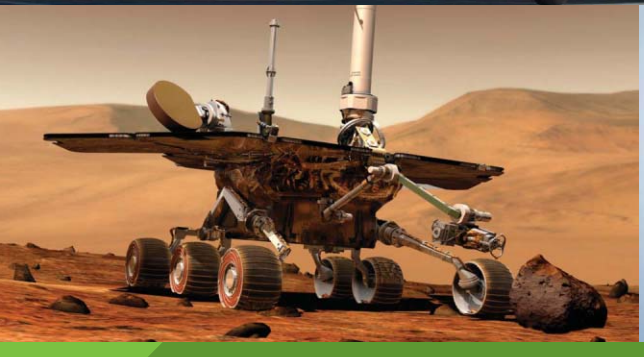
Annual Report

2001 2002 2003 2004 2005 2006 2007 2008 2009 **2010** 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020



IEEE
Advancing Technology for Humanity

Table of Contents

i	Who We Are
ii	2010 Highlights
1	Message from the President and the Executive Director
2	Serving Society
7	IEEE Milestones
8	Serving Members
12	Products and Services
16	Awards, Fellows and Honors
20	2010 Board of Directors
20	Management Council
21	Message from the Treasurer
21	Report of Independent Auditors
22	Financial Statements

The 2010 IEEE Annual Report is available online at:
www.ieee.org/about/corporate/annual_report.html

This Year's Cover...

The January 2011 issue of *IEEE Spectrum*, our association's award-winning magazine, inspired this year's cover. *Spectrum's* cover story—the most consequential innovations to come of age in the first decade of the 21st century—mirrors the contributions of IEEE members over the years to global society.

The drone aircraft, the planetary rover and the LED light bulb are each a technological tour de force that our members and others in the world's technical community had critical roles in developing and refining.

Nicola Tesla first demonstrated his "telautomaton"—a small boat operated remotely by radio—in 1898. His invention was rejected as too fanciful, but the value of unmanned, fully controllable and reusable combat vehicles came of age during the past decade. Planetary rovers, pioneered some 40 years ago, have emerged as an amazing exploration tool. They demonstrate that unmanned missions offer formidable rewards as technologists attempt to answer the most profound scientific question: Are we alone? LED lighting, another innovation cited by *IEEE Spectrum*, is expected to soon replace incandescent and fluorescent light bulbs. White LEDs last 25 times as long as Edison's bulbs, and 150 percent longer over compact fluorescent lights—and contain no toxic mercury.

We selected a wind farm as our fourth cover photo this year because a modernized electrical delivery system based largely on sustainable energy sources is one of the next areas of significant technological innovation that could be realized.

Previous Page | Contents | Zoom in | Zoom out | Front Cover | Search Issue | Next Page

Who We Are

MEMBERSHIP STATUS

Honorary Members	31
Fellows	6,531
Senior Members	32,703
Members	249,496
Associate Members	15,985
Student Members	62,349
Graduate Student Members	40,446
Total Membership	**407,541**

MEMBERS IN GLOBAL WORKFORCE

Industry	45.9%
Academia	25.9
Government	9.8
Self-employed	6.8
Retired	3.3
Unemployed	3.6
Other	4.7

AGE OF MEMBERS

Under 30	23.8%
30–39	18.3
40–49	20.4
50–59	19.0
60–69	11.1
70 and over	7.4

GENDER

Male	90.0%
Female	10.0

GEOGRAPHIC DISTRIBUTION

United States	51.4%
India, China, Pacific Rim	22.2
Europe, Middle East, Africa	18.0
Canada	4.2
Latin America	4.2

