



# IEEE Systems Council Strategic Plan, 2016



V3b

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### I. Executive Summary

This document represents the latest Version of the Strategic Plan for the IEEE Systems Council. It is intended be a living document that allows Systems Council officers to help guide the Council as we move forward in our quest to serve our member Societies, Affiliate Members, those of IEEE, and the overall community addressed in the Systems Council Field of Interest. The following Mission, Vision and Core Values statements help set the stage for our overall strategy.

#### **Mission**

The IEEE Systems Council promotes, encourages, and supports the technical, academic and application aspects of systems engineering and systems thinking through its own activities, and with its Society members through joint activities for the growth of Council Affiliate membership, member Society membership, and for addressing overall global challenges.

#### **Systems Council Vision**

Be recognized as the leader organization by the technical community of systems engineers in the world.

#### **Systems Council Core values**

- **Partnership and value for member societies:** The Systems Council aims at providing services and products to its IEEE member Societies for the benefit of their members and technical societies as a whole. This is being pursued by building long-lasting partnerships and by creating value for the member societies and for their members.
- **Value for the technical community:** The Systems Council aims at being recognized as the leading organization providing value in systems engineering for the Engineering and Academic professions.
- **Geographic diversity:** The Systems Council will provide the benefits associated with the cross-cultural contributions of engineers and technical experts, working in diverse continents and areas in the world.
- **Research-based services and products:** IEEE is the recognized world leader in the majority of scientific areas in electrical engineering. One of the strengths of its approach is to provide services supported by state-of-the-art scientific results. The Systems Council promotes and

encourages usage of state-of-the-art techniques in systems engineering, based on the outcomes of research activities.

- **Empowering the new generation of systems engineers:** The Systems Council promotes the involvement of young engineers in all its activities.

In addition to the specific actions and goals in the following sections of this plan, Systems Council has an overall objective to promote and participate in multi-society/council and multi-association activities in support of mutual activities and objectives, by the following:

- Look for potential opportunities to co-sponsor conferences
- Jointly sponsor new journals and magazines in important emerging areas of common interest
- Establish a joint Distinguished Lecturer Program
- Jointly develop Standards
- Look for areas of common interest and opportunities therein
- Engage in a joint Technical Community approach

## II. Conferences

**Mission:** The mission of Systems Council Conferences is:

- Enable the conduct of high-quality conferences, symposia and workshops
- Produce high-quality technical content to serve Systems Council member Society members and our technical community
- Facilitate the generation of reasonable surplus while maintaining high overall quality
- Refine and promote Best Practices in planning and managing Systems Council conferences
- Explore new conference delivery mechanisms

**Objective:** The Systems Council Strategic Plan for Conferences should focus on refining and promoting best practices in planning, management, publications and financing our existing conferences, and determine whether any new conferences could be initiated to support the Council's member Society membership and our overall technical community. As the Council's formal individual members are quite small in number it is difficult to host many conferences without the assistance of member Societies. The Council currently has 2 conferences, the IEEE International Systems Conference held each spring in North America averaging 225-250 attendees, and the International Symposium on Systems Engineering held each fall in Europe, averaging 90-100 attendees.

The Systems Council has identified the following elements as critical to our continued conference performance:

- Strengthen the areas of setting up Conferences to insure that we preserve the IEEE Name Brand, conduct a quality conference, produce quality proceedings, and provide a financial benefit to both the Institute and Society. Key elements of these practices include:
  - Make sure that a competent Memorandum of Understanding exists where we have co-sponsors that clearly delineates the responsibilities of each party
  - Generate a budget that is realistic, and produces a minimum of 20% surplus

- Produce Conference Publications that are of high quality and maintain the reputation of the conference, the Council, Council member Societies and IEEE

#### **Short Term Actions:**

- Review all conference budgets for opportunities to reduce expenses
- Strengthen the Systems Council Conference involvement of Council member Societies – encourage new Systems Council AdCom members to participate in conference committees within their area of interest.
- Create, publish and maintain a conference operations guidebook as a supplement to the IEEE Conference Organizer’s Manual, and ascertain that our conferences follow the IEEE and Systems Council conference guidebook by making them available to all Systems Council conference organizers.

