graduate Certificate of five courses, and a Master of Science program of ten courses. Additionally, Customized Corporate Programs can be constructed to meet the needs of individual organizations.

Course Listing. Three to five courses are offered each semester. The courses offered consist of:

- System Dynamics Foundations
- Modeling & Experimental Analysis System Dynamics for Insight
- Model Analysis & Evaluation
- Real World System Dynamics Strategy Dynamics
- Environmental Dynamics
- Project Dynamics
- Macroeconomic Dynamics
- Psychological Foundations of SD Models

Distinguished Faculty. WPI's System Dynamics faculty are noted for their involvement in the field.

Additional Information. Please contact WPI Corporate and Professional Education – Pamela Shelley, Assistant Director – online@wpi.edu – www.online.wpi.edu – 508-831-6789. Worcester, Massachusetts 01609, USA.

Please see pages 7 and 8 for a list of all the 2007 Conference Sponsors and Exhibitors.

Other Conference News

The **web proceedings'** anticipated publication date is the end of September. Once the web proceedings have been officially published to our website, we will provide a link and an ISBN number. Additionally there will be a printable .jpg file for a CD label should you decide to download the proceedings to a CD. The contents of the printed abstract proceedings book are already available on the conference website.

If you have any comments you would like to share about the conference, please feel free to complete and send in anonymously the **“System Dynamics Conference Satisfaction Survey.”** The survey can be found on the conference website. The direct address is <http://www.systemdynamics.org/conferences/2007/survey.pdf> (or .doc). The completed form may be sent to Etienne Rouwette, Radboud University Nijmegen, PO Box 9108, 6500 HK Nijmegen, The Netherlands (Email: e.rouwette@fm.ru.nl) or to the Society office (Email: conference@systemdynamics.org).

Each year we have volunteer photographers wandering around the conference taking photos. In the near future, we will be posting **photographs from the conference** on the web; an email message will be sent to let you know when they are available. If you have any photos you would like to share, please send them and we will add them to the website collection. (If there is a photograph of you on the web that you would prefer us to remove, please let us know at conference@systemdynamics.org.)

Two new products offered at the conference and now available for sale: ***The Electronic Oracle*** by Donella H. Meadows and Jennifer M. Robinson; this is a reprint of the original 1985 book. ***The Fireside Chat with Jay W. Forrester.*** This one-hour DVD is a wide-ranging and often humorous interview of Jay Forrester by George Richardson. Please contact the Society office (Email: office@systemdynamics.org)

Information regarding the **2008 Athens Conference Call for Papers** and Sessions will soon be located on the Society website. The dates for the conference are July 20 – July 24, 2008. You will be receiving more information about the conference in the coming months.

Sponsors and Exhibitors

**AIMS, llc. and
ConfluentC, llc.**
3549 West Walnut Hill Lane,
Suite 2065
Irving, TX 75038 USA
Phone: + 1 972 871 8417
Fax: + 1 972 692 7446
www.usmanaghani.com and
www.confluentc.com

Amber Blocks Ltd.
535 Park Avenue, Suite 4A
New York, NY 10025 USA
Phone: + 1 212 593 3110
Fax: + 1 212 755 3755

Atkins Nutritionals, Inc.
Melville, NY 11747 USA
Phone: + 1 631 953 4000
Fax: + 1 631 953 4001
www.atkins.com

BP
Worldwide
www.bp.com

Clif Bar Inc.
1610 5th Street
Berkeley, CA 94710 USA
Phone: + 1 800 CLIFBAR
www.clifbar.com

CRA International, Inc.
200 Clarendon Street T-33
Boston, MA 02116 USA
Phone: + 1 617 425 3000
Fax: + 1 617 425 3132
www.crai.com

Decisio Consulting Inc
201 Linden Street 3202
Fort Collins, CO 80524 USA
Phone: + 1 719 332 2591
www.decisio.com

e-integrate
Rue Edouard Olivier, 20
1170 Brussels, Belgium
Phone: + 32 2 380 96 58
Fax: + 32 2 380 96 58
Email: info@e-integrate.com

Evans & Peck Pty Ltd
20/390 Eastern Valley Way
Roseville, New South Wales
2069 Australia
Phone: + 612 9882 0527
Fax: + 612 9417 8850
www.evanspeck.com

Forio Business Simulations
2320 Jones Street
San Francisco, CA 94133 USA
Phone: + 1 415 440 7500
Fax: + 1 415 354 3457
www.forio.com

**Global Strategy Dynamics
Ltd.**
Two Farthings, Aylesbury Road
Monks Risborough
Buckinghamshire HP27 0JS UK
Phone: + 44 (0)1844 275 518
Fax: + 44 (0)1844 275 507
www.strategydynamics.com

GoldSim Technology Group
22516 SE 64th Place, Suite 110
Issaquah, WA 98027 USA
Phone: + 1 425 295 6985
Fax: + 1 425 642 8073
www.goldsim.com