SOCIETY MEMBERSHIPS

5,223	IEEE Aerospace and Electronic Systems Society
8,507	IEEE Antennas and Propagation Society
2,118	IEEE Broadcast Technology Society
10,346	IEEE Circuits and Systems Society
50,218	IEEE Communications Society
2,696	IEEE Components, Packaging, and Manufacturing Technology Society
6,892	IEEE Computational Intelligence Society
75,156	IEEE Computer Society
3,417	IEEE Consumer Electronics Society
9,048	IEEE Control Systems Society
2,242	IEEE Dielectrics and Electrical Insulation Society
3,513	IEEE Education Society
4,197	IEEE Electromagnetic Compatibility Society
10,587	IEEE Electron Devices Society
9,321	IEEE Engineering in Medicine and Biology Society
3,488	IEEE Geoscience and Remote Sensing Society
5,429	IEEE Industrial Electronics Society
10,142	IEEE Industry Applications Society
3,656	IEEE Information Theory Society
1,193	IEEE Intelligent Transportation Systems Society
4,566	IEEE Instrumentation and Measurement Society
3,172	IEEE Magnetics Society
12,190	IEEE Microwave Theory and Techniques Society
3,342	IEEE Nuclear & Plasma Sciences Society
1,874	IEEE Oceanic Engineering Society
7,151	IEEE Photonics Society
7,324	IEEE Power Electronics Society
28,158	IEEE Power & Energy Society
964	IEEE Product Safety Engineering Society
1,197	IEEE Professional Communication Society
2,002	IEEE Reliability Society
8,121	IEEE Robotics and Automation Society
15,595	IEEE Signal Processing Society
1,919	IEEE Society on Social Implications of Technology
10,184	IEEE Solid-State Circuits Society
4,779	IEEE Systems, Man, and Cybernetics Society
2,294	IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society
4,436	IEEE Vehicular Technology Society
346,657	**Total**

51 percent of IEEE members belonged to one or more societies at year-end 2010.

FINANCIAL INFORMATION 2006–2010 (IN US$ THOUSANDS)

	Total Assets	Revenue	Net Assets
2006	$ 369,758	$ 330,823	$ 209,404
2007	427,496	339,561	246,686
2008	311,122	342,377	158,066
2009	380,153	389,660	229,157
2010	442,954	392,916	262,370

Sources: Members in Global Workforce data from Member Use of Internet Survey, 2010, and weighted to reflect the geographic distribution in the member population. Age and gender data are from IEEE Membership, as of December 2010. All other membership data are from the Annual Statistics of the IEEE - 2010.

2010 Highlights

JANUARY

Pedro Ray takes office as 2010 IEEE President, and Moshe Kam becomes 2011 President-elect.

FEBRUARY

IEEE introduces new tagline: Advancing Technology for Humanity.

Redesigned IEEE Xplore® digital library, with significant browse, search and personalization options, is launched.

Two eBook offerings—IEEE-Wiley eBooks Library and IEEE eBook Classics—provide members and customers with new research convenience.

MARCH

Revamped IEEE Web site represents scope of IEEE activities while also helping users find information faster and more easily.

IEEE Engineering in Medicine and Biology Society partners with American Medical Association for conference on individualized healthcare.

APRIL

More than 150 people from 33 countries attend IBM/IEEE-sponsored conference in Dublin on providing critical interdisciplinary skills for engineering students.

The *IBM Journal of Research and Development* becomes the second publication from a non-IEEE source available through IEEE Xplore®.

MAY

MyIEEE, the IEEE member portal, adds new personalization options and secure messaging services between members.

IEEE Member and IEEE Chief Technology Officer Alexander Pasik participates in U.S. White House conference on cloud computing.

JUNE

IEEE presents its prestigious Medal of Honor to Andrew J. Viterbi, developer of the Viterbi Algorithm and co-founder of QUALCOMM, Inc.

First IEEE Green Your World Challenge invites global participants to make simple changes that benefit the environment and humanity.

JULY

With the launch of E-Scientia, an IEEE-sponsored exhibit in Montevideo, Uruguay, students can experience real-time engineering challenges during simulated space travel.

AUGUST

IEEE Board of Directors approves approach to address open access to IEEE publications.

SEPTEMBER

Eta Kappa Nu becomes official honor society of IEEE.

OCTOBER

President Ray inaugurates IEEE's new India office in Bangalore.

