

IEEE Technical Activities

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2008 IEEE Vice President, Technical Activities
2000 – 2001 President, IEEE
Communications Society

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Hanoi, Vietnam
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What is IEEE Technical Activities

- 38 Societies
- 7 Technical Councils
- 2 Technical Committees
 - ICEO
 - TC on RFID (created in 2008)

Technical Councils

- Technical Councils have no individual members and are formed by Societies.
 - Nanotechnology
 - Sensors
 - Superconductivity
 - Systems
 - Electronic Design and Automation
 - Technology Management
 - Biometrics (went into Operation in 2008)
 - Sustainability (?)

Standing and Administered Committees

- Periodicals
 - Periodical Review Committee
- Products and Services Committee (jointly with PSPB)
- Conferences
- **Society Review Committee**
- Several others (Finance, N&A, etc.)

What we do?

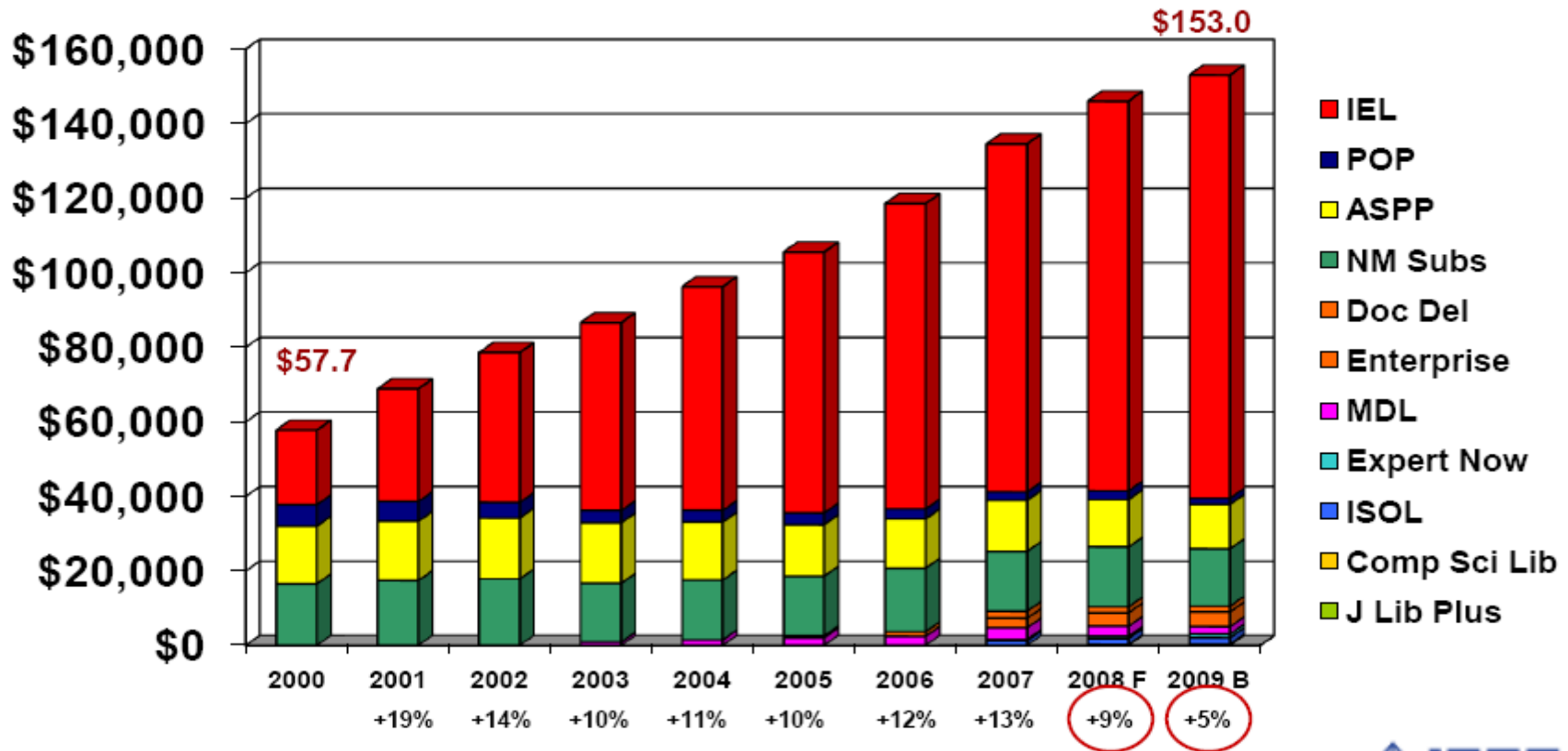
- Edit over **135** periodicals (the best portfolio in the world in our area)
- Sponsored **~400** conferences in 2008
 - Participated in **~ 300** technical co-sponsorships of conferences
- Certification Programs : Computer Society (2), WCET, PES (?), Systems (?)
- Sponsor a large number of Standards (IEEE 802, 40% of all IEEE standards are sponsored by PES; new 1900 series)
- Huge conference and on line Tutorial program
 - Content for Expert Now

How much TA bring in (without market fluctuations)?

