

IEEE Systems Council Meeting Jan 27-28, 2006 Vancouver, Canada Summary Minutes

The meeting was called to order at 8:30 AM Friday Jan 27, 2006, at the Hyatt Regency Hotel, Vancouver Canada. Meeting attendees are listed in **Appendix A**.

Opening Remarks, Introductions

President Bob Rassa opened the meeting by welcoming all the attendees. Remarks by the participating society presidents and other distinguished guests were also made. The meeting agenda was reviewed. Bob introduced the Systems Council officers and asked for volunteers to cover the open positions. He asked Theodora Saunders to be the secretary of the Systems Council and Theodora accepted the challenge. A list of the Copies of the IEEE Systems Council Business Plan (draft 1 dated 23 January '06) and the Systems Council Constitution (Vers 9.0 (RCR) 5/18/05) were distributed to all participants. The current Systems Council officers and appointed committees are listed **Appendix B**.

Meeting Executive Summary

Bob Rassa provided an overview of what the council is trying to accomplish. He stressed that the goal of the Systems Council is to focus on larger and more comprehensive systems. IEEE membership statistics were presented, and membership trends for the individual societies were discussed. The consensus was that Systems Council activities will help to bring the IEEE into the forefront in the systems area. Bob encouraged discussions regarding fears and concerns for overlaps with other societies. The consensus was that the Systems Council will facilitate interactions among societies on system-level problems in a way that will complement the operation of other societies. A communications memo will be written to other participating societies to dissolve any fears for the Systems Council becoming a Society, as clearly written into the Council's Constitution. The increased demand for good systems engineers was discussed, and the need to increase student-representation to the council was recognized. It was proposed to include 1-2 graduate students in the Systems Council.

The major topics that dominated the discussions during the meeting included:

- **Systems Council Field Of Interest (FOI) and Business Plan updates**
- **Systems Journal naming and Content**
- **Systems Council Technical Operations**

Highlights of the discussions on these three topics are provided below. Other topics discussed, actions items, and motions proposed are also described.

Systems Council FOI and Business Plan Updates

- Bob Rassa and Paul Gartz led the discussion on the Council's focus and Field Of Interest. The consensus was that IEEE must address the following:
 - "Systems" environment; such things as behavior & properties of circuits & systems, manufacturing aspects of circuits & chips, analytical aspects are also important as they relate to the larger view of systems. Systems Biology is important, control systems etc.
 - Energy systems, including managing energy from source to use are also important. How does systems design impact and shape society, political impacts of systems & systems design (ethics etc), sustainability in energy management, including friendly disposal of spent energy.
 - Defining the system boundaries and understand the impact of systems engineering on other engineering field including communications systems, System-of-Systems reliability, and Quality.
- Disaster response is also a system, and hurricane Katrina proved that our disaster response system cannot handle anything above a certain complexity. The need to understand the pathology of systems (failures) was recognized.
- Bob Lyons emphasized the need to include in the Systems Council people in the emergency services, who understand operations and who understand why things fail. These are people who deal with the execution and the pathology of issues.
- Bob Rassa asked Bob Lyons to coordinate the establishment of and work with Paul Gartz and Jim Barbera.
- Bob Rassa asked Paul Gartz to be in charge and lead the task of identifying emerging issues pertinent to Systems Council FOI.

Journal Name and Content

Mo Jamshidi reviewed detailed plans for the Journal by going over the required IEEE planning. Several discussions took place with respect to name of the journal. Consensus was reached, and the official journal of the IEEE Systems Council will be called the **IEEE SYSTEMS JOURNAL**.

The Journal will publish technical or non-technical application-focused articles on systems of national as well as global significance. Papers published in this journal will have a wider inter-society appeal among the Council's family of societies.

The Journal will focus on such topics as:

- Energy, management, disaster response,
- Space exploration, manufacturing, automation,
- Information technology (including cyberspace, internet),
- Distributed information networks, transportation,
- Environment (including global earth observation),
- Socio-economic, biological, nano-technology, education domains, etc.

The first issue of the Journal was initially planned for the 1st quarter of 2007, based on Form 2 approval in February 2006. Per latest information the TAB Periodicals Committee is not expected to delay deliberating on Form 2 until June '06. This delay will impact

publication of the first issue of the Journal. During a breakout session, Mo and several Council members updated the Form II for submittal to IEEE.

Technical Operations

- **Paul Croll** provided an overview of the scope and described the responsibilities of the VP of Technical Operations' activities. The benefits of "systems" thinking were discussed with emphasis on educational aspects of the Systems Council. Highlights of the Technical Operations discussions led by Paul included the following:
- The Vice-President for Technical Operations will provide direction for the technical operations of the Council, including but not limited to technical studies, policies, guidance, and other products and services. With the approval of the Council AdCom, the Vice-President for Technical Operations may sponsor subordinate technical committees. The Council may establish Standing Committees as deemed appropriate. The Standing Committees of the Council will include the following committees:
 - 1) **Standards Committee** will be responsible for working with the IEEE Standards Association, and appropriate Technical Committees to identify the need for recommending a new or update to a specific standard.
 - 2) **Meetings Committee** to focus on workshops and forums related to system architecture, system-level risk management, understanding and predicting systems behavior, System of Systems, systems engineering for small systems, systems approach to infrastructure protection, systems thinking for effective epidemiology, and systems thinking for effective business decisions.
 - 3) **Education Committee** responsible for university involvement, educational needs assessment, curriculum development, curriculum certification and educational materials development.
 - 4) **Technical Focus Integration Committees** with emphasis on System of Systems e.g. Global Earth Observation System of Systems (GEOSS), and critical infrastructure for communications, disaster/emergency response, health care/medical information systems, power, telecommunications and transportation.
- The Council plans to sponsor several workshops, symposia and training sessions each year. Several discussions on the curriculum development took place. Revenue-focused (low cost) educational materials including hand books and guides were proposed. Potential for technology transfer between academia and industry was considered and the development of Systems modeling & simulation tools was proposed. It was recognized that industry needs will guide the curriculum development and content.
- The need to increase awareness of the Systems Council and to help the council to be transnational was recognized. Various options including holding symposia and workshops outside the US, and strategically planning our conferences were considered.
- A major annual international Conference on Systems and Systems Engineering is being planned for startup in 2007. Venues being explored are Hawaii, Vancouver and Montreal. It was voted to hold the 2007 Systems Conference in Hawaii to attract more international participants for the 1st year, moving to Vancouver for the 2nd year. Bob Rassa will do the planning and is seeking volunteers to assist.

