Engaging Students and Student Activities

"Section and Student Branch Interaction for Increased Member Engagement"

Sections Congress – Amsterdam
22 - 24 August 2014

John Paserba - IEEE MGA Student Activities Chair
Christian M. Schmid - IEEE Region 8 Student Rep
Wouldn’t It Be Great If…

- Every Student Branch in Your Section was Active and Successful?
- Student Branches had Financial Resources for Quality Programs?
- Student Members Felt IEEE was Valuable to Their Education and Career and Renewed Their Membership Every Year as a Student?
Attendance at Your Section Meetings Averaged 50-100 Members or More?

Members Volunteered for Your Section Officer Positions, Leadership Positions, and Other Assignments?

All Graduating Student Members Retained Their IEEE Membership and Were Active in Their Section?

“Students are the Section’s Future Volunteers”
IEEE Student Membership

StM | GSM

Year | StM | GSM
--- | --- | ---
1963 | 20,000 | 30,000
1965 | 25,000 | 40,000
1967 | 30,000 | 50,000
1969 | 35,000 | 60,000
1971 | 40,000 | 70,000
1973 | 45,000 | 80,000
1975 | 50,000 | 90,000
1977 | 55,000 | 100,000
1979 | 60,000 | 110,000
1981 | 65,000 | 120,000
1983 | 70,000 | 130,000
1985 | 75,000 | 140,000
1987 | 80,000 | 150,000
1989 | 85,000 | 160,000
1991 | 90,000 | 170,000
1993 | 95,000 | 180,000
1995 | 100,000 | 190,000
1997 | 105,000 | 200,000
1999 | 110,000 | 210,000
2001 | 115,000 | 220,000
2003 | 120,000 | 230,000
2005 | 125,000 | 240,000
2007 | 130,000 | 250,000
2009 | 135,000 | 260,000
2011 | 140,000 | 270,000
2013 | 145,000 | 280,000

Total Members: 120,389
There are 120,389 Student Members Globally, Representing 28% of Total IEEE Membership as of the end of 2013

IEEE Student Membership has Grown 41% Since 2008 (From 85,235 to 120,389)

Global Student Branches Have Grown 38%, From 1,829 to 2,517 Since 2009

Student Membership Delivered More Than 150,000 Higher Grade Members Over the Last 5 years
Increased Interaction Between a Section and Student Branches....

**Leads to....**

- More Successful Section Events and Meetings with Increased Attendance
- Open Doors for Joint/Shared Meetings Between Student Branches and Sections
- Future Skilled Volunteers for the Section
- Potential Increase in Number of Active Chapters
Hold ExCom Meetings at Universities with Student Branches

Have a Student Member Serve on the Section ExCom as a Voting Member

Provide Branch Mentors to Your Student Branches

Plan and Hold Joint Technical Activities, Industry Tours, and Professional Awareness Activities with Your Student Branches

Host an Annual Student Branch – Section Dinner

Provide Judges for a Student Branch Contest (Such as a Paper Contest or Ethics Contest)
Support Student Branch Events Financially or by Providing Speakers

Provide Student Branch – Section Networking Opportunities
  – Hold Panel Discussions to Talk to Students about Professional Life and What Type of Skills are Needed in the Current Work Environment

Support Participation in Regional and International IEEE Student Branch Activities

Support a Student Branch in Your Section to Host a Regiona Student Branch Congress or Annual Conference
IEEEExtreme 24 hour Programming Competition
Student Professional Awareness Activities
IEEE Student Branch Awards
IEEE Student Branch Competitions
Student Branch Leadership Training
Social Media
  – https://www.facebook.com/IEEEStudents
Student Transition and Elevation and Program
  – In conjunction with Young Professionals (YP)
See Support Material in Appendix of this Presentation

*SAC = IEEE MGA Student Activities Committee
For Student Branches

– Students Renew their Membership Each Year While in School

– Student Leaders and Activity Planning Committee Members Gain Valuable Project Management Skills

– Student Branches Build Momentum for Holding Regular Events in the Future Ensuring Strong Student Branches Year-Over-Year
For Sections

– Students Begin to Understand how IEEE Works for Engineers and What Resources are Available for Their Careers

– Students Retain Their Membership After Graduation

– Students Learn to Become Active IEEE Section Volunteers

“Many Current IEEE Members Started as Student Members!!!”
Did you first join IEEE as a Student?
– Yes
– No
To Student Branches:
- Reach Out to Your Sections – They Want to Hear From You!!

To Sections:
- Reach Out to Your Student Branches – They Want to Hear From You!!