- **TA Revenue 2008:** **\$189.5M+25M**
+ Xplore expenses
- **TA Net 2008:** **\$ 11.6M (85%)**
 - **Conference Net:** **\$ 20.3M (up from \$7M in 2004)**
- **Total 2008 IEEE revenue: \$326M**
- **Total 2008 IEEE net: \$ 13.3M**

Key IEEE Product Sales Trends

2000-2009B in \$ millions earned sales / 265% growth in 10 years



Celebrating 125 Years
of Engineering the Future

Transnational Scorecard

www.ieee.org/web/volunteers/tab/tab_tn_scorecard.html

Percent from outside the USA

- **S/C Membership:** 49%
- **TAB:** 25%
- **Society AdComs** 33%
- **Standards Board:** 10%
- **Board of Directors** 21%
- **OU Series Attendance** 15%
- **Authors** 76%
- **Xplore Usage** 78%
- **Editors in Chief** 34%
- **Conferences R7-10** 52%

JCR Year and Edition: 2007 Science - Electrical and Electronic Engineering

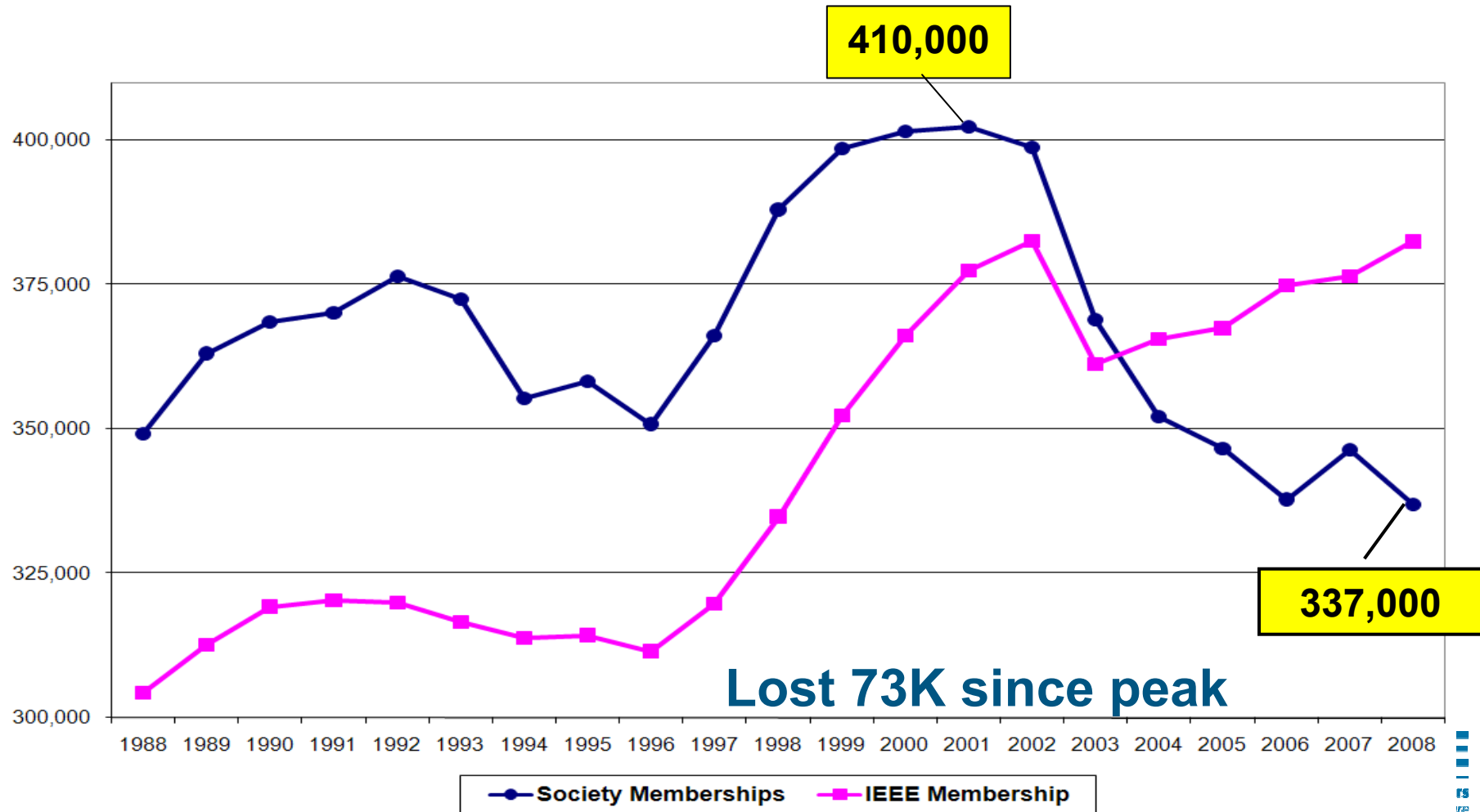
Abbreviated Journal Title	ISSN	2007 Total Cites	Impact Factor	Immediacy Index	2007 Articles	Cited Half-Life
P IEEE	0018-9219	12770	3.82	0.606	132	>10.0
IEEE T PATTERN ANAL	0162-8828	16492	3.579	0.571	189	9.7
