



System Dynamics NEWSLETTER

Volume 21 – Number 1 March 2008

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FROM THE PRESIDENT *James Lyneis*

Dear Colleagues,

I am honored to write this letter as President of the System Dynamics Society for 2008 and I look forward to working with the officers and members of the Society on a number of activities this year. In this newsletter, I would like to bring you up to date on these activities, and ask for your input and support.

First, let me thank the outgoing President, Qifan Wang, for his service last year and in particular for initiating the strategy development activity which I will mention further below. On behalf of the Society, let me also thank the outgoing members of the Policy Council – Mike Radzicki (Past President), Ginny Wiley (VP Chapters), Henk Akkermans, Brad Morrison, Scott Johnson, and Jim Thompson – for their service to the Society. I would also like to welcome the new members to the Council – Erling Moxnes (President Elect), Tim Haslett (VP Chapters), Enzo Bivona, Burak Guneralp, Imrana Umar, and Lars Weber – we look forward to their contributions.

During my year in office, rather than initiating significant new activities I intend to focus on carrying forward and extending some of the major activities that have been initiated in prior years.

These include: (1) strategy development; (2) improving the conference program; (3) streamlining the functioning of the Policy Council; and (4) expanding Society membership. I will summarize each of these activities below; as reported elsewhere in this newsletter, we have moved forward on some of these activities during the Winter Policy Council Meeting.

Strategy Development A committee composed of Henk Akkermans, Deborah Campbell, Joel Rahn, and Yutaka Takahashi was appointed by the Policy Council at the 2007 Summer Policy Council Meeting and asked to define and address issues related to the next 50 years of the System Dynamics Society. The Committee is considering undertaking a strategy development exercise based on Kim Warren's Competitive Strategy Dynamics. The initial stages of this process would consist of a progressive series of 1-2 day meetings of a select group of eminent Society members such as the Forrester Award winners to elaborate detailed strategy proposals. At present, three meeting dates are being considered in late spring (May-June) and summer (during the Athens Conference and at a POMS conference in Tokyo in

Policy Council Nominations for 2009

During the 2008 Winter Policy Council Meeting the following were nominated as officers and members of the Policy Council, to take office in 2009:

- *President Elect (2009)*
Rogelio Oliva
- *Secretary (2009-2010)*
J. Bradley Morrison
- *Vice President–Electronic Presence (2009-2011)*
Robert L. Eberlein

Vice President–Member Services (2009-2011)
Krystyna Stave

- *Vice President–Publications (2009-2011)*

Deborah Lines Andersen

- *Policy Council Members (2009-2011)*

Susan Howick
Birgit Kopainsky
Agata Sawicka
Aldo Zagonel

For brief biographies of each candidate, go to “Activities/Governance” on the drop-down menu of the Society website.

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Nominations, *continued on page 6*

President, *continued from page 1*

August). In addition, the Committee is considering undertaking an email-based discussion to do some initial spadework in preparation for the face-to-face meetings. If you have ideas to contribute, please contact the Committee Chair, Joel Rahn, at jrahn@sympatico.ca. This is an important initiative, as it will provide guidance to the work of other committees such as setting a rotation plan for future conferences and investing in specific activities.

Conference Program Informal feedback from the 2007 conference indicated that the quality of the program was one of the best ever. This no doubt resulted in part from a larger pool of good work to choose from, and in part due to organizing decisions such as increased selectivity and improved paper placement. Several years ago the web-based blind peer review process and Thread Chair system were set up to assist the Program Chair in selecting and placing papers. In addition, the Peer Review Dialog session was initiated by a group of concerned reviewers to improve the reviewing process. We intend to build on these systems through efforts to improve the reviewing process (standards, coaching, feedback) and to enhance communication between the Thread Chairs and the Program Chairs (debriefing meeting) and between past and future Program Chairs (briefing meeting).