Proactively Promote Joint Student Branch – Section Activities. Always Look for New Opportunities to Engage!!!
Every Student Branch in Your Section was Active and Successful?

Student Branches had Financial Resources for Quality Programs?

Student Members Felt IEEE was Valuable to Their Education and Career and Renewed Their Membership Every Year as a Student?
Attendance at Your Section Meetings Averaged 50-100 Members or More?

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“Students are the Section’s Future Volunteers”
Let's learn from each other and talk about some examples from you on fostering student branch-section relationships:

- What was the event?
- How was it promoted?
- How well was it attended?
- What kind of interaction took place?
- What was the follow-up?
- Would you do it again?
Discussion

John Paserba
IEEE MGA Student Activities Committee Chair (SAC)

j.paserba@ieee.org
How to Engage Students?

Christian M. Schmid, IEEE Region 8 Student Rep
Expectations

- More questions than answers
- We want YOU to participate
- There’s chocolate ;}
Questions

- Why students?
- How to interact with students?
- What motivates students?
- What works and why?
- What does not work?
- What are your immediate next steps when you come back home?
Why Students?

STUDENTS ARE THE FUTURE
How to Interact with Students?

- It is our responsibility as leaders to seek interaction
- Section Level
  - Direct Interaction with Students (e.g., SAMIEEE)
  - Direct Interaction with Student Branch Leaders
  - Section Student Activities Chair / Officer
  - Section Student Representative
What Motivates Students?

- I am IEEE ...
  https://www.youtube.com/watch?v=tq3DG1aAq5E
What Motivates Students?

Opportunities
- to learn
- to play (= hands-on learning)
- to grow
- to interact
- to share
- to have new experiences
- to stand out
- to help
- to lead
- to be successful
What Motivates Students?

My Model (Venn Diagram)

- (Graduate) Student Members
- Local Leaders (e.g., SB officers)
- Section Leaders (e.g., SSR)
- Regional Leaders / Global Leaders
- Innovators
What Works and Why?

Student Branch Activities
Section/Region/Global Opportunities for Individuals
Many opportunities on this level are provided by Local Leaders

Why?
Fun, learning, interaction
Not too much work

- Interacts with scientists
- Interacts with industry
- Interacts with fellow students
What Works and Why?

Interaction between SBs/Section
Section/Region/Global Programs/Events/Activities

Organized:
Student Paper Contest
IEEE Tech-Talk Series
(both with help of Industry/University/Section Funding)

Why?
Likes helping people, likes to lead, he has the support by the University, he still has other hobbies :)

Gregor Gerstorfer
Johannes Kepler University Linz, Austria
What Works and Why?

Interaction between Section/SBs
Section/Region/Global Programs/Events/Activities

Today:
Professional Activities Leader
IEEE Slovenia Section

Why?
Likes to lead and is good at it!

Challenge: Identify people and support them
What Works and Why?

Interaction between Section/SB
Section/Region/Global Programs/Events/Activities

Later:
IEEE Region 8 Student Representative
IEEE Region 8 Strategic Planning
...

Challenge: Identify people and support them

Why?
Josip Balen: IEEE R8 LKW Award 2014
Support them, support them, Support them!!!! Funding, Personal Support
What Works and Why?

Rui Costa:
IEEE R8 LKW Award 2013
Support them, support them, Support them!!!! Funding, Personal Support
We have given them the opportunity to interact, to speak, to play, ...
What Does Not Work?

- TWIN student branch program

= 

- Connecting two SB in the Region
- Motivating them to invent joint activities and defining a successful event as expected outcome
- While not providing any funding
- While not providing any other support (moral, ...)
Next Steps?

- I will reflect on what I have heard at SC (I set aside 2 hours next weekend)
- I will (try to) convince my company (30k employees worldwide) to host a workshop for all Austria Section students and YP.
- I will find one person to be the leader to organize this
NOW IT IS YOUR TURN

- This set of slides is unfinished (edit: see YOUR comments on the next2 slides)
- YOU have to develop the rest
- Final result will be shared with all participants

The following slides summarize some of the results from the lively discussions at Sections Congress 2014 in Amsterdam
What Works and Why?

- Connect students / young professionals and industry
- Student and Young Professional Congresses
- Well-defined, well-organized student activity funding process
- Connect (young) professionals and students
- Bring students to Section excom meetings
- Student branches hosting Section / Chapter meeting
- Give responsibility to students
- Getting technical societies closer to students, e.g., student branch chapters
- Opportunities for socializing between students and technical side of IEEE
- Good support by student branch counselor
- Address engaging branch counselors
What Works and Why?