#### **Three-year goals:**

- Seek additional cooperative conference engagement opportunities with member Society conferences; such as sponsoring a track or tutorial or even a full conference sponsorship opportunity.
- Increase the Conference Surplus returned to SysC by working with and monitoring SysC conference committee planning with regard to costs and expenses
- Assure that all conference chairs follow the Systems Council conference guidelines
- Ascertain that all Systems Council conferences are of the highest technical quality and standards
- Increase tutorial attendance

### **III. Education**

**Mission:** The mission of the Systems Council education activity is to:

- Coordinate the educational activities of the Council to provide timely, relevant and interesting educational topics and delivery methodologies to our member Societies
- Provide the means to deliver high quality Distinguished Lectures and Tutorials to our audience
- Address the needs of emerging engineers

#### **Three-year goals:**

- Grow the Distinguished Lecturer (DL) Program
  - Make the budget go further by perfecting the 50% share plan and by making effective use of virtual DLs, using modern video conference techniques.
  - Where practical, tie in talks at local universities with DL commitments.
  - Select new DLs to improve the global distribution of our lecturers.
  - Have Chapter Chairs submit contact information, bios, and abstracts of select candidate lecturers within respective Chapters so that the DL Program may review them and thereby expand the DL offering.
  - Review DL participants at least every 5 years and drop those who are inactive or whose material is too out-of-date

- Maintain a Systems Council Overview that each DL will use as an introduction for his lecture.
- Ensure that the host distributes Systems Council material to meeting attendees
- Investigate establishing a tutorial program and expand as feasible
  - Ask the Technical Committees and Conferences to broaden the tutorial topics, which are now predominantly systems engineering related.
  - Approach people providing tutorials at Systems Council sponsored conferences and at similar conferences sponsored by Systems Council member Societies as potential tutorial lecturers for the Council
  - Consider authors of the Systems Council Journal articles for potential tutorials
  - Publicize the tutorial program to students – undergraduate as well as graduate.
- Develop a compendium that provides useful links to existing open source education information such as links to appropriate courses on Connexions (<http://cnx.org/>), <http://www.radartutorial.eu> and others, where systems engineering is a focus.
- Implement the James O. Gray Scholarship (graduate students) and companion Systems Council Scholarship (undergraduate students) activities upon approval from IEEE TABARC (Technical Activities Board Awards and Recognition Committee).
  - Assure that adequate publicity is established to make the scholarship known to the IEEE community in general
  - Conduct the nomination/submission and award process in a manner that assures integrity and fairness to all applicants
  - Notify and publicize scholarship award winners in a timely manner
- Work with the Systems Council Young Professional (formerly GOLD) members to develop programs that are aimed at our younger members. These could include:
  - A program modeled after the DL program but developed by our younger members for younger members
  - Financial support and mentoring for projects such as a student UAV program.
  - Making tutorials at our conferences available to Young Professional members by recorded webinars.
  - Put together a package of material that anyone can use, including test cases of successful and unsuccessful engineering.

## IV. Finance

**Mission:** The Mission of the Finance Committee is to develop and manage a budget that will:

- Allow Systems Council to deliver the types of services and benefits to our members and members of our professional community that are in keeping with the overall goals and objectives of the Council and IEEE
- Generate a reasonable surplus to keep the Council solvent and vibrant and allow for expansion of our activities as needed.
- Provide adequate funds for new initiatives to better serve the member Societies and those who signed up with Systems Council as Affiliates
- Provide timely financial assessment to assist officers in managing their area.

- Provide feedback to the Systems Council AdCom regarding IEEE financial operations and information.

**Short Term Actions:**

- Strengthen Budgeting Process for establishing the annual budget.
- Strengthen the Systems Council liaison with IEEE Conferences and Publications to improve understanding of financial risk and upside investment funds potential for Systems Council activities and initiatives.
- Provide feedback to the AdCom regarding Systems Council investments in technical committees (TCs), DLs, tutorials, conferences, publications and similar activities.

**Three-year goals:**

- Track Open Access and understand the impact on future financial flows.
- Work with Conferences to increase the surplus returned to Systems Council
- Put checks and balances in the process to improve the Systems Council activities planning, and protect our surplus
- Seek additional sources of revenue such as corporate partnerships, conference co-sponsorships with member Societies, and similar.

