Engaging Industry Partners

Blake Lloyd
Toronto Canada

Map of Toronto and its surrounding area.

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<tr>
<th>Country</th>
<th>Leader</th>
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<td>Canada</td>
<td>Prime minister: Stephen Harper</td>
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<tr>
<td>Netherlands</td>
<td>Head of state: King Willem-Alexander</td>
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| Population | 34,568,211 | 16,805,037 |
| Life Expectancy | 81.570 years | 81.010 years |
| Capital City | Ottawa | Amsterdam |
| Largest City | Toronto (population: 4,612,190) | Amsterdam (population: 741,636) |

- Human Development Index:
  - Canada: 0.967
  - Netherlands: 0.958

- GDP per capita:
  - Canada: $43,400 US
  - Netherlands: $42,900 US
Industry Applications Society

- IAS was formed in 1965, two years after the creation of IEEE – our 50th year is 2015!

- Current Members - 10,244

Broad field of interest - The application of electrical engineering to industry.
Attributes of IAS

- 212 Chapters with 70 student branch chapters
- Sponsor of about 30 conferences per year
- Support about 50 of the standards IEEE maintains
- 20 Technical Committees – broad range of technologies covered by Society
- Significant Industrial collaboration on conferences, training, standards, and publications
Membership by Employment Sector

Approximately 2/3 industrial
4 Departments and 20 Technical Committees

- Metal
- Cement
- Petroleum and Chemicals
- Mining, Pulp and Paper
- Safety

- Electrostatics
- Lighting
- Industrial controls

- Power electronics and motors
- Renewables Transportation

- Industrial
- Rural
- Standards (Color books)

Specific Industries

Energy Conversion

Technologies

Industrial and rural power systems

Broad Range of Technical interests
Process Industries Department’s Committees

- Petroleum & Chemical Industry
- Cement Industry
- Electrical Safety
- Pulp and Paper Industry
- Mining Industry
- Metal Industry
Manufacturing Systems & Development Department’s Committees

- Electrostatic Processes
- Industrial Automation and Controls
- Industrial Lighting & Displays
Industrial Power Conversion Systems Department

Electric Machines

Industrial Drives

Renewable and Sustainable Energy Conversion Systems

Industrial Power Converters

Transportations Systems

Devices
Industrial and Commercial Power Systems Department’s Committees

- Power System Protection
- Power System Engineering
- Energy Systems
- Rural Electric Power
- Codes and Standards
What Industry needs....

- Young engineers no longer have access to the network from school - need a technical home / community to interact with:
  - Chapters provide a forum for local industry collaboration and technical events – networking opportunities.
  - IEEE sponsored Local Conferences / Trade Shows
  - Continuing education an important aspect for many young industrial engineers – Workshops, and Tutorials given locally can be accredited thru CEU’s
What Industry needs....

- Industrial management and administration needs understanding of technology at high level – most companies run by accountants not engineers

- Courses like PES “Plain Talk” series for local industry:
  - Power System Basics, Distribution System, Transmission System
  - The PLAIN TALK "SMART GRID" SERIES consists of the following two day course: Smart Grid Overview

- Courses in general topics like Automation, Internet, Process Control, etc can be very lucrative and will attract more industrial participation
What industry needs....

- Standards needed by Industry – Color Books (DOT) – recommended practices for power systems in industrial plants.
  
  **Red Book™** — IEEE STD 141™-1993 (R1999), Recommended Practice for the Electric Power Distribution for Industrial Plants
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- Excellent Opportunity for local Training seminars
- NFPA 70E / IEEE 1584 Arc Flash) – research, standard development, commercialization, and training
Some IAS Industrial Relationships

- PetroBras – Brazil
- Pemex – Mexico
- SAE - Society of automotive engineers.
- SMMA - Motor & Motion manufacturing trade association
- PSMA – Power Sources Manufacturing Association
- CES - China Electro-technical Society
- NFSC - Natural Science Foundation of China (NFSC)
- KIEE - Korean Institute of Electrical Engineers (KIEE)
- IEEJ - Institute of Electrical Engineers of Japan
- PCA – Portland Cement Association
- NFPA – National Fire Protection Association
- IEC – International Electro-technical Commission
- CIGRE – International Council on Large Electric Machines
- PCIC Europe – Petrochem Committee of Europe
- IEEMA - Indian Electrical and Electronics Manufacturers
Conferences

- Many of these relationships are with industries, industry associations or regional technical societies for collaboration on conferences.
- Often a technical area is already well covered by a regional conference and rather than setting up a competing IEEE version, we approach the external association or society and collaborate either by technically co-sponsoring or financially sponsoring a joint conference.
- Technically co-sponsoring or financially sponsoring of joint conferences a good collaboration path with Industry – bring Academic and Practicing Engineers together, build local technology centers.
Benefit of IEEE Collaboration

