IEEE FOUNDATION Focus 2006

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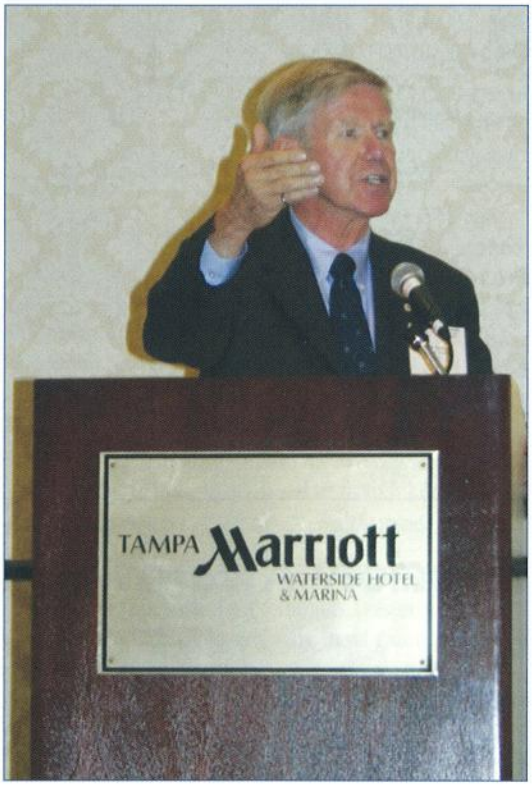
The President's Perspective

In October 2005, I had the privilege of representing the IEEE Foundation at the 2005 Sections Congress in Tampa, Florida. This impressive event provided the opportunity to meet with IEEE delegates from all over the world and confirm their interest in the IEEE Foundation's new initiative - Technological Literacy *Matters!* Members from throughout the IEEE Regions addressed the importance of improving the understanding of technology.



Richard Gowen, IEEE Foundation President, addresses the delegates at Sections Congress 2005.

Ralph Russell (right), lead volunteer for IEEE Emeritbadge.org program, shows Richard Gowen, IEEE Foundation President, the microprocessor kit several hundred Boy Scouts completed during the 2005 National Scout Jamboree, thanks to a grant from the IEEE Foundation.

The Technological Literacy *Matters*! initiative is the result of extensive member and donor recommendations to advance the education and scientific mission of the IEEE. This initiative provides opportunities for IEEE sections and societies to develop activities supported through gifts and donations. The IEEE Foundation currently administers over 80 donated funds that support awards, scholarships, student travel grant programs and educational projects of IEEE sections and societies. The IEEE Foundation is available to assist IEEE organizations in the preparation of new activities to be supported through gifts and donations.

The IEEE Foundation also provides developmental funding for projects and events that enable members to provide activities that enhance the educational and scientific purposes of the IEEE. The funding provided by the IEEE Foundation to support events at the 2005 Sections Congress is an example of the type of funding available. Another example of the use of development funding is the project grant to IEEE Educational Activities in 2001 that led to the new program to prepare teachers with technologically oriented projects for students.

The visits with delegates at the Sections Congress provided the opportunity to thank donors for their contributions. It is through events like Sections Congress, publications like this one, and you, our donors, that the IEEE Foundation is able to increase the understanding of the many successes in the use of donated funds to support the scientific and educational purposes of the IEEE.

Warm wishes for a happy new year,

Richard J. Gowen

Richard J. Gowen
2006 President, IEEE Foundation

Check out our new website! Visit www.ieeefoundation.org

The IEEE Pre-University Engineering Activity Search

Find a Pre-university Engineering Activity to Bring Back to Your Community

By: Allison Ickowicz, IEEE Educational Activities

Have you or other members of your local IEEE Section ever wanted to help your local pre-university community, but just did not know where to begin? Thanks to a grant from the IEEE Foundation, you can start by visiting the IEEE Pre-university Engineering Activity Search page. This new section of the IEEE web site, created by IEEE Educational Activities, was developed to help members and volunteers around the world find the right activity for their Section without having to re-invent it.

"The activities are sorted into 12 categories, such as Classroom Activities, Organized Competitions and Activities, and Careers in Engineering."

The IEEE Pre-university Engineering Activity Search identifies a wide variety of pre-university science, engineering, mathematics and technology education activities being conducted by IEEE sections throughout the world. The activities are sorted into 12 categories, such as Classroom Activities, Organized Competitions and Activities, and Careers in Engineering. Simply by clicking on a category, members will find a list of engineering activities that they can organize and implement in their local communities. The site also allows members the opportunity to submit an activity that is not already listed in which they have participated and wish to share.

E-campers in Thailand construct simple electronic circuits.

Examples of activities available on the IEEE Pre-university Engineering Activity Search include:

- E-camp – Thailand Section

This is a four day camp in which IEEE members teach basic electronics, conduct hands-on activities, and take high school students to visit research laboratories. The camp is free to the students, including meals and lodging.

- Robots 101 – Panama Section

This is a five hour program conducted by IEEE members for students in grades 7 – 9 that consists of 90 minutes of lectures with the remaining time dedicated to hands-on activities. The program shows the students the value of engineers and engineering, introduces engineering and robotics basics, and allows the students to work and maneuver a robot.

www.ieee.org/eab/preudatabase

To access the IEEE Pre-university Engineering Activity Search visit http://www.ieee.org/eab/preudatabase. For more information about the site, contact IEEE Educational Activities at +1 732 562 5496 or email a.m.ickowicz@ieee.org.