**V. Member Services**

**Mission:** The mission of Systems Council Member Services activity is to provide member services and benefits that attract and retain Society and Affiliate members.

**Short Term Actions:**

- Invite all new Systems Council Affiliate members to participate in Council events and activities via a member “Welcome Letter” email from the Council President
- Using the SAMIEEE database available to us for all member Societies, seek new Affiliate members that have Systems Council-related TIP (Technical Interest Profile) Codes
- Provide information on becoming a Systems Council Affiliate to attendees at all technically and financially sponsored conferences worldwide, as well as flagship conferences of our member Societies where allowed, by creating a single page document that describes the Council and its activities and depicts how to become an affiliate of the Council.
- Implement the suggested Council awards program and seek nominations for each award.
- Assure that the Fellows Identification Committee pursues potential senior members for elevation to the grade of Fellow.

**Three-year goals:**

- Maintain close liaison with Chapters and engage chapter members in Systems Council technical committees, events and activities
- Promote formation of Joint Society Chapters with other IEEE Society Chapters to serve members where no Council chapter exists
- Promote the concept of Council chapter participation in organizing conferences by providing conference planning resources to chapter officers.
- Grow Systems Council Affiliate membership by 1% per year
- Increase Affiliate and Society member participation in our activities and events
- Recruit student members to full membership upon their graduation
- Offer assistance to Affiliate and Society members for elevating to the next grade

- Expand use of social media to promote the Council’s activities and events.

## VI. Publications

**Mission:** The Mission of Systems Council Publications is to provide Council members with scholarly, highly-regarded publications that support their professional growth and advancement. Publications will provide venues for publication of scholarly achievements, knowledge for the specialist, education for the nonspecialist, and information for our professional community.

Systems Council Publications will pursue the following strategic vision for its publications:

- *Journal* articles are relevant, timely, technically advanced, and highly regarded among professionals in our field.
- *Tutorials* are a useful, informative, and timely resource for the professional growth of our members
- *Quarterly Newsletter* provides new and timely information to support our members’ involvement in our professional community.
- *Systems Council Web Site* is a one stop shop for Council information.

### Three-year goals:

- Reduce the average submission to-publication delay for the Systems Journal to 12 months.
- Increase the contributions to the Systems Journal from industry by 50%
- Increase Impact Factor of Journal to 2.5
- Increase readership (opens) of Quarterly Newsletter by 10%
- Increase visits to the Council website by 10%

### Publications Initiatives

- Manage Term Limit requirements for Editors of the Systems Journal, currently a two-year term renewable twice.
  - Continuously identify potential candidates for the position of Editor
  - Provide experience and/or training for potential Editors as appropriate
- Increase the presence of student activities in the Journal
  - Student editors
  - Student submissions
- Continuously seek to improve the operation of Editorial Board for the Journal.
- Increase industrial participation in the Systems Journal

## VII. Technical Operations

**Mission:** The mission of Technical Operations is to form and maintain Technical Committees (TCs) in the Council’s fields of interest to stimulate technological advances and member engagement in technical networking, standards development, publications, conferences, chapter meetings, and other professional development activities.

### Three-year goals:

- Review all TCs for relevance, activity and leadership

- Seek revitalization of those TCs that may be dormant or lagging, and drop those TCs whose relevance or currency have expired
- Identify topics and potential leaders for new areas within our Field of Interest where technical collaboration would be beneficial
- Promote collaboration among TCs and local IEEE chapters
- Periodically review each TC to ensure activities are performed, and they are aligned with the TC's established purpose and objectives and aligned with the TC's strategic goals
- Develop guidance in the specific areas of the TC expertise in the form of best practices, methods and tools
- Promote synergy and collaboration among the education activities to develop continuing professional development modules for each of the TC areas of expertise.
- Nominate members for various Council and Field awards

## **VIII. Governance**

**Mission:** The mission of Systems Council governance is to:

- Provide the operating framework for all Council activities
- Assist officers in managing the Council's business areas in a professional and consistent manner

**Three-year goals:**

- Review governing documents to ensure continued compliance with all IEEE policies and "must-haves"
- Review governing documents with analysis to improve Council operation, as needed
- Ascertain that all officers understand their responsibilities per the governing documents and abide by all provisions therein
- Improve the awareness of the governing documents by our member Societies