PROG ELECTROMAGN RES	1559-8985	1433	3.32	0.739	249	1.9
IEEE T MED IMAGING	0278-0062	7725	3.275	0.368	144	7
IEEE SIGNAL PROC MAG	1053-5888	1751	2.907	0.338	68	5.8
IEEE T AUTOMAT CONTR	0018-9286	17058	2.824	0.19	294	>10.0
IEEE T NEURAL NETWORK	1045-9227	7019	2.769	0.189	164	8.1
PROG QUANT ELECTRON	0079-6727	597	2.636	0.2	5	>10.0
IEEE ELECTR DEVICE L	0741-3106	5770	2.486	0.332	313	5.1
IEEE T IMAGE PROCESS	1057-7149	8531	2.462	0.282	262	7.1
IEEE J SEL TOP QUANT	1077-260X	4689	2.384	0.385	200	5.8
IEEE J QUANTUM ELECT	0018-9197	10178	2.36	0.399	153	>10.0
IEEE T GEOSCI REMOTE	0196-2892	9167	2.344	0.283	375	6.8
IEEE T INFORM THEORY	0018-9448	16221	2.315	0.282	397	9.1
IEEE PERVAS COMPUT	1536-1268	600	2.293	0.171	35	4
IEEE T SPEECH AUDI P	1063-6676	1893	2.291		0	7.2
IEEE J SOLID-ST CIRC	0018-9200	7767	2.254	0.22	277	6.7
IEEE T IND ELECTRON	0278-0046	3967	2.216	0.425	341	5.8
J LIGHTWAVE TECHNOL	0733-8724	10843	2.196	0.305	436	7.2
IEEE T ELECTRON DEV	0018-9383	11134	2.165	0.392	434	7.6
IEEE T FUZZY SYST	1063-6706	3166	2.137	0.147	102	7.4