Streamlining Functioning of PC

As the Society grows and the Policy Council becomes more geographically scattered we are looking for better ways to maintain institutional memory regarding policies, procedures, and actions taken. To do this we have increasingly moved to standing and ad hoc committees to evaluate alternatives and make recommendations to the Policy Council for action. For example,

last summer ad hoc committees reviewed and made proposals for changes to the Society's membership dues and to the nominating process and nominating committee. These were then presented to the entire Policy Council for discussion and vote. These committees have been set up with staggered membership to provide for institutional memory. Going forward, we will continue this process. For example, a new committee has been set up to evaluate conference site proposals and make a recommendation to the Policy Council; to maintain institutional memory, the committee includes both the current and past VP Meetings. We are also expanding the roles available to make greater use of our volunteers. Several years ago, we instituted the idea of Assistant Vice Presidents not only to provide needed help to busy VPs, but also to get more people involved with Society work. There will continue to be opportunities as new ad hoc committees are formed. In particular, the Conference Site Selection Committee could use some additional members (contact me at jmlyneis@verizon.net).

Expanding Society Finally, we continue our efforts to expand Society membership beyond its traditional boundaries. Past activities have included revising the nominating process to expand the field of candidates considered and implementing the tiered dues structure (see note elsewhere in this newsletter). This year the Conference Fees Committee will evaluate extending the tiered membership dues structure to our conference fees, and the Conference Site Selection Committee will consider developing a long-range plan for conference rotation to additional regions of the world. If you have ideas about either of these, please contact Andreas Größler,

who chairs both committees, at agroe@is.bwl.uni-mannheim.de.

In closing I'd like to thank you all for giving me the opportunity to serve as president of the System Dynamics Society. I hope to see you all in Athens.

Notes from the Policy Council

The System Dynamics Society is governed by its Policy Council, which meets twice a year, during the conference and again in the winter. Historically, fewer people are able to attend the Winter Policy Council Meeting. As part of a continuing effort to increase participation in this meeting, this year's meeting was divided into three parts. The first session was electronic and occurred during the last two weeks of January. This was followed by a face-to-face meeting in Worcester, Massachusetts on January 31st to discuss administrative and open policy issues, and then develop and propose motions. For approximately a four-week period after the face-to-face meeting there has been on-line discussion and voting on proposed motions. In fact, the meeting is still in session as this newsletter goes to print.



Face-to-Face Winter Policy Council Meeting

Ongoing business and discussions at the electronic meeting include reports by officers and committees, publication reports, conference reports, and new business. All the reports, and more detailed notes on discussions at meetings, will be available on the Society website (click on "Governance" in the "Activities" drop-down menu).

New Dues Structure by
Deborah Campbell, VP Member Services, for the Dues Committee

Membership in the Society should be accessible to everyone interested in system dynamics. Yet, until recently, many potential members were excluded from our Society because the membership dues were not compatible with the economics of their profession or geographical region. This was a loss for both the individuals and the field. By providing a membership dues structure that bridges the financial divide between various professions and between geographical regions, the Society is able to attract a larger number and broader spectrum of members, opening up new and rich opportunities for member collaboration, and supporting our long-held goal of disseminating system dynamics widely.

Historically, the Society has had two membership categories: regular members and student or supported members. These two categories have helped make lower-cost memberships available, but even those lower-cost memberships were out of the reach of many individuals interested in the field. For example, the Chinese Chapter of the Society is a very large chapter, and while many chapter members would value a membership in the Society, only a few can manage it. India, a country with a substantial amount of work being done in system dynamics, has not been able to form an official chapter because they lack the requisite number of Society members. On an individual level, others, such as those retiring, have been asking for more flexibility in our membership dues.

To address this potential membership opportunity, a committee was formed to propose a new and more inclusive dues structure. The goal was to align membership dues with what members and potential members

can afford while not significantly impacting the overall membership revenue, which is used to provide services to members. This committee consulted with a diverse set of members from various regions and in various occupations. The committee considered setting dues by job title or region but neither of these dues structures met our needs. The economic situation of students world-wide (or consultants or academics) varies, as does the economic situation of all people living in a single country.

Using income as a proxy for ability to pay provides inclusive economic access to membership in the Society across all regions and professions. This conclusion was reinforced by our research, which showed many professional societies are transitioning to tiered, income-based membership dues for the same reason. As the bulk of the Society's expenses are paid in US dollars, the decision was made to continue to base prices on and collect the dues in US dollars.