IEEE Member Recognition through IEEE Society Awards

By Michael Deering, IEEE Development Office

Through the diligent efforts of IEEE Industry Applications Society (IAS) members, and financial underwriting by General Electric Company, a new IAS award is now available. This annual award, called the IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award, honors innovators for meritorious contributions to the advancement of power conversion technologies through innovations and their application to industry. The technical field for the Kliman Innovator Award includes, but is not limited to, electrical machines, electrical drives, power electronic systems and power electronic devices. Prize items include a US$500 honorarium and a plaque.

This award not only recognizes the many innovators of the future, but also pays tribute to Dr. Gerald Kliman, whose many innovations in the field of rotating machines, electric traction drives, and electromagnetic pumps are still widely used in industry today. Jerry (as he was known to all his colleagues) received all of his electrical engineering degrees from MIT, culminating in his Ph.D. in 1965. After serving in the US Air Force, and as a faculty member at Rensselaer Polytechnic Institute, he joined General Electric Company. He was a Life Fellow of the IEEE and member of several IEEE IAS technical committees. At the time of his death, he had 88 US patents with about 20 applications pending. Sadly, this highly accomplished and well respected engineer passed away in a tragic automobile accident on 30 January 2004.

"The technical field for the Kliman Innovator Award includes, but is not limited to, electrical machines, electrical drives, power electronic systems and power electronic devices."

Tomy Sebastian (right), IAS Industrial Power Conversion Systems Department Chair, IEEE IAS presents the first IEEE IAS Industrial Power Conversion Systems Department Gerald Kliman Innovator Award to Dr. Russel J. Kerkman (left) for his contributions to "the control and reliability of ac motor drives".

According to Tomy Sebastian, IAS-Industrial Power Conversion Systems Department Chair, "It was most gratifying to work with IEEE volunteers to bring about this award in honor of the late Dr. Gerald Kliman, and to remember his many contributions and innovations to the technical areas of the Industrial Power Conversion Systems Department".

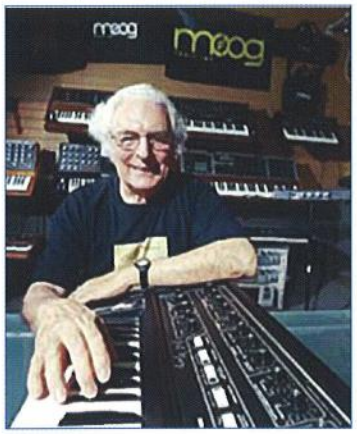
Update: IEEE Virtual Museum

By: Kim Breitfelder, Manager, IEEE Virtual Museum

The last twelve months marked another year of growth for the IEEE Virtual Museum (VM) with the addition of two new exhibits. The first, Songs in the Key of E explores the world of electronic instruments and music, and examines the linkage of art and technology. The second, Nanotechnology, investigates the 30-year history of that "cutting edge" field of technology. These two exhibits, plus additional content added to preexisting exhibits, brought the page count of the VM to over 600 pages of unique content divided into eight exhibits. VM viewership also grew. Going into 2006, the VM could expect between 30,000 and 50,000 visitors per month, depending on the time of year, making it one of IEEE's most popular web areas. To check us out, visit www.ieee.org/museum.

"VM continues to seek funding from traditional sources, such as grants like those generously provided by the IEEE Foundation"

Despite these improvements, growth of the VM remains constrained by financial considerations. Indeed, the only hindrance to adding more exhibits and new material at a faster rate is the lack of resources to generate the material. To that end, the VM continues to seek funding from traditional sources, such as grants like those generously provided by the IEEE Foundation, while also seeking new revenue streams, such as advertising, on the site. It is hoped that these various revenue streams will meet and provide the VM with the resources to add new material as well as make technical and aesthetic upgrades that keep the site fresh, evolving, and relevant to IEEE members, students, and the general public.



From the Songs in the Key of E exhibit – Robert Moog shows off a Moog synthesizer, a device he pioneered that creates sound electronically.

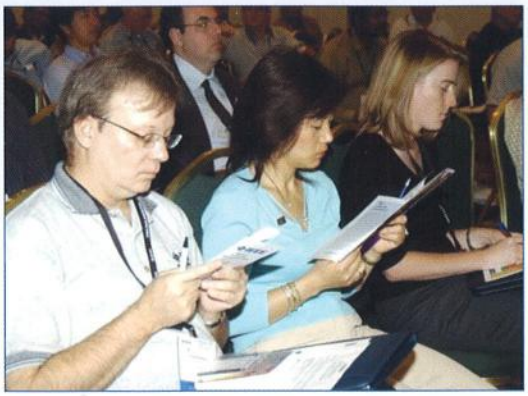
IEEE Volunteer Leadership Receives Training

By: Jim Howard, Chair, IEEE Sections Congress 2005 Steering Committee

In keeping with the IEEE Sections Congress 2005 theme "Promoting a World Class Volunteer Community", delegates from 81 countries representing 260 Sections came together in Tampa, Florida this past October. This Sections Congress saw the largest attendance ever with 947 total registrations. The purpose of the IEEE Sections Congress is three-fold: 1) leadership training; 2) networking; and 3) guiding the future of the Institute through the development and prioritization of recommendations for action.

Saturday morning started with each delegate assigned to one of the Core Track training sessions. The topics of the sessions included an IEEE Overview, Financial Management, Electronic Communications, and Products & Services. Through these sessions, each attendee received the leadership basics they need to take IEEE into the future, and information to assist their individual Sections and Chapters to provide its membership with continuing services.

"Promoting a World Class Volunteer Community"



Delegates prepare for a Core Track training session to begin.

Another important element of Sections Congress is the exhibits. Here, a delegate visits the IEEE Florida West Coast Section booth.