New Periodicals coming up

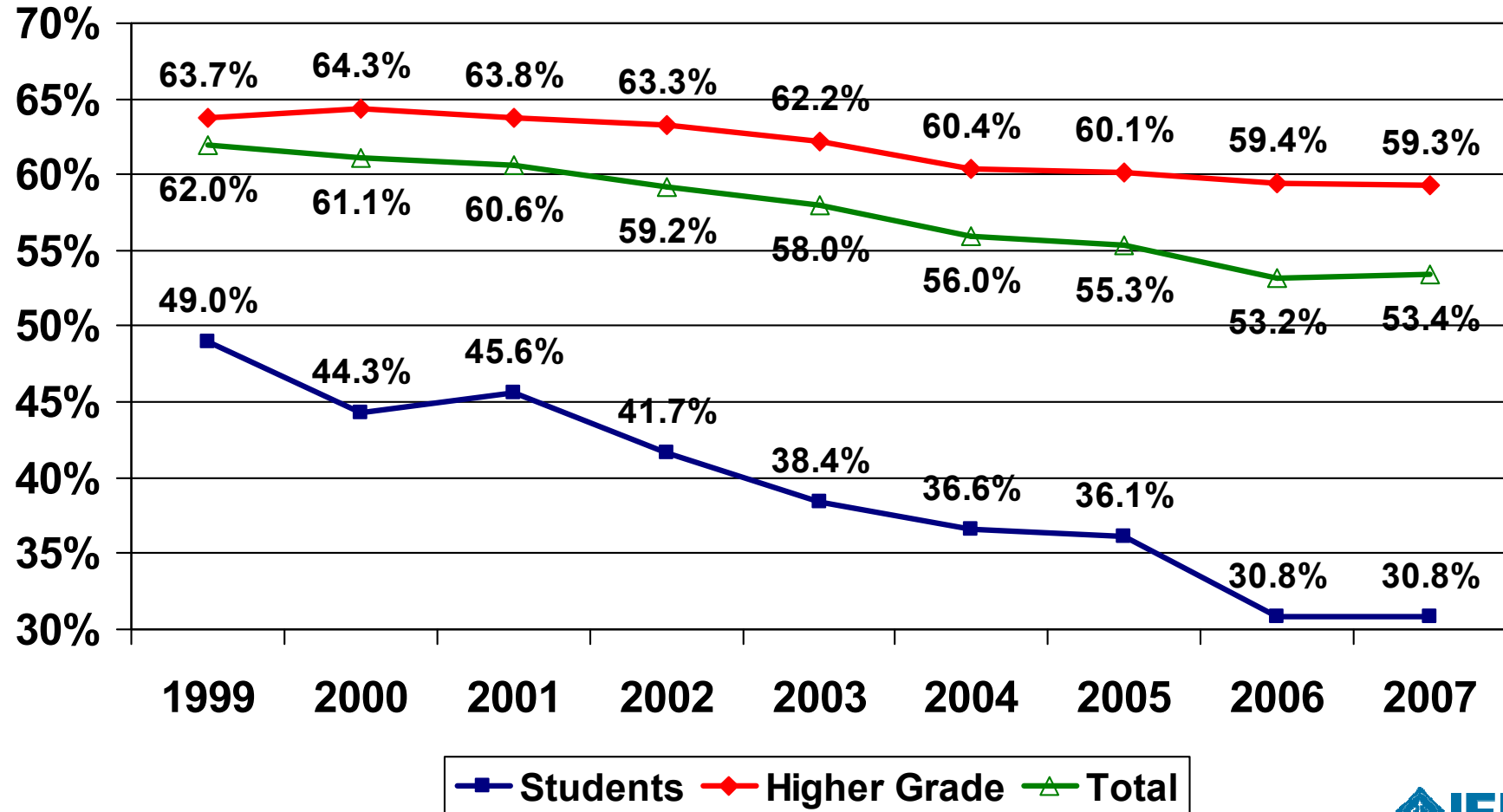
- 2009 initial publication:
 - IEEE Transactions on Computational Intelligence and AI in Games
 - IEEE Solid-State Circuits Magazine
 - IEEE Photonics Journal
 - IEEE Transactions on Autonomous Mental Development
 - IEEE Embedded Systems Letters
 - IEEE/OSA Journal of Optical Communications and Networking
 - IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing

- More in 2010: Smart Grid, Sustainable Energy, Affective Computing, Clinical Engineering and Healthcare Solutions, Biometrics Compendium, etc.)

Concern: Society Memberships vs. IEEE Membership 1988 - 2008



Concern: Percentage of Members Holding a Society Membership



Adhoc Committee on Society Membership: Mission

- Achieve a better understanding on what MGA has to offer to Societies and how it can best be leveraged within Societies. (Joint meetings with MGA in 2008)
- Clearly identify the needs of the societies with respect to membership and develop a plan for addressing those needs in partnership with the new MGA organization.
- Develop a list of products and tools that have good potential for increasing Society membership.
- Assist in addressing the alternative membership model (s) impacts on society.

What to Do?

- Nearly all the societies are engaging in discussions about the development of new benefits to attract and satisfy members. Most say they are struggling to identify the “magic bullet” that members want.
- 50% of respondents criticized the SAMIEEE data base.

What Can the “Big IEEE” Do?

- Guide each new member to join at least one society.
- Implement alternative membership models that reduce fees for people who are primarily interested in society, not IEEE, membership.
- **Relax the rules for new chapter development.**
- **Reduce its overhead costs** and pass the savings to the societies.
- Provide societies with **marketing support** to help them improve their member recruitment communications.
- **Help societies define the value proposition** and investigate potential new member benefits to replace those lost to IEEE Xplore.
- Find ways to make IEEE more accessible to the international community.
- Provide contact information on people downloading a society’s papers from Xplore.