- Brainstorming for ideas with students on a Section level
- Strategic planning workshop with students/new volunteers/professors
- Competitions (e.g. IEEExtreme)
- Provide value
- Go SPAC!
- Promote mentor program and create networks for career development
- Mentor students on how to get a job and career-related questions
- It is easier to keep SBs going than to revitalize
- Invite students from dormant SBs to workshops
- Push students towards standards
What Does Not Work?

- Treating student members and graduate student members as kids is not the way to go
- How to revitalize student branches?
  - Inactive student branch counselor are an issue
  - Student branch reporting / contact data is a problem (e.g., outdated data)
  - SPAC in R8 (lack of promotion?)
  - We should not reproduce what universities provide already
  - Work on and promote benefits for students is still not at the level required
Support Material
SAC = Student Activities Committee
MGA = Member and Geographic Activities
TAB = Technical Activities Board
YP = Young Professionals (formerly GOLD = Graduates of the Last Decade)
SPAA = Student Professional Awareness Activities
SPAC = Student Professional Awareness Committee
S-PAC = Student Professional Awareness Conference
S-PAVe = Student Professional Awareness Venture
SPA X = Student Professional Awareness Experience
STEP = Student Transition Elevation Program
S = IEEE Student Member
GSM = IEEE Graduate Student Member
IEEE MGA Student Activities Committee (SAC)
Mission

- To deliver a common, high-quality IEEE Student Member experience globally, for life-long professional success through IEEE membership

Vision

- To be recognized as the global platform to inspire, enable, develop, and support students as the future leaders of our profession
1. Deliver a World-Class IEEE (Student) Member Experience

2. Expand IEEE’s Global (Student) Membership Presence

3. Modernize the (Student) Volunteer Experience
Student Activities Committee Chair, Past Chair, Vice Chair
10 Regional Student Activities Committee Chairs (RSAC)
10 Regional Student Representatives (RSR)
Potentials Editor/Student Editor
Young Professionals (YP) Committee Representative
TAB Representative
Branch Chapter Representative/Student Representative
IEEE-USA SPAC Chair
IEEE SPAA Subcommittee Chair
Industrial Representatives (Up to 6)
IEEEExtreme Lead (Corresponding Member)
SAC Awards Chair (Corresponding Member)
IEEE Staff
RSAC and RSR Steering Committees
IEEEExtreme Subcommittee
Student Professional Awareness Activities (SPAA) Subcommittee
Awards Subcommittee
Branch Leadership Training Subcommittee
Potentials Magazine Editorial Board
Electronic Communications / Social Media Subcommittee
SAC/Young Professional Liaison
Humanitarian Subcommittee/Change the World Contest
AdHoc Working Groups and Subcommittees
Direct and indirect staff support to programs, products, services, volunteers and members
SAC Supported Student Activities
IEEExtreme is a global challenge in which teams of up to 3 IEEE Student (SM) or Graduate Student (GSM) Members (max of 2 GSMs per team), supported by an IEEE Student Branch, advised and proctored by an IEEE member, compete in a 24-hour time span against each other to solve a set of programming problems.
1838 active competing teams—21% growth from 2011
- 4900 students; 764 proctors; 50 volunteers/staff

61 countries represented from all 10 IEEE regions

497 universities/SB’s with team(s)

Prizes:
- 1st place — all expense paid trip for team to IEEE conference anywhere in the world;
- 2nd and 3rd place — iPads for all team members
- Top regional runners-up — special IEEE gear
- All participants — t-shirts and certificates
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Registration Will Open Soon
- [www.ieee.org/xtreme](http://www.ieee.org/xtreme)

Facebook
- [https://www.facebook.com/IEEEEXtreme](https://www.facebook.com/IEEEEXtreme)

Questions
- [student-services@ieee.org](mailto:student-services@ieee.org)
What is Professional Awareness?

- As defined within IEEE “Professional awareness is the emphasizing of the importance of the non-technical aspects of engineering to engineers and future engineers.”

