

Scalability

of your IEEE Membership: Choices and Opportunities for Serving and Being Served



S-PAC Presentation for Region 1 iSTEP events - 2016 Revision

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Presented at S-PACs, iSTEPS, Student and GOLD Conferences all over the World...

Career Resiliency

Overview

- Computer Technology Tools
- Electronic Communications Tools
- E-commerce and Networking requirements
- IEEE Structure/Management
- Scalability
- Performance
- Reliability

2



**You have already learned
in your lab experiments that...**

- ❖ **Noise** is Collected
- ❖ **Analysis** yields *Data*
- ❖ **Data Distillation** yields *Information*
- ❖ **Information Evaluation** yields *Knowledge*
- ❖ **Knowledge & Understanding** yields *Insight*

3



**You are proficient in many
Electronic Communications Tools**

- ❖ **Email, Blogs, Podcasting, HTML/CSS**
- ❖ **Word processing**
- ❖ **Spreadsheet use**
- ❖ **Circuit & Systems Simulation**
- ❖ **PowerPoint Presentations**

4



**The E-commerce and Networking
Requirements of**

**Scalability
Performance
Reliability**

... are also member needs

5



Volunteer Management

Volunteers manage all IEEE Boards and Organizational Units

IEEE Professional Activities Coordination

Your 2016 Region 1 Contacts are:

- Charles Rubenstein: RSAC
<c.rubenstein@ieee.org>
- Joe Cuker: PACE Chair
<j.cuker@ieee.org>
- Bruce Hecht: S-PAC Support Coordinator
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6



IEEE in Facts & Numbers (2015 Data)

- > More than 421,000 members in over 180 countries, (54% are now outside the United States)
- > 71,580 IEEE Student Members
- > 42,870 Graduate Student Members
- > 12,982 Society Affiliates
- > 335 IEEE Sections (and 56 subsections)
- > 2,274 IEEE Section Chapters
- > 454 Affinity Groups (AICN, WIE, YP)
- > 2,845 Student Branches in 80 countries
- > 1,344 Student Branch Chapters
- > 438 Student Branch Affinity Groups
- > 39 societies and 7 technical councils
- > > 2 million documents in the IEEE Xplore Database!
- > Publishes more than 130 transactions, journals and magazines
- > Sponsors/co-sponsors over 1600 conferences each year
- > IEEE Standards Association has over 7,000 individuals in 100 countries and over 200 corporate members in 22 countries

7



IEEE Board Structure

IEEE Board of Directors (BoD)

- Member & Geographic Activities Board (MGA)
- IEEE-United States Activities Board (IEEE-USA)
- Technical Activities Board (TAB)
- Educational Activities Board (EAB)
- Publications Services and Products Board (PSPB)
- Standards Activities Board (SA)

8



Your Geographic IEEE

Anywhere in the World – There you are!

One of 420,000 Members in 180 countries

- > Regions 1 through 6 = United States
- > Region 7 = Canada
- > Region 8 = Europe, Africa, Middle East
- > Region 9 = Latin America
- > Region 10 = Asia and Pacific

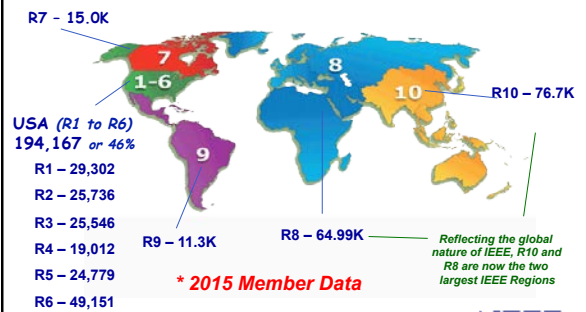
The IEEE Map is on the next slide...

9



IEEE is Worldwide Membership

TOTAL / VOTING MEMBERSHIP = 421+K / 341+K*



10



IEEE-USA: Regions 1 - 6

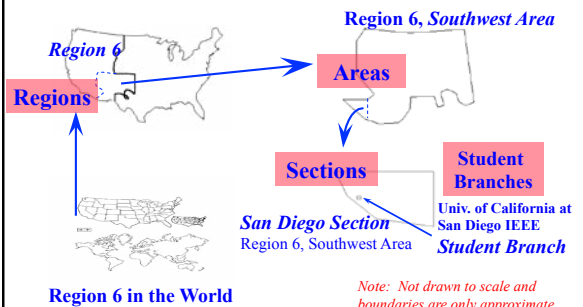


As an active IEEE Volunteer
I have been to 38 States and more than eleven countries!