The first worldwide IEEE Day inspires 75 celebrations on six continents.

IEEE.tv mobile Web site enables access to IEEE's popular Internet-based TV network using a smart phone.

NOVEMBER

In Singapore, IEEE relocates and expands its office to better serve Singapore's science and engineering research community.

DECEMBER

IEEE membership surpasses 400,000 mark with 407,541 members.

President Ray passes gavel to Moshe Kam, 2011 IEEE President.

Message from the President and the Executive Director

Challenges faced, obstacles overcome, expectations exceeded—that was the story of 2010 for IEEE.

It was a year that saw our already robust membership shatter the 400,000-member mark; a year when we made key strides in the development of a new business platform for IEEE and began an upgrade to our conference management systems. It also was a year when we launched a redesigned, user-focused ieee.org Web site and furthered our strategic global agenda through active engagement. IEEE opened an office in India, and moved our Singapore office to "Fusionopolis," the hub of that city-state's science and engineering research efforts, to better address opportunities in the Asia Pacific region.

2010 was about investments in IEEE's business and its future. To this end, IEEE made progress across the enterprise. Among our many achievements are the following:

- **The launch of an electronic membership.** This enables a reduced fee structure for members in certain developing nations who opt to receive online-only delivery of publications and membership materials.
- **A five-point plan to engage in the public dialogue among stakeholders in the scholarly publishing field on Open Access.** Among the key points of this plan were that Open Access could coexist with traditional publishing, and that public access is best done on existing platforms of publishers.
- **Tremendous developments in the IEEE Xplore® digital library platform.** In February, the debut of IEEE Xplore® 3.0 added a more robust search engine and personalization. A series of additional seamless upgrades and maintenance releases helped set the stage for the January 2011 introduction of our beta version of "next generation" interactive articles. 2010 also saw IEEE "go mobile" with the introduction of several products specially configured for mobile devices.
- **Twelve local Engineering Programs In Community Service (EPICS).** This new initiative, developed at Purdue University under the guidance of 2007 IEEE President Leah Jamieson, encourages IEEE sections and student branches to work with high-school students on engineering-related projects for non-profit or humanitarian organizations.
- **Strengthening the IEEE Standards Association's (IEEE-SA) leadership position in smart grid standards development.** In 2010, IEEE-SA finalized the globally recognized IEEE P1901™ standard for broadband over power lines for a range of applications including smart energy, transportation and local area networks. It also advanced toward its targeted final ballot in 2011 IEEE P2030™, the industry's first cross-disciplinary guideline for smart grid interoperability for the power, communications and information technology industries. In addition, the IEEE-SA and the State Grid Corporation of China signed a memorandum of understanding to support both entities' ongoing efforts in the creation of standards for smart grid and its supporting technologies.

These investments in IEEE's future and the many others in this report were made possible by our continued strong financial performance in 2010. Fiscal highlights of the year include:

- **Outstanding overall financial results,** with a net surplus of US$33.2 million, an operational surplus of US$22.1 million, and net investment gains of US$25.8 million.
- **A 9.7 percent increase in intellectual product revenues.** This was made possible by an array of strong areas, especially the continued value placed on these products by academic subscribers, rebounding corporate sales, IEEE eLearning Library enhancements and the launch of IEEE eBooks.
- **Seven consecutive years of growth.** A record-high membership of 407,541 capped off a year filled with accomplishments.

What lies ahead in 2011? Even greater investments of time, resources and expertise as we steer IEEE forward for the benefit of our members and our customers. In 2010, we placed IEEE on a path of possibility and opportunity; we will continue down that path, building achievement upon achievement, for many years to come.

Pedro Ray
2010 IEEE President and
Chief Executive Officer

E. James Prendergast
IEEE Executive Director and
Chief Operating Officer

Serving Society

Above, Left • The 460 participants in the first IEEE Innovative Smart Grid Technologies Conference (ISGT) in Europe assembled in the Gothenburg (Sweden) City Hall. Attendees at the October 2010 meeting represented 40 different nations. ISGT was sponsored by the IEEE Power & Energy Society and Chalmers University of Technology.