The committee consulted with a group of collaborating members to ensure the proposed income ranges met the needs of diverse groups, and conducted an analysis of the dues structures of several other professional societies. The committee also evaluated the likely impact on revenue, adjusting the proposed dues to ensure no substantial impact. In addition, our partner John Wiley & Sons, the publisher of the *System Dynamics Review*, was approached, and agreed to provide additional financial support for lower-income members and potential members. The new dues structure was approved during the 2007 Summer Policy Council Meeting in Boston.

It should be noted that, while the suggested membership fee is based on income, the Society does not request income verification or collect income information. The

only information recorded at the Society office is membership fee paid; the Society does not record or release any individual financial information.

The dues structure has changed, but in a manner consistent with the roots of the Society's formation. The new dues structure connects one member with another, regardless of finances, building toward an even more exciting future; helps balance distribution of membership; and works to the betterment of the Society community. We hope that members, veteran and new, always feel the sense of community and comradeship that has become a Society tradition.

We believe this new dues structure provides access to Society membership for a broader and more diverse audience than we have reached before, and extends the reach of the field of system dynamics to new individuals, professions, countries, and application areas. Early reactions are primarily positive – we are pleased with renewals received to date and there is no decline in membership revenue.

The Society is a complex network of people who care deeply about the field and future of system dynamics, all with different expectations. With change there is inevitable friction and as with all policy changes, we value your feedback. Please address any suggestions for the dues structure to 2008 President Jim Lyneis, at jmlyneis@verizon.net. The dues structure will be reviewed after two years.

We are beginning a similar process for conference registration fees, and would welcome member input and involvement in the review process. If you have any suggestions or are interested in getting involved, please contact VP Meetings Andreas Größler at a.groessler@fm.ru.nl.

2008 Conference Athens, Greece

The Athens conference is shaping up very nicely! Participants are registering, a wide variety of papers are being submitted, and events are being finalized. The conference promises strong participation and a full program of high quality contributions.

This year, *Developmental Papers* sessions are being introduced. Authors will present ongoing work. The normal presentation format will be reversed – there will be a short presentation followed by a longer discussion period. It is expected that these sessions will be filled with lively debate!

Featured plenary speakers in 2008 will include Professors Peri Loucopoulos and Kostas Zografos, along with senior members of the Athens Olympic Organizing Committee, who will present their award-winning modeling work which was carried out to facilitate the logistics of successfully staging the Athens Olympics in 2004.

This will be an unforgettable meeting!

Some quick reminders:

- March 21st – paper submission deadline. Workshops and session proposals are also due.
- Notifications of acceptance will go out on May 9th.
- May 16th – final abstracts are due for the printed proceedings.
- May 30th – presenter registration.
- June 20th – deadline for accommodations booking *and* the early conference registration fee rate. Forms can be found on the conference website. Please register early using the versatile web-based submission system.
- A limited number of partial conference scholarships for accepted authors are available this year. To apply, use the “Award and

Scholarship Information” button on your user menu page in the submission system.

- The Printed Abstract Proceedings will be distributed at the conference. The full proceedings, including complete papers, will be available on the Society website after the conference; no CD will be distributed.

Newcomer Orientation is a special event for newcomers. Information will be provided by experienced guides to help newcomers maneuver resourcefully through the conference and get the most out of the experience. If you are a newcomer and would like to benefit from this program, please check the box on the registration form as a first-time participant. To volunteer as a guide, contact James Melhuish, jamesmelhuis@gmail.com.

Awards and Scholarships

For more detailed information on both the Society scholarships and awards, and the outside awards, including the nominating process, please visit the conference website.

Society Awards and Scholarships

The *Dana Meadows Student Paper Prize* and honorable mentions are awarded to outstanding papers authored by student(s) and presented at the conference.

The *Jay Wright Forrester Award* is given annually to the best publication in system dynamics during the previous five years. The award is presented during the conference.

Scholarships covering conference registration fees and in some cases hotel expenses for the conference days are available. Scholarships will be awarded to authors who have a paper accepted for the conference. Scholarships are based on financial need and a review of all submitted papers. Scholarships are not limited to students.

