



The President's Perspective

Support of these projects would not be possible without the enthusiasm and contributions from people like you.

The IEEE Foundation is the philanthropic arm of the largest technical-professional society in the world. As such it has a unique opportunity and obligation to support activities that advance the proper use and understanding of the technologies our members have played such major roles in

the IEEE Foundation works to impact society by funding projects that will (1) improve education at all levels in mathematics, science, and technology, (2) preserve, research, and promulgate the history of IEEE's technologies, and (3) recognize outstanding



FUND NAME

IEEE UNIT

LEOS Aron Kressel Award

IEEE Lasers and Electro-Optics Fund Society

IEEE Robert N. Noyce Medal Fund

IEEE Awards Board

IEEE Dennis J. Picard Medal Fund

IEEE Awards Board

IEEE Life Members Graduate Study Fellowship in Electrical Engineering Fund

IEEE Awards Board

IEEE Internet Award Fund

IEEE Awards Board

The Chen-To Tai Fund

IEEE Antennas and Propagation Society

Santa Clara Valley K-12 Education Fund

IEEE Santa Clara Valley Section

IEEE Foundation President, Emerson Pugh (at left), presents Fred Andrews (right), retiring IEEE Foundation Board Member, with a Certificate of Appreciation for his seven years of service. The certificate reads "The Board of Directors expresses its sincere appreciation to Frederick T. Andrews for his many years of valued service on the Foundation Board since 1994, during which he served as Vice President from 1995 through 2000, and beginning in 1999 provided important guidance and support to the recently established Development Office in his role as the Foundation's first Vice President, Development."

developing. This obligation is honored in two ways: first, by awarding grants from the IEEE Foundation General Fund, and second, by serving as the Fund administrator for more than 100 Funds that support the educational and technical activities of IEEE units.

We are proud to announce that during 2000, the seven funds listed above were added to the Funds administered by the IEEE Foundation.

We are also pleased to announce that during 2000, the IEEE Foundation awarded over US \$700,000 in new grants from its General Fund in the areas of Education, History, and Awards, bringing the grand total committed for project in 2000 and 2001 to over US \$1.3 million. By providing financial support to worthy programs,

achievements of individuals and organizations in our professional areas. Support of these projects would not be possible without the enthusiasm and contributions from people like you.

In this issue of the *IEEE Foundation Focus*, you will find updates on a selection of projects funded by the Foundation that were made possible with your help. Additional updates and information can be found on our Web site at www.ieee.org/foundation. I welcome your comments and suggestions; please email me at supportieee@ieee.org.

With best wishes for the New Year,
Emerson Pugh
President, IEEE Foundation

IEEE Foundation helps to Bring Science & Technology to Life at the Benjamin Franklin House in London, England

By: Marcia Balisciano, Benjamin Franklin House

*"He found
electricity a
curiosity and
left it a science."*

Franklin biographer, Carl Van Doren

In Feb 2000, we received the exciting news of our grant from the IEEE Foundation supporting the recreation of Benjamin Franklin's laboratory. Every visitor to 36 Craven Street, where the great electrician lived for sixteen years on the eve of the American revolution, has learned of the IEEE Foundation's assistance in bringing the world's only remaining Franklin home to life as a lasting center for science.

The plans are to open this five story Georgian House to the public in January 2002 to celebrate Benjamin Franklin's 296th birthday. After opening, the House will incorporate a historical-theatrical tour, a sensory journey back to Franklin's momentous years in London using sight, sound, and even smell on the first three floors with an educational center on the top two floors. The tour will begin with an introductory historical music video that sets the scene: why Franklin in London, why 36 Craven Street, while introducing some of the characters influential in his London story.

Franklin's landlady's daughter, Polly Hewson, to whom he wrote some of his most important letters on science, and who was a second daughter to him, will take visitors through the House. The tour is set on Franklin's last night in London. Polly is not so much a guide as a

figure from history, thinking you, the visitor, are there to visit Franklin. There will be moments when Polly grows quiet and reflective, the lighting will change, an object is illuminated and more of the story of Franklin in London is told. As it is his last night, there is a sense of urgency and to 'buy time' - since you won't meet Franklin - Polly takes you on a tour of the House, which ends in the laboratory.