11



Local Units of the IEEE



12



Your Technical IEEE

IEEE's global technical activities are divided into -
10 IEEE 'Divisions' encompassing
45 IEEE Technical Societies & Councils

Your IEEE Section

provides talks and presentations from one or more of these activities through local 'Chapters' of these technical units

13



In Regions 1 –6 (US) IEEE-USA provides programs and services on the IEEE-USA PACE Web Site



www.ieeeusa.org/volunteers/PACE

14

IEEE-USA Professional Activities Newsletter - spring 2012



PACE is Professional Development

In the US, local PACE funding is available for

- Leadership Skills Workshops
- Project Management Workshops
- Professional Development Seminars
- Teacher-Engineer Partnerships
- Teacher-in-Service Programs
- Student Professional Awareness (S-PACs)
- Student Professional Awareness Ventures (S-PAVs)
- Future City / FIRST Robotics / Lego Mindstorm



15



PACE Modules: bundles of resources you can use!

PACE Modules

IEEE-USA's PACE Modules bundle resources on topics of interest to U.S. IEEE members. Here you'll find prompts for presentations, webinars, articles, eBooks and other resources from IEEE-USA to help you to get your career.



www.ieeeusa.org/volunteers/PACE/modules

16



Model Section/Chapter Professional Activities

- Awards & Recognition
- Consultants Networks
- Employment and Career Activities
- Engineer's Week Activities
- Government and 'Grassroots' Activities
- Professional Development Seminars (PDS)
- Pre-College Activities
- Student Professional Awareness (S-PACs)
- Technical Policy Support and Awareness

17



Student Professional Awareness Conferences (S-PAC)

Since 1979 -
Bringing students and GOLD members,
together with local, national and
international speakers for soft skill
presentations in eight topic areas

> Co-Result: Student Membership Drive -
Free/reduced admission for members!

For more information:

<http://ieeusa.org/volunteers/committees/spax/>

18



S-PAC is ...

More fun than going to Oktoberfest!
S-PACs are student organized and managed so you can learn about:

- **Conference planning and budgets**
 - **How to contact speakers and industry**
 - **Making presentations**
 - **Finding funding resources**
- **Coordination: two or three S-PACs in a local area using the same speakers!**

19



Student Professional Awareness Conference (S-PAC) Topics

- **Career Development**
 - **Professional Integrity**
 - **Personal Skills**
 - **Engineers & Public Policy**
 - **Leadership in Professional Organizations**
 - **The Practice of Innovation**
 - **The Art of Communication**
 - **Humanitarian Grand Challenges**
- Eight NEW Topic Areas!**

20



S-PAC Topics in **Career Development**

Technologists are uniquely positioned to embark on careers that are not only technical but also in various areas including business management, finance, economics, health, law, non-profit sector, consulting, journalism, public relations, entrepreneurship, government, and entertainment.

- *Make the most of your career choices, career fairs and internships, and in informational and formal interviews*
- *Craft and customize your resume, curriculum vita, and cover letter for different career pathways*
- *Be better informed for your job search and negotiations*
- *Establish/maintain professional connections and mentors*
- *Prepare for professional registration, certifications, as well as advanced degrees*

21



S-PAC Topics in **Professional Integrity**

Ethics and engineering are fundamentally intertwined. Decisions made by engineers can have a profound impact on society.

- Practice ethics in a work environment that is constantly influenced by realities of globalization, financial motivation, and information overload
- Generate or customize a framework or set of principles for ethical conduct across differing conflicts and scenarios
- Balance professional integrity against corporate loyalty and other personal interests

22



S-PAC Topics in **Personal Skills**

Personal skills are as crucial as technical skills for a successful career in engineering.

- Develop skills that are necessary to effectively run a meeting and manage a committee.
- Apply the best practices for time management and priority setting of tasks
- Better manage your online persona and learn how it can assist or affect your career
- Plan your finances and investments

23



S-PAC Topics in **Engineers & Public Policy**

Decision-makers are frequently looking to engineers for advice to improve public policies.

- How a legislation is drafted, introduced, and debated in Congress
- The major policy issues and contentions of current interest, and why you should care
- The role engineers play in informing and shaping public policy and how to get involved

24



S-PAC Topics in **Leadership in Professional Organizations**

Staying involved in a professional society adds value to your career. However, becoming a leader improves your professional net worth and profile.

- > A professional society—such as IEEE—can help you in your professional and personal growth
- > Staying involved with a professional organization is a value to you and your profession?

(The current presentation is in this topic area...)

25



S-PAC Topics in **The Practice of Innovation**

Innovation is a complex theoretical concept but can be learned by practice like any other art or science.

- > Capitalize on your professional training and creativity to become an innovator
- > Learn from the success and failure of others
- > Incorporate elements and practices of other cultures and professions (such as arts, humanities, media, and sociology)

26



S-PAC Topics in **The Art of Communication**

In a world of short attention spans, it is crucial to create and communicate a message that sticks.