Outside Awards

The *Barry Richmond Scholarship Award* is presented annually to a deserving systems thinking or system dynamics practitioner whose work demonstrates a desire to expand the field or to apply it to current social issues.

In addition, we are pleased to announce two new awards:

The *Building the World Award* will be given to the winner of an essay competition seeking plausible solutions to improve the world's future using the methodology of system dynamics. For topics, criteria, instructions and more go to: www.buildingtheworld.com.

The *Lupina Young Researchers Award* will be awarded to outstanding papers dealing with health-related topics, authored by students or recent (past 5 years) graduates and presented at the conference. The work considered for this award must be accepted as a paper for presentation at the current conference, with its primary thread designation being Health Policy.

To submit your paper for any awards, log into the conference submission system; on the User Menu page, click on the “Award and Scholarship Information” button and follow the instructions. Conference paper awards are self nominating and the review processes are conducted separately. Please note that you can apply for all of the above awards. You may also submit more than one paper for each award.

For updated conference details please visit: www.systemdynamics.org

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Publications Update

Open Source Historic Links “Jay W. Forrester Biography” and “Oral History of the System Dynamics Society” are two new entries on the “Publications” page of the Society website.

Both these works are part of the 50th anniversary of the founding of the field of system dynamics, celebrated this past summer at the 2007 Boston conference. Please take a look!

2007 Conference Proceedings The 2007 Proceedings are available on the Society website as open source material. Instructions on how to create your own CD or purchase a full proceedings print set can be found on the “Activities” page of the website; scroll to “Past Conferences.”

1994 Conference Proceedings The Society continues to digitize all past conference proceedings and add them to the open source materials on our website. 1994 is the latest to be added; 1993 will be available soon. Abstracts and titles are fully searchable; papers are scanned as non-searchable .pdf files.

Announcements

European Energy Special Interest Group (SIG) Workshop-Meeting Organized by the European Institute for Energy Research (EIFER) and LISTO byba and kindly hosted by EIFER, this meeting aims at gathering all system dynamics practitioners in the energy domain together in a pleasant atmosphere. The workshop will take place April 17-18 in Karlsruhe, Germany.

Events will include a variant of the well-known Beer Game and a one-day workshop allowing an exchange of information and best practice experiences among the participants. We look forward to your presence and especially to your willingness to present your work and to stimulate interaction by preparing

questions you would like to see addressed during this workshop.

For more information and registration forms contact: Tobias Jaeger (EIFER) tjaeger@eifer.org or Luc Van Den Durpel, LISTO vddurpel@listo.be.

News and Notes

Web Navigation Improvements In October 2006 the Society’s website was moved from a University at Albany server to an independently hosted dedicated server to allow for upgrades and more automation.

In early fall of 2007 we improved the navigation scheme to save space and to make a larger number of topics available from any page with navigation. Hovering over most buttons leads to a drop-down menu of perhaps five related topics. The one requirement is that your browser support and permit JavaScript.

In addition, although all the original Society email addresses are functional, the Society is phasing in more uniform email addresses, for example office@systemdynamics.org and conference@systemdynamics.org. We welcome comments on this endeavor. ~Jack Pugh

London School of Economics Celebrates 50 Years of System Dynamics In recognition of this anniversary, the Operational Research Society’s SD+ group organized an afternoon meeting at LSE in December 2007 called SD+50. More than 70 participants attended, drawn from various companies, government departments and universities. A series of talks discussed the history of system dynamics, the ways in which system dynamics relates to other disciplines, and the contribution it has made to them.

The event was chaired by Elke Husemann (MES group, LSE) who

read to the meeting a special message sent by Jay Forrester.

The presentations included “Jay W. Forrester and the Emergence of System Dynamics” by David Lane (OR and MES groups, LSE) and “Defence Modelling Using System Dynamics” by David Exelby (Decision Analysis Services Ltd); Mike Jackson (Dean of Hull University Business School) offered “Some difficult questions from a systems science perspective.”

A break allowed discussion of the issues raised and the consumption of a celebratory 50th birthday cake.