Topics Include:

1. Career Development
2. Professional Integrity
3. Personal Skills
4. Engineers and Public Policy
5. Leadership in Professional Organizations
6. Practice of Innovation
7. Art of Communication
8. Humanitarian Grand Challenges
Student Professional Awareness Conferences

Students Plan and Run the Event with Consultation From SPAA Regional Coordinators

The Students do all Project Management

Presentation or Panel Format Related to the Professional Awareness Categories

Topics are Selected by Students from the Professional Awareness Categories in Consultation with Regional Coordinators
Student Professional Awareness Ventures

Venture can Take on any Form Except Conference or Panel Presentation Format (can be a Workshop Format)

Student Branch Submits Proposal Based on the Professional Awareness Categories with Budget and Schedule

The Students do all Project Management

Start-up Funds are Available to Initiate Venture

“Free flowing” Format Enables Creativity
IEEE-USA Launching New Professional Awareness Experience for Students
(excerpts from August 7, 2014 Press Release)

- The Student Professional Awareness experience (SPAx) replaces Student Professional Awareness Conferences and Ventures (S-PAC and S-PAVe). A hallmark of the new program is that it leaves event design up to the students.
- “SPAx opens up a lot of design choices for the students; they solve for x,” said Guru Madhavan, chair of the IEEE-USA Student Professional Awareness Committee. “Students can customize their events to meet their professional needs, expectations and interests.”
- For a SPAx (pronounced “spa x”) video preview, see http://youtu.be/oOYqf7jyFeE
- Like the S-PACs and S-PAVes it replaces, SPAx emphasizes the non-technical skills an engineer needs to succeed. These include, among others, effective communication, leadership and career-development skills. SPAx seeks to have students explore, engage, experience.
- A SPAx event can still be a traditional student-focused conference or venture, or it can be, for example, a design contest, industry visit, humanitarian field project or informal social activity focused on professional skills development. Students can choose whatever they want as long as it relates to the eight S-PAC thematic areas.
- Another goal of SPAx is to streamline the reporting and feedback process so it reduces the burden on students. SPAx will be fully deployed in January.
- The IEEE-USA Student Professional Awareness Committee is celebrating its 35th anniversary in 2014. It has sponsored more than 1,200 activities, reaching over 100,000 students in more than 200 U.S. colleges and universities.
Information at:
- www.ieee.org/spac

IEEE-USA SPAC Chair:
- Guru Madhavan (gmadhavan@gmail.com)

Regions 1-to-6 Coordinators:

SAC SPAA Chair (Regions 7-to-10):
- Juan Esteban Velez Tamayo (juanvelezt@ieee.org)

On Facebook at:
- https://www.facebook.com/groups/ieeeusaspac/

Note: Some modest funding support is available for R1-to-R10 SPAA events from IEEE MGA SAC. Speaker travel is supported by IEEE-USA for R1-to-R6 events.
IEEE Student Enterprise Award

Larry K. Wilson Regional Student Activities Award

IEEE Regional Exemplary Student Branch Award

IEEE Outstanding Branch Counselor Award

The Darrel Chong Student Activity Award

To Engage in IEEE Student Branch Awards:

– http://www.ieee.org/membership_services/membership/students/awards/student_branch_awards.html
IEEE Xtreme 24 hour Programming Challenge

- See earlier slides for details
- To Engage:  www.ieee.org/xtreme

IEEE Presidents' Change the World Competition

- Open to college and university students who demonstrate excellence in the development, design and implementation of technology that can solve a life challenge for the benefit of humanity
- Organized by the IEEE Presidents and supported by SAC as needed
- To Engage: http://www.ieee.org/membership_services/membership/students/competitions/change_the_world/PCW_general_info.pdf
IEEE-USA's (R1-to-R6) Online Video Competition for Undergraduates
- IEEE-USA will present four scholarship awards undergraduates In R1-to-R6 who create the most effective 90-second video clips reinforcing for an 11- to-13-year old audience how engineers improve the world.
  - To Engage:  http://www.ieeeusa.org/communications/video_competition/

IEEE Student Branch Web Site Contest
- IEEE Student Branches are eligible for the Student Branch Web site contest. Each Student Branch may enter at most one Web site. To enter send an e-mail message to your Regional Students Activities Chair (RSAC), Regional Student Representative (RSR), and the contest administrator
  - To Engage:  
    http://www.ieee.org/membership_services/membership/students/awards/site_contest.html
IEEE Regional Student Paper Contests

- This award is comprised of ten regional paper contests to recognize technical, written, and verbal communication skills. These skills are key to successful careers.

- To Engage:
  http://www.ieee.org/membership_services/membership/students/awards/awards_regional.html
Others Contests: IEEE offers a multitude of student competitions annually, sponsored by a variety of IEEE units, including the MGA Student Activities Committee and various Societies. New contests are added frequently, so check often at the website below.