Above, Right, Top • At the IBM-IEEE conference in Dublin on reshaping engineering education, attendees explored how to prepare engineering and computer science students for the workplace. Here, (left) Tariq S. Durrani, 2010 IEEE Educational Activities vice president, moderates an expert panel composed of: IEEE Senior Member Elizabeth Burd, University of Durham, U.K.; IEEE Life Fellow Paul Penfield, Massachusetts Institute of Technology; and 2006 IEEE President Michael R. Lightner, University of Colorado.

COLLABORATING ON GLOBAL SMART GRID INITIATIVE

IEEE and other prominent organizations are collaborating on smart grid, a worldwide forum to create a modernized electrical delivery system that promises to revolutionize the production, delivery and use of electricity.

As a global organization, IEEE is ideally positioned to evolve standards, share best practices, publish developments and provide relevant educational offerings to further the smart grid. Launched in 2009, IEEE Smart Grid is enabling coordination among the IEEE Standards Association (IEEE-SA), IEEE societies, the IEEE Future Directions Committee and others involved in related research and development. In 2010, emphasis was on four areas: standards, conferences, publications and a Web portal.

Opposite, Right, Below • The IEEE International Symposium on Power Lines and Its Applications (ISPLC) in Rio de Janeiro was one of many IEEE conferences in 2010 that explored smart grid developments, standards, research and industry trends. Some of the participants in an ISPLC workshop are shown here.

Standards

IEEE-SA is involved extensively in smart grid standards development—from innovation to creation and market adoption. IEEE has approved or is developing or updating over 100 global standards addressing interoperability, powerline communications, integrating renewable energy and more. This includes developing industry's first guidelines for cross-discipline smart grid interoperability, IEEE P2030™. IEEE-SA delivered two new standards in 2010 that are expected to have critical roles in development and deploying smart grid technologies. The IEEE 1815™ Distributed Network Protocol (DNP3) standard for electric power systems communications improves device interoperability and strengthens security protocols. It was delivered in a record seven months. IEEE P1901™ Broadband over Power Line (BPL) standard is expected to be a key enabling technology for a wide range of applications including smart energy, transportation and local area networks.

Conferences

IEEE offered smart grid technical meetings around the world:

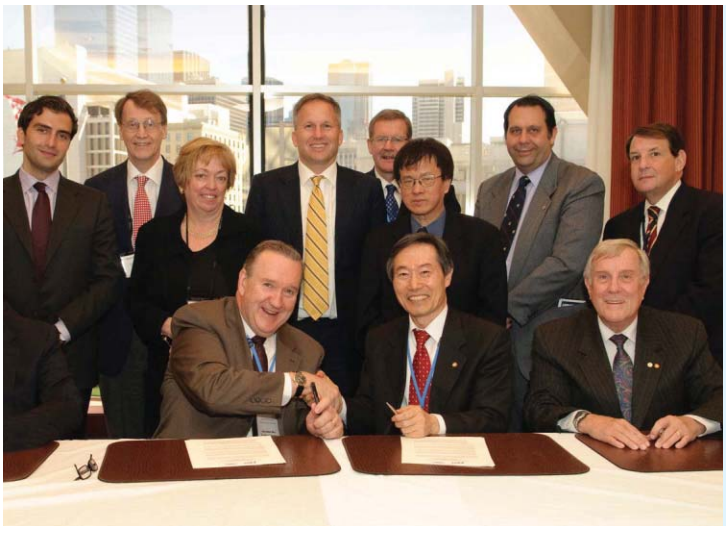
- The IEEE Power & Energy Society Smart Grid Conference in Sweden drew 460 attendees—60 percent of them from industry.
- More than 450 people from 30 nations attended the IEEE International Conference on Smart Grid, held in Gaithersburg, Maryland, USA, and sponsored by the IEEE Communications Society and 12 technical co-sponsors.
- The IEEE Smart Grid World Forum in Brussels attracted 350 people. Those who could not attend were able to view a virtual conference at a reduced fee.