Other Discussions

- President Bob Rassa recognized Mark Montrose for his contributions to the Systems Council planning activities, including the name and scope of the journal.
- Various options that will help the Systems Council to generate revenues were discussed.
- A need to establish a conference abstract review process was identified. It was suggested to look into what process other societies used.
- Conference management system including registration could be handled by a small business who is familiar with conference registrations. Bob Rassa knows such a small business that is in startup. We will purchase a small commercially-available software registration package for our use. Bob Rassa tasked Paul Gartz to focus on publicity activities and to ensure awareness by industry and academia.
- Need for a Systems Council website was discussed and funding was requested. Bob Rassa presented a proposal from the company now updating the AES website, at a cost of between \$7,500 and \$10,000, Jim Barbera noted that his Society (OES) had just updated their website and used a contractor who charged them \$1,500 for the total development. Paul Croll volunteered to be the website coordinator. Jim Barbera and Paul Croll will both be in the communications regarding the website development activities. Funding was approved for up to \$2,000.
- The Council will need a logo, Bob Rassa will see about getting some artwork done.
- If Council officers need business cards, these may be ordered from IEEE.
- Paul Croll wishes to suggest a ByLaws change on Council membership to delete the provision that Council officers may not hold simultaneous position as Society representative. He will email that to the Council.

Budget & Finance

A council budget has been prepared and approved by IEEE. The budget will be updated for 2007 as Conference, Workshop and Symposia planning commences. It is estimated that the Council will show a small surplus generation for 2006 because of society member dues, and for the 2nd year of full operation (2007) because of member dues and Conference /Symposia/ Workshop revenues. Journal income will not start until later as there is typically a delay between Journal startup and ASPP revenue generation.

Ian Hiskens provided an overview of the expense reporting process. Bob Rassa asked the Systems Council officers who are not reimbursed by the home organizations to charge their expenses to the Systems Council. Society representatives will charge their travel expenses to their respective societies as was agreed during Council formation.

Action Items

- Bob Rassa agreed to write a communications memo to the participating Societies reiterating that the Systems Council will not become a society. (AI-0001)
- Bob Rassa will update the Business Plan to reflect the meeting discussions on FOI and other as required. Inputs to the Business plan will include how the Systems Council plans to generate revenues. (AI-0002)
- Bob Rassa will finalize the dates for the next meeting and he will notify the council members. (AI-0003)
- Paul Gartz and Jim Leonard will ask the AES International Liasons for input and to identify potential needs for international Systems Council workshops and symposia. (AI-0004)
- Paul Croll to update the educational activities charts to reflect latest discussions. (AI-0005)
- Paul Croll to email his suggested Bylaws change. (AI-0006)
- Paul Croll will provide a name for a potential webmaster. (AI-0007)
- Bob Rassa will work in developing the Systems Council logo. (AI-0008)
- Jim Barbera will provide the POC for business cards (Kathy Colobaugh, k.colobaugh@ieee.org) (AI-0009)
- Jim Barbera will develop a procedure for conference abstract review. (AI-0010)

Motions

- Moved to have the Educational Committee to be reporting to the VP of Technical Operations; approved (M-0003)
- Moved to appropriate \$ 2K for the development of Systems Council website; approved (M-0004)

Appendix A - Meeting Attendees

Bob Rassa, I&M
Paul Croll, CS
Wade Shaw, EMS
Jim Barbera, OES
Clyde Chittister, I&M
Paul Gartz, AES
Ian Hiskens, CAS
Jim Leonard, AES President (guest)
Theodora Saunders, AES
Mo Jamshidi, SMC
George Friedman, INCOSE Liaison
Robert Lyons, AES
Gus Gaynor, EMS
Ljiljana Trajkovic
Alicia Casals, RA
Witold Pedrycz, CIS
Antonello Monti, PELS
Wai-Chi Fang, CAS
Byron Purves, CS
Steve Karlovic, I&M

Appendix B - Current Council Officers

| President | Bob Rassa |
|---|--|
| President – Elect | Paul Gartz |
| Vice-President, Technical Operations | Paul Croll |
| Vice-President, Conferences | Jim Barbera |
| Vice –President, Publications | Wade Shaw |
| Vice-President, Finance | Clyde Chittister |
| Secretary | Theodora Saunders |
| Treasurer | Ian Hiskens |
| Appointed & Automatic Committees | |
| Meetings | Paul Croll |
| Publications | Wade Shaw, Chair; Mo Jamshidi, Marcello Simoes |
| Nominations & Appointments | TBD |
| Constitutions & ByLaws | Mark Montrose |
| Fellows | Steve Adam |
| Standards | Steve Adam |
| Finance | Clyde Chittister |
| Liaison & Transnational | Wai-Chi Fang |