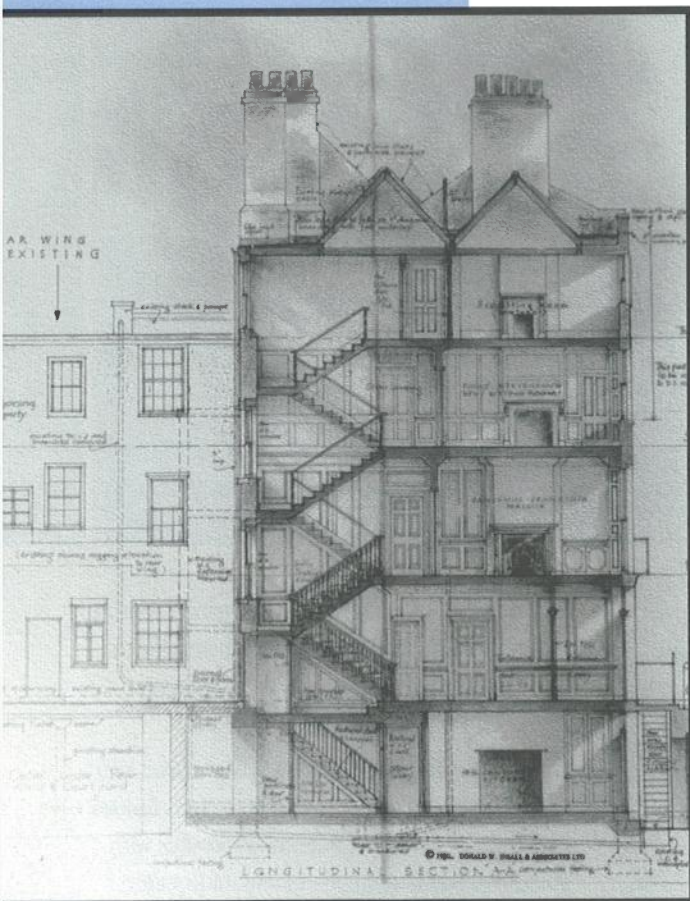
The laboratory will be filled with Franklin's experiments, including a replica of an electrostatic machine, which he used to advance knowledge of electricity and lightning rods will be set against one wall. We will also focus on other science he was doing at Craven Street: such as oxygen experiments with the great chemist Joseph Priestley, smoothing rough water with oil (hydrodynamics), canal depth explorations, the Franklin Stove, and investigations into the steam engine. The walls will be covered with early maps of the Gulf Stream, which he pioneered.

Visitors will discover that while Franklin's many innovations brought personal glory, it was never an end he sought (exemplary was his decision to forgo patents on his inventions). Rather his inquisitiveness was always in service of improving quality of life. All will be encouraged to think and question, rather than to expect ready answers.

With the IEEE Foundation's support it has been an exciting year. We will be working hard to continue and accelerate the success achieved so far and look forward to reporting back on our progress.

*"I have given
a loose to
imagination..."*

Benjamin Franklin



The IEEE Foundation's support will help to fill the laboratory (third floor) with Franklin's experiments and instruments.

IEEE Foundation Globalizes Inspirational Student Branch Congress

By: T. W. (Ted) Hissey, IEEE Director Emeritus and Secretary, IEEE Foundation

Students and young professionals are not only the future of IEEE - they are a very important and vital part of the present.

In this article, I would like to share with you a recent experience I had where the tremendous vitality and enthusiasm of this younger element of the IEEE membership really stood out. In May 2000, I had the privilege of participating in Student Branch Congress 2000 (SBC 2000). Held in Eindhoven, the Netherlands, SBC 2000 had 158 participants from 71 IEEE Student Branches representing 33 countries. The Congress was organized by the Region 8 Student Activities Committee (SAC) and executed by the Eindhoven IEEE Student Branch with financial support from IEEE Region 8, IEEE Regional Activities, IEEE SAC, and the IEEE Foundation.

This well planned and well executed event provided an interactive program with excellent documentation, while allowing time for exchanging ideas, general networking, and the all-important cultural exchange. Held at the modern Eindhoven

University facility, the students utilized all of the "state-of-the-art" electronic devices available. I had the opportunity to share some ideas with the group through a talk and discussion on the subject - "Extra Skills Required for the Young Engineers Entering the 21st Century Work Force."

The total enthusiasm, spirited exchange of ideas, and overall networking will be carried to the many Student Branches represented by the attendees. This exchange will certainly bolster the energy, image, and spirit of IEEE for the future. Dan Benigni, Past IEEE Vice President of Regional Activities said, "SBC 2000 was the most exciting and invigorating IEEE event in which I have participated."

A grant from the IEEE Foundation helped to make this a truly global event by supporting a portion of the basic budget of SBC 2000,

SBC 2000 participants share experiences about their IEEE Student Branch, University, and Country at the Intercultural Exhibition.



and also subsidizing the participation of 23 individuals from 12 Student Branches from outside of IEEE Region 8. Providing grants for activities such as the Student Branch Congress 2000, as well as other activities for Students and Young Professionals, underscores the mission of the IEEE Foundation and is important to the future of the IEEE.