Web Portal and Publications

The IEEE Smart Grid portal (http://smartgrid.ieee.org) provides a wide range of smart grid information including IEEE conferences, publications, standards and educational tutorials.

The online *IEEE Smart Grid Newsletter* features practical and timely technical information and commentary on smart grid developments and deployments around the world. The newsletter brings together experts, thought leaders and decision makers to exchange information and discuss related issues.

Two new, multi-disciplinary journals dedicated to smart grid and sustainable energy research and implementation strategies were introduced: *IEEE Transactions on Sustainable Energy* and *IEEE Transactions on Smart Grid.*



At the East West Institute's (EWI) Worldwide Cybersecurity Summit in May 2010 in Dallas, Texas, USA, John Edwin Mroz, EWI founder and president, and Byeong Gi Lee, IEEE Communications Society president, shook hands after signing a new collaboration agreement. Seated with them is Curtis Siller, IEEE Communications Society president emeritus. Standing, from left: Vartan Sarkissian, EWI; Peter Castenfelt, Archipelago Enterprises; Karen Mroz, Middle East Children's Institute; Karl F. Rauscher, IEEE Senior Member and EWI Distinguished Fellow; Greg Austin, EWI; Chi-Ming Chen, IEEE Senior Member and IEEE Communications Society; James Isaak, IEEE Senior Member and IEEE Computer Society president, and Robert Rose, Thomson Reuters. The conference, co-sponsored by the IEEE Communications Society, brought together government and business leaders to explore new measures to ensure the security of the global digital infrastructure. **Photo: Steve Foxall**

IEEE HUMANITARIAN EFFORTS SPAN A RANGE OF PROGRAMS

IEEE is continuing to deliver on its core value: service to humanity.

In early 2011, IEEE, ASME (American Society of Mechanical Engineers) and Engineers Without Borders, USA launched Engineering for Change (E4C). This new Web site provides engineers, technologists, non-governmental organizations and local community advocates with the tools to address humanitarian challenges.

The platform will enable members of the E4C community to work together in designing, applying and sharing knowledge to develop technical solutions to these challenges for local communities worldwide. Other notable progress in advancing this core value included:

- Engineering Projects in Community Service (EPICS)—IEEE volunteers mentor IEEE student and graduate student members as they work with local high-school students on engineering projects that help the community. At year-end 2010, EPICS was operating in more than a dozen locations around the world thanks to IEEE involvement. The program was created in 1995 at Purdue University by Leah Jamieson, dean of engineering and 2005 IEEE president.

- In the second year of the IEEE Presidents' Change the World Competition, a student team from Imperial College London won first prize of US$10,000 for a hydro-powered generator that brought electricity to 60 households in a remote village in Rwanda and provided employment opportunities to the community. A team from California Institute of Technology and the University of Southern California took the US$5,000 second prize for a low-cost, portable system that detects the presence of heavy-metal pollutants in outdoor and indoor environments.

One of more than a dozen Engineering Projects in Community Service (EPICS) around the world is in Cape Town, South Africa. IEEE student branch members at the University of Cape Town taught students from Thandokhulu and Westford secondary schools the basics of wind power, then helped them design and build a wind turbine out of scrap material to generate power for a local village. Not only did the students build a prototype that could deliver some 50 watts, but many were inspired to consider an engineering career.

2010 IEEE President-elect Moshe Kam presented the US$10,000 IEEE Presidents' Scholarship to James Sinclair Popper at the annual Intel International Science and Engineering Fair in San Jose, California, USA. Popper, then a senior at Marlborough College in the United Kingdom, was recognized for his CookerSmart project, a smoke detector designed for the kitchen. Unlike traditional smoke detectors, which do not function effectively in kitchens, CookerSmart uses an innovative method to sense fires in their infancy, identify the infra-red flicker of the flame, and then analyze and respond to specific frequency bands of flame flicker.

In May 2010 in Beijing, SGCC Vice