Health Market Sciences
2700 Horizon Drive, Suite 200
King of Prussia, PA 19406 USA
Phone: + 1 800.593.4467
Fax: + 1 610.940.4003
www.healthmarketscience.com

isee systems
Wheelock Office Park
31 Old Etna Road, Suite 5N
Lebanon, NH 03766 USA
Phone: + 1 603 448 4990
Fax: + 1 603 448 4992
www.iseesystems.com

ISSS
**The International Society for
the Systems Sciences**
47 Southfield Road
Pocklington, York YO42 2XE
UK
Phone: + 44 (0)1759 302718
Fax: + 44 (0)1759 302718
www.issss.org

Jantz Morgan LLC
253 Pleasant Street
Arlington, MA 02476 USA
Phone: + 1 781 643 6027
Fax: + 1 703 200 6598
www.jantzmorgan.com

John Wiley & Sons, Ltd.
The Atrium, Southern Gate
Chichester, West Sussex PO19
8SQ UK
Phone: + 44 (0)1243 779777
Fax: + 44 (0)1243 775878
www.wiley.com

Kolbenschmidt Pierburg
Worldwide
www.kspg.com

Lane Press of Albany
11 Kairnes Street
Albany, NY 12205 USA
Phone: + 1 518 438 7834
Fax: + 1 518 438 3942
www.lanepressofalbany.com

**National Business
Promotions, Inc.**
19 Colvin Avenue
Albany, NY 12206 USA
Phone: + 1 518 459 5270
and + 1 800 666 2301
Fax: + 1 518 489 3047
www.nb-promotions.com

Nonni's Food Company, Inc.
Tulsa, Oklahoma 74119 USA
www.nonnis.com

continued on back ...

Sponsors and Exhibitors continued

PA Consulting Group
 One Memorial Drive
 Cambridge, MA 02142 USA
 and additional worldwide
 locations
 Phone: + 1 617 225 2700
 Fax: + 1 617 225 2631
 www.paconsulting.com

Pearson Education New Zealand
in association with
Kambiz Maani & Bob Cavana
 67 Apollo Drive, Rosedale
 North Shore City 0632 NZ *or*
 Private Bag 102 902
 North Shore, North Shore City
 0745 New Zealand
 Phone: + 09 442 7400
 Fax: + 09 442 7406
 www.pearsoned.co.nz

Pegasus Communications, Inc.
 One Moody Street
 Waltham, MA 02453-5339 USA
 Phone: + 1 781 398 9700
 Fax: + 1 781 894 7175
 www.pegasuscom.com

Powersim Software AS
 P.O. Box 125
 N-5871 Nyborg, Bergen
 Norway
 www.powersim.com

Powersim Solutions, Inc.
 585 Grove Street, Suite 130
 Herndon, VA 20170 USA
 Phone: + 1 703 467 0910
 Fax: + 1 703 467 0912
 www.powersimsolutions.com

Project Performance International
 PO Box 2385
 Ringwood, North Victoria 3134
 Australia
 Phone: + 1 888 772 5174
 Fax: + 1 888 772 5191
 www.ppi-int.com

Raytheon Integrated Defense Systems
 50 Apple Hill Drive
 Tewksbury, MA USA
 Phone: + 1 978 858 5000
 www.raytheon.com

Edward Roberts
 MIT USA
 and
Nancy Roberts
 Lesley University USA

Sandia National Laboratories
 Albuquerque, NM USA
 www.sandia.gov

Seaport Hotel
 One Seaport Lane
 Boston, MA 02210 USA
 Phone: + 877 SEAPORT
 www.seaportboston.com

System Dynamics Group MIT Sloan School of Management
 30 Wadsworth Street
 Cambridge, MA 02142 USA
 web.mit.edu/sdg/www

SoL
The Society for Organizational Learning
 25 First Street, Suite 414
 Cambridge, MA 02141 USA
 Phone: + 1 617 300 9500
 Fax: + 1 617 354 2093
 www.solonline.org

Cindy and John Sterman
 USA

Swiss Reinsurance Company
 Worldwide
 www.swissre.com

Vanguard Strategy
 33 Soho Square
 London W1D 3QU UK
 Phone: + 44 20 7478 3380
 Fax: + 44 20 7478 3399
 www.vanguardstrategy.com

Ventana Systems, Inc.
 60 Jacob Gates Road
 Harvard, MA 01451 USA
 Phone: + 1 508 651 0432
 Fax: + 1 508 650 5422
 www.vensim.com

Worcester Polytechnic Institute (WPI)
 100 Institute Road
 Worcester, MA 01609 USA
 Phone: + 1 508 831 6789
 Fax: + 1 508 831 5881
 www.online.wpi.edu

XJ Technologies Company Ltd.
 Office 410
 49 Nepokorenykh Avenue
 St. Petersburg 195220 Russia
 Phone: + 7 812 441 3105
 and + 7 812 441 3106
 Fax: + 7 812 441 3107
 www.xjtek.com

Conference Sponsor Notes

published by the

System Dynamics Society

Milne 300 - Rockefeller College
 University at Albany
 135 Western Avenue
 Albany, New York 12222 USA

Phone: +1 518 442 3865

Fax: +1 518 442 3398

Email:

office@systemdynamics.org

www.systemdynamics.org