Shaping the Future of the Profession through a Legacy Gift

By: Karen Galuchie, IEEE Development Office

One way you can help shape the future of the profession is by making a legacy gift in the form of a bequest to the IEEE Foundation. The bequest given by the estate of Alfred N. and Gertrude Goldsmith did just that; it seeded the cornerstone of the IEEE Foundation's grant making. Perhaps you would like to make a personal commitment that will ensure that bright, but disadvantaged electrical engineering students have access to scholarships or that the history of this great technology is not forgotten. Or you may wish to support the IEEE Foundation in its goal to support the advancement of technology and education. The IEEE Development Office is available to help you design a gift that will fulfill your personal goals and make certain that your legacy will make an impact on the profession. Your contribution will provide the critical support that will secure the future of the IEEE Foundation.

Bequests are among the most popular types of deferred gifts because they have a great impact and are revocable. Should your circumstances or goals change the bequest amount or ultimate designation can be easily altered. There are several ways to make a bequest to the IEEE Foundation. You and your attorney can decide which way is best for you. A member of the IEEE Development Office will be happy to provide sample wording for you to review with your attorney or financial advisor.

If you decide to include the IEEE Foundation in your will, please consider informing the IEEE Development Office. This helps the IEEE Foundation plan for the future and acknowledge donors during their lifetime. You can reach the IEEE Development Office by telephone at +1 732 562-3860 or by email at supportieee@ieee.org.

The IEEE Foundation and Ties Magazine Join Forces

By: Ken Maskell, Editor, *Ties Magazine*

Although we know that the best learning is done by building upon practical, concrete experiences, education is dominated by “theory first and foremost” approach to teaching. For example, a typical high school geometry or trigonometry curriculum emphasizes learning rules and formulae needed to pass tests. If there is time left after that is done, students may be exposed to contexts illustrating where and how that knowledge might be used to solve “real-world” problems. The “theory first and foremost” method is employed in most of our schools because it is the only style of teaching our current crop of educators has ever seen. It is the pedagogy that shaped their own education.

Engineers throughout the world intrinsically understand that context motivates problem solving and that problem solving supports learning. Recognizing that connection, professional engineering groups have tried to provide support for teachers in a number of ways. Most of those attempts were not successful on a national level because there were no national curricular standards. Without those standards, it was impossible to intimately relate activities and materials to the classroom curriculum. Because the teachers lacked relevancy to what they were required to teach, most did not use the materials that engineering societies were providing.

National standards for math, science and technology are now in place. For the first time, the framework exists that will allow the richness of “hands-on” learning to integrate math, science, and technology in US classrooms.

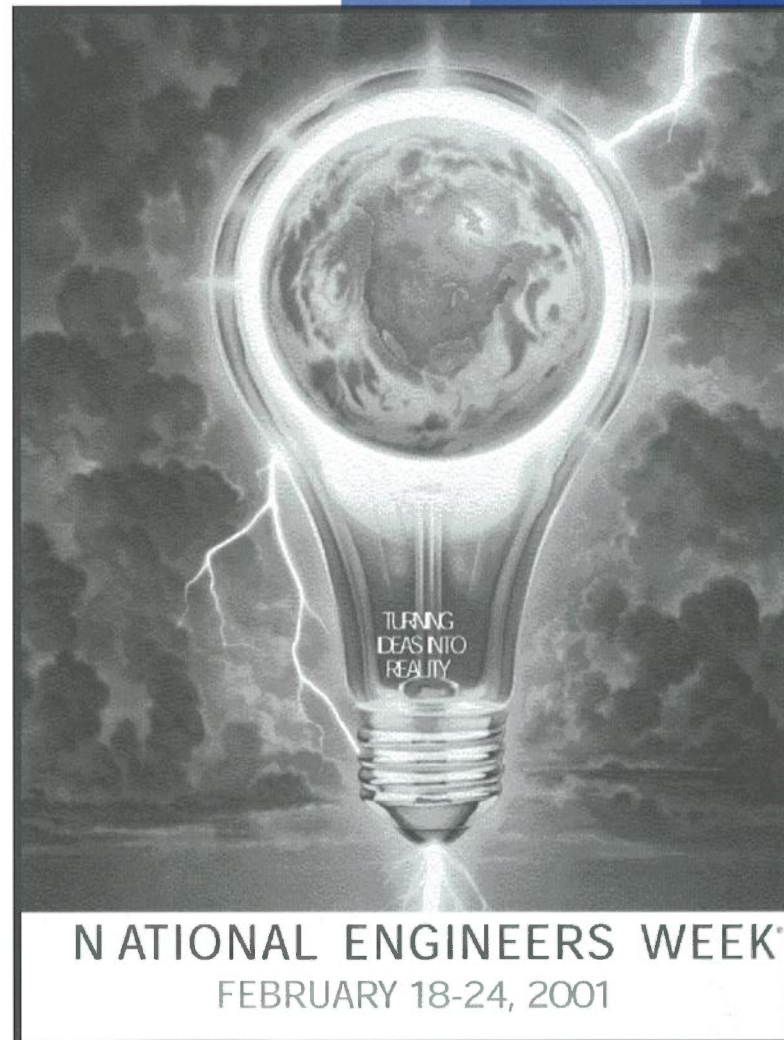
Ties Magazine, now in its twelfth year of publication, represents a long-term and continuing effort to help classroom teachers see that engineering-oriented activities can take place with children of all ages and play a central curricular role in attending to the new educational standards. Ties has 43,000 subscribers in the US, 99% of whom are classroom teachers.