- Advertisement and the IEEE name, Xplore access, along with technical papers (attendees), tutorials, expert paper reviewers,
- Local support for conference organization with volunteers from the appropriate Technical community and or local Chapter/Section
- Relationship defined by an MOU – in some cases multi-year
- For financial co-sponsorship often share any income with local entity
Issues with conference collaboration

- Alignment of goals – IEEE is not-for-profit
- Agility – IEEE moves slowly and is run by committees not individuals
- Continuity – IEEE volunteers change
- Quality – need to maintain quality of IEL – need a good technical base
Examples of what can go wrong

- Portland Cement Association – very successful conference cement vs electrical and $$
- ICEMS – KIEE, CAS, IEEJ – regional rotating conference with no distinct lead
- PCIC Europe – communications, branding of PCIC name
Some lessons learned for Partnering

- Industry will go where customers are – create events that fill needs
- Conflict resolution, MOU is never adequate and should be periodically reviewed
- For conferences, limit paper uptake based on experience – be sure of quality
- Trademark names, protect Brand
- Appointed liaison who is active (meet regularly) and reporting back

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IEEE
Advancing Technology for Humanity
Industrial Power Conversion Systems Department

- Electric Machines
- Industrial Drives
- Renewable and Sustainable Energy Conversion Systems
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- Devices
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Engaging Industry Partners

Lawrence Wong
Outline

- Motivation for partnerships & collaborations
- Types of partnerships/collaborations
- Scope of partnerships/collaborations
- Modes of partnerships/collaborations
- Examples
- Benefits & value
Motivation for Partnerships/Collaborations

- Increasing value to IEEE members at the local level
  - Technical breadth and depth
  - Member benefits
- Section/Chapter visibility

Approaches:
- Filling the gaps
- Complementarity
- Increasing technical outreach
- Member benefits programs
Partners/Collaborators

IEEE entities:
- Sections
- Chapters
- Student branches
- Affinity groups
- Regions
- Technical societies

Non-IEEE entities:
- National societies
- Professional societies and associations
- Government agencies
- Service providers
Scope of Partnership/Collaboration

- **Technical:**
  - Joint technical seminars
  - Co-sponsored conferences / symposia / workshops
  - Joint awards programs
  - Joint projects programs

- **Educational/Professional:**
  - Recognition / accreditation programs
  - Joint professional development programs

- **Non-technical:**
  - Joint member benefits programs
  - Joint social events
Mode of Partnership/Collaboration

- Financial co-sponsorship
- Technical co-sponsorship

- Arrangements/agreements
  - With/without financial commitments

Many joint technical activities fall into this category

Many joint non-technical activities fall into this category

Most, if not all, modes of partnership/collaborations require informal/formal agreements/contracts
## Types of partnership/collaboration

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- **Red**: Technical partnership/collaboration
- **Green**: Educational/professional partnership/collaboration
- **Blue**: Non-technical partnership/collaboration
Examples (1/2)

IEEE-National Society/Professional Society:
- IEEE-IES MOU on technical & professional cooperation
- Joint IEEE-IES Award
- Joint technical seminars
- Co-sponsored conferences

Region-Section:
- R10-Sections:
  - Awards (Best section, Industry, AG)
  - Co-sponsored projects (SAC, WIE, SIGHT, Industry, etc.)
  - Co-sponsored events (SAC, WIE, SIGHT, Industry, etc.)
  - Distinguished Lecture Programs

Section-Section:
- Co-sponsored conferences/symposia/workshops
- Humanitarian technology support
Examples (2/2)

- **Section-Chapter/AGs/SBs:**
  - Joint technical seminars
  - Co-sponsored conferences/symposia/workshops
  - Professional development programs
  - Co-sponsored social activities
  - Member benefits programs

- **Chapter-Chapter:**
  - Joint technical seminars
  - Joint conferences

- **Section-Service Providers:**
  - Member benefits:
    - Credit card
    - Insurance
    - Discount programs
    - Affinity programs
Benefits and Value

- **Non-IEEE entity:**
  - Increased understanding, relevance & cooperation with IEEE
  - Connectedness to global IEEE

- **Section/Chapter:**
  - Local vibrancy
  - Visibility
  - Relevance
  - Bridging local/global needs

- **Members:**
  - Increased breadth and depth of activities
  - Locally relevant member benefits
  - Better return on dues
  - Increased networking opportunities
QUESTIONS