– IEEE Computer Society Student Competition
– Humanitarian Technology Challenge
– IEEE International Future Energy Challenge

To Engage in IEEE Student Branch Competitions:

– http://www.ieee.org/membership_services/membership/students/competitions/index.html
Volunteer Training Webinar Series:

- To Engage: [http://www.ieee.org/membership_services/membership/students/student_webinars.html](http://www.ieee.org/membership_services/membership/students/student_webinars.html)

Also to Engage Consider Attending a Student Branch Congress or Conference

To Engage Contact:

- [student-services@ieee.org](mailto:student-services@ieee.org)
New, Improved Webpage Entry Point to Student Services:
– [http://www.ieee.org/students](http://www.ieee.org/students)

Facebook Pages*
– IEEE Students – 167,436 likes
  [https://www.facebook.com/IEEEStudents](https://www.facebook.com/IEEEStudents)
– IEEE Potentials – 3,448 likes
  [https://www.facebook.com/IEEE.Potentials](https://www.facebook.com/IEEE.Potentials)
– IEEE Xtreme – 51,071 likes
  [https://www.facebook.com/IEEEXtreme](https://www.facebook.com/IEEEXtreme)

Need support?
– student-services@ieee.org

*Updated as of 8-14-14
IEEE Young Professional’s Student Transition & Elevation Partnership (STEP) Program Assists Member Satisfaction/Retention as Student Members are Elevated from Student Level to Higher Grade Member

Engagement and Outreach Opportunity Facilitates the Transition from Student Member to Young Professional

Introduces the Opportunities and Benefits of IEEE Membership During the Onset of a Career
Meet Local Young Professionals

Introduction to the Greater IEEE Network Through the Young Professional Affinity Group In The Local Section

Recognition for Their Accomplishments While Being Welcomed Into the Professional IEEE Community

Increased Awareness of IEEE Benefits for Young Professionals

Career Enhancement, Networking, and Professional Development Activities at the STEP Event
To Engage in STEP:


- Contact STEP at [step@ieee.org](mailto:step@ieee.org) or [student-services@ieee.org](mailto:student-services@ieee.org)

- Note: Some funding is available from IEEE Young Professionals (YP). Up to $500USD from IEEE MGA YP.

Also See Young Professionals on Facebook at:

- [https://www.facebook.com/ieeeyp](https://www.facebook.com/ieeeyp)
What is Accreditation.org?

Accreditation.org is intended to be the preferred resource for all information on Engineering, Technology and Computing (ETC) accreditation globally.

Who is the intended audience?

*Primary Audience*: Professionals with an interest in degree program accreditation in engineering, technology and computing; including Professional societies, Licensing bodies, Academic institutions and their faculty and staff, Governmental bodies, and Employers and Industry.

*Secondary Audience*: Parents, students and prospective students.

What can you find on this website and how can we help you?

This website provides information on Accrediting and Recognized Bodies, Accredited Institutions, and various Accreditation Resources.

In addition it describes the accreditation process, and provides information on methods, objectives and challenges to accreditation, as it is practiced at present around the world. The section does not mean to present or assess any particular method or accrediting body, and veterans of specific accreditation processes may therefore find that their individual experience was different than the general methodology described here.
Regional Needs

- Literature that can assist the development of educational programs in specific regions
  - Several areas in Africa may be the most appropriate target for this activity
  - The nomenclature project for South America is a good example for what we can do
    - “IEEE Workshop on Common Nomenclature for Computing-Related Programs in Latin America”
IEEE Position Papers on Education

Read the following position papers approved by the IEEE Board of Directors and endorsed by IEEE Educational Activities.

- IEEE Position Paper on Accreditation of Academic Programs in ECT (DOC, 52 KB): Describes views of IEEE on accreditation of educational programs in engineering, computing, and technology.
- IEEE Position Paper on the First Professional Degree in Engineering (DOC, 48 KB): Describes the practice of obtaining the first professional degree in engineering.
- IEEE Position Paper on the Roll of Technical Standards in Education (DOC, 42 KB): Defines the desired role of technical standards in engineering, technology, and computing within engineering, technology, and computing academic curricula in the technical areas of interest of IEEE.

http://www.ieee.org/education_careers/education/eab/position_statements.html
In Closing...

- Accreditation provides IEEE volunteers with a significant opportunity to contribute to education in engineering, computing and technology.

- This type of volunteer activity requires dedicated volunteers who stay with the projects for the long haul.
  - ...unlike more time-limited activities which typically require 2-3 years in an IEEE ‘job’.

- There are challenges and opportunities all over the world, and in all settings of currently existing accrediting bodies.