The Ties staff is intimately involved with developing design and engineering based instructional materials. Over the past ten years, they have secured the funding for and coordinated the efforts of four National Science Foundation grants that support this type of curricular development for kindergarten through high school.

The IEEE Foundation and Ties Magazine are partners in a three year project entitled “Design and Technology Engineering (DATE) Materials K-12 Classroom” that will provide Ties readers with six, eight-page pull outs, three articles and three editorials which contain the type of pre-engineering and design materials described in this article. The majority of the materials will be modifications of support materials developed by the Institute of Electrical Engineers from the United Kingdom.

The first pull out will appear in the November / December 2000 issue. It is a 17" x 22" Engineering Week poster on the front side, with a list of the professional engineering associations and societies who support education on the back. The listing includes contact information to assist teachers in finding engineers in their local area who are interested in helping schools.

*theory
first and
foremost*



DATE Project's first pull out – an Engineering Week 2001 poster - to appear in the Nov/Dec 2000 issue of TIES magazine.



2000 Graduate Teaching Award

Haniph A. Latchman from the University of Florida in Gainesville, FL was the recipient of the 2000 Undergraduate Teaching Award. He was recognized "for innovative and inspirational teaching and advancing the use of information technology in education." This award, sponsored by the IEEE Foundation, was presented at the 2000 IEEE Frontiers in Education Conference in Kansas City, MO, USA on 21 October 2000.

2000 Undergraduate Teaching Award

Weng Cho Chew from the University of Illinois at Urbana was the recipient of the 2000 IEEE Graduate Teaching Award. He was recognized "for contributions to the inspirational teaching of graduate students, developing graduate curricula, and inculcating enthusiasm in graduate research in classical and computational electromagnetics." This award, sponsored by the IEEE Foundation, was presented at the 2000 IEEE Frontiers in Education Conference in Kansas City, MO, USA on 21 October 2000.



This is a tremendous accomplishment and illustrates a true dedication to the preservation of history

You Are Up to the Challenge

By: **Ramona M. Ponce**, Development Office Staff

Great News! Just two months after the "Friend-to-Friend History Challenge" was announced, the half way mark of \$50,000 was reached! The "Challenge" was a pledge made by History Center Trustee, Paul Baran to match, dollar for dollar, all gifts to the IEEE History Center Friends Program, between September 2000 and August 2001, up to a grand total of \$100,000. The Friends Program recognizes contributions to the annual operating budget of the IEEE History Center in the range of \$25-\$2500.

This is a tremendous accomplishment and illustrates a true dedication to the preservation of history. Look for the final results of the "Friend-to-Friend History Challenge" in the next issue of the IEEE Foundation Focus.

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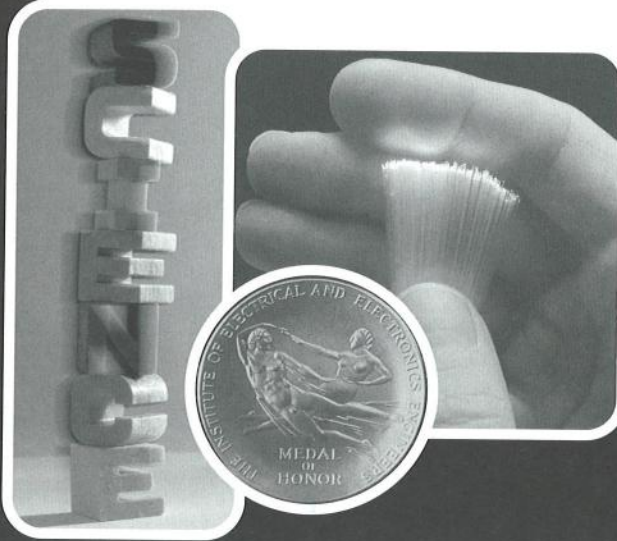
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- ◆ Keep engineers on the leading edge
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- ◆ Foster an appreciation of the impact of engineers on everyday life
- ◆ Recognize engineering achievements

You may be eligible to receive a grant from the IEEE Foundation.

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