- > Master the art of storytelling
- > Deliver better presentations
- > Improve written communication
- > Leverage social, traditional, and other media effectively
- > Use these skills to help improve the public understanding of engineering and its impact

27



S-PAC Topics in **Humanitarian Grand Challenges**

Engineers play a major role in advancing technology for the benefit of humanity.

- > Play a role in reducing poverty and hunger, improving infrastructure, and addressing environmental and economic challenges
- > Become a global citizen and an ambassador for the engineering profession

28



The Scalability of your local section member's membership

begins when they are a ...

- IEEE Member: **Student, Young Professional, WIE Member, etc.**
- IEEE Meeting or Conference Speaker or Organizer
- Local Chapter Officer
- Local Section Officer

29



Their Scalability continues as a

- > **Regional or Technical Society Board Member or Officer**
- > **MGA, IEEE-USA, EAB, PSPB, TAB, SA Board Member or Officer**
- > **Technical Society or Council President**

30



Scalability includes service as ...

- > **Regional or Technical Division Director**
2016-2017 Region 1 Director: Ron Tabroff (NH)
- > **An IEEE Vice-President**
TAB & IEEE-USA VPs are member-elected
- > **Or even as IEEE President ... from Region 1:**
 - 1963: Ernst Weber (New York)
 - 1987: Henry Bachman (Long Island)
 - 2001: Joel Snyder (Long Island)
 - 2004: Arthur Winston (Boston)
 - 2008: Lew Terman (Schenectady)
 - 2009: John Vig (NJ Coast)
 - 2013: Peter Staecker (Boston)
 - 2015: Howard Michel (Providence)
 - 2016: Barry Shoop (Mid-Hudson)

31



You might ask... “But How do I get there?”

Encourage your Section's

- IEEE Student Members, and
- IEEE Graduate Student Members, and
- IEEE Young Professional Members, and
- IEEE WIE Members ...

To participate in the fun – to become

VOLUNTEERS!!!

32



Performance

Your service as a IEEE volunteer gives you experience in

leadership,
management,
and *presentation skills ...*

at *low risk*

with potentially *wide exposure*

33



RESPONSIBILITY!

As a Graduate Student Member or
Young Professional Member
it is your privilege and RESPONSIBILITY to

VOTE! in IEEE elections

To be a leader, YOU must take the lead...
encourage those in your Section to VOTE

34



IEEE Reliability

- > **More than a decade of Member Benefits:**
 - Life Insurance and Liability Insurance Programs
 - Credit Card Programs
 - Car Rental and Equipment Purchase Discounts
- > **IEEE Xplore online Library Resource**
- > **37+ Years of IEEE S-PAC presentations**
- > **Member Service since 1884!**
AIEE (1884) and IRE (1912) merged into IEEE in 1963

35



What's the Cost?

- > **Student Membership Dues**
 - > **\$32 for a full year!**
- > **Full IEEE Membership Dues**
(with one Society Membership)
\$15/month – about 50 cents per day

36



Young Professional Options

- Share Resources
- Network among peers
- Leadership/Management Training
- IEEE Alias Address
- IEEE Insurance

37



Your Next Steps?

- Plan to Organize a Section/Chapter:
 - Leadership Skills Workshop
Contact: c.rubenstein@ieee.org
 - Project Management Workshop
Contact: tarek.lahdhiri@gm.com
 - Plan an S-PAC or S-PAVE
 - Professional Activities Programs
Speak to your Section PACE Chair...

38



Your Next Steps?

- Graduate Students and Young Professionals
Plan to attend

IEEE-USA Congressional Visits Day

Spring 2017

Washington, D.C.

IEEE Sections Congress 2017

11 - 13 August 2017

Sydney, Australia

2018 Future Leaders Forum (TBA)

39



IEEE-USA Professional Activities

Region 1 Contacts:

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40



Thanks for Listening!

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Rocking!
Networking Your World

Fostering Technological Innovation

Promoting Community Worldwide

Enabling Members' Careers

12 BASIC NEEDS THAT ALL VOLUNTEERS SHARE

According to one expert, there are 12 basic needs that all volunteers share*

1. A specific manageable task with a beginning and an end.
2. A task that matches the interests and reasons for volunteering.
3. A good reason for doing the task.
4. Written instructions.
5. A reasonable deadline for doing the task.
6. Freedom to complete the task when and where it is most convenient for the volunteer.
7. Everything necessary to complete the task without interruption.
8. Adequate training.
9. A safe, comfortable, and friendly working environment.
10. Follow-up to see that the task is completed.
11. An opportunity to provide feedback when the task is finished.
12. Appreciation, recognition, and rewards that match the reasons for volunteering.

(*The list is from "Volunteers: How to Get Them, How to Keep Them" by Helen Little; Panacea Press, Inc. Naperville IL., 1999)

42



I C E D T E A

Identify a potential volunteer

Contact them personally

Enlist their help

Designate a small task for them

Thank them profusely afterwards

Encourage them to stay involved

Ask them to help again