50th Birthday Cake for System Dynamics

In its fifty-year history, system dynamics has been applied to an extraordinary breadth of phenomena. Representative of this, John Haywood (University of Glamorgan) presented his work on “Modelling Church Growth.” The final talk was by Larry Phillips (OR group, LSE) on “Modelling in Groups: What system dynamics and decision conferencing can learn from each other.”

The meeting closed with thanks to the event’s sponsors: LSE’s Operational Research and Managerial Economics and Strategy groups, and the Operational Research Society. ~David Lane

News and Notes, continued on page 6

We include “News and Notes” in every issue of the Newsletter. We are eager to hear about your new books, promotions, awards, completed degrees, new products, notable projects, and any other milestones.
Please send us your news!

News and Notes, continued from page 5

Workshop for Teachers A partnership between Sandia National Laboratories and the University of New Mexico, aimed at strengthening K-12 education in the Albuquerque school districts, sponsored a one-day workshop in systems thinking and system dynamics on February 16th. Technical staff from the Labs joined forces with the Waters Foundation to deliver an exciting overview based upon Fish Banks, Inc. (developed by Dennis Meadows and sold by the Sustainability Institute). The workshop involved playing the game and addressing the “tragedy of the commons,” from problem definition and reference modes to chauffeured simulations of policy alternatives.



Fish Banks Workshop for Teachers, held in Albuquerque, New Mexico

With both teachers and students in attendance, we used sensor and temperature probes to grasp the concept of graphs of behavior over time. The workshop emphasized the use of visual aids, such as reference modes, causal loop diagrams and stock and flow diagrams, to describe and characterize dynamic problems embedded in complex systems. A qualitative model was discussed in terms of a dynamic hypothesis of the system structure that explains the behaviors of the system under study. We used Jim Lyneis’s Fish Banks model to test this structural/behavioral hypothesis, and to explore leverage points in the system. The participants were engaged throughout the day, but seemed

especially captivated when shown the student work done in K-12 classrooms as part of the Waters Foundation’s extensive experience in teaching systems thinking in schools.

With help from our sponsors, the Sandia team of Len Malczynski, Jim Ellison, and Aldo Zagonel are scheduling a follow-up model formulation and testing session, and Tracy Benson is offering the Waters Foundation’s week-long introductory workshop later in July. We are also formulating a plan involving the System Dynamics Society and the Creative Learning Exchange to host special events tailored to the system dynamics education community around the Albuquerque Conference in 2009. Thanks to Roberta Spencer and Debra Lyneis for their encouragement and to Jim Lyneis and Lees Stuntz for their help and advice. ~Aldo Zagonel, Tracy Benson

The Boeing Company Visit Dr. John Newman of the World Bank, and Ron Lopez and Paul Newton of The Boeing Company, together recently visited MIT, Brandeis University, WPI and the University at Albany to jointly introduce system dynamics applications in international development, defense, and aerospace.



Paul Newton introducing Boeing Company

New Chapter and SIG in 2007 The motion to accept the German Chapter into the System Dynamics Society was passed at the 2007 Summer Policy Council Meeting. Additionally, in October 2007 the Special Interest Group for Model

Analysis (SIG-MA) was formally accepted into the Society. There are currently 17 Chapters (with three new proposals in the pipeline) and eight Special Interest Groups. To learn more about Chapters and Special Interest Groups, please go to the “Activities” drop-down menu of the Society’s website.

If you would like to contribute an article of interest please send your suggestion to the Society office.

Nominations, continued from page 1

The Nominating Committee submits a single nomination for each position to be filled in the pending election. However, members may submit other nominations for these offices and positions, provided that: (1) each such nomination is accompanied by a petition signed by twenty-five members in good standing; (2) each nominee is a member in good standing; (3) written evidence is submitted to the effect that each nominee has agreed to stand for election; and (4) such nominations reach the Secretary within five weeks after publication of nominations received from the Nominating Committee.

If no nominations are received by the Policy Council from the membership at large, the slate of candidates submitted by the Nominating Committee, and approved by the Council, will be deemed elected. For more information on Nominations and Elections, click on “Governance” in the “Activities” drop-down menu of the Society’s website, then go to “Policies of the System Dynamics Society.”

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