What's Next?

- Continue effort on new initiatives and tools to promote membership
- Use what we've learned to leverage and affect MGA activities.
- Create a real, active TAB presence in MGA, as it relates to membership and member engagement.
- Provide professional marketing assistance to the societies (costs money!)

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New Technologies Menu

- Technologies
 - Biometrics
 - Distributed Diagnosis and Home Healthcare
 - Earth Observations
 - Electric Ship
 - Electronic Health Records
 - Electronics Recycling
 - Hydrogen Economy and Alternative Fuels
 - Plug-In Hybrid Electric Vehicles (PHEV's)
 - Portable Information Devices
 - Remote Sensing
 - RFID
 - Smart Grids
 - Terabit Networks
 - Wind Power
 - Technology Working Groups
 - New Technologies Directions Committee (NTDC)

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IEEE energy 2030
IEEE Conference on Global Sustainable Energy

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New Technology CONNECTIONS

Welcome to the New Technology Connections portal.

Your connection with the IEEE brings you access to a wealth of knowledge. We have a selected a few technologies to feature first, some are brand new, some are well entrenched but have some new twists and new applications that make them interesting.

For each featured technology, you will find a general description, upcoming conferences, news articles, technical papers, related standards, professional organizations, and academic programs ... all here, in one place. Depending on your goal and interests, you can further explore these new connections for more depth.

We have kept the content level broad enough to be useful to a wide audience of professionals, academicians, students, technical press, and the general public eager to keep watch on the newest happenings in an easy-to-understand way.

For additional in-depth information, we invite you to visit the Technology Discourse that complement some selected technologies.

We invite you to participate in our Technology Discourses!

A Technology Discourse is a conversation - an extended and interactive communication about a particular technology and its implications, environmental, economic, social and public policy. Its purpose is to stimulate more discussion and encourage participants to debate and probe further.

In addition to articles and essays, the Technology Discourses include video segments which are also hosted by [IEEE.tv](http://www.ieee.tv).

Featured Content

RFID

- IEEE RFID 2007 Conference Highlights (Video)

Wind Power

- Wind Power - The Technology (Video)
- Discourse Overview

Earth Observations

- Group on Earth Observations - GEOSS (Video)
- GEOSS Applications (Video)

THE GRID

- "The GRID", an inside look at "power," humanity's lifeblood, is the first and flagship of the "Circuit Earth" TV series. (Video)

E-Waste

2009 New/Future Technology Activities (1)

- *Understand what is already being done by S/Cs in terms of new/technologies.*
- 2009 NTDC-Sponsored Conferences
 - ESTS 2009 (Electric Ship Technologies Symposium)
 - “Accessing the Future” Conference (in partnership with IBM)
- Collaborate with Public Visibility Initiative

2009 New/Future Technology Activities (1)

- **Implementation of some ideas that originated in 2008 Industry Advisory Committee**
 - (Small) Events, tailored to industry, focusing in specific emerging topics. These will also have electronic distribution
 - These sequence of meetings should lead into a IEEE TA Emerging Technologies event.
 - Develop coordinated multi-product approach to multidisciplinary technologies (e.g., Smart Grid, Electronics in Vehicles)
 - Foster the launching of an industry targeted publication addressing problems/views concerning new technologies. Each issue covering a different topic.

Humanitarian Technology Challenge

- 3 focus areas selected:
 - Reliable Electricity
 - Data Connectivity of Rural District Health Offices
 - Patient ID and Tie to Health Records
- Region 10 representatives in Geographic Partnership Group: Amarnath Raja, Jimmy Chan

Challenge Conference - Challenge Definition & Confirmation

- ✓ **Conducted three-hour conference call with “early-stage” participants – humanitarians and technologists – to launch development of detailed challenge definitions**
 - **35 total participants, from 9 countries**
 - **10 humanitarians, 11 technologists,**
 - **Steering Committee members, IEEE staff, UNF staff**
 - **75 minute plenary session, 75 minute concurrent challenge-specific work group sessions, 30 minute review with all participants**
- ✓ **Defined requirements for complete challenge definition**
- ✓ **Introduced and demo’d Spigit collaboration tool**
- ✓ **Formed Working Groups for each challenge comprised of technologists and humanitarians**
- ✓ **Work Groups shared initial thoughts and perspectives on challenges**
- ✓ **Gained consensus on schedule for next 60 days and final deliverables**

■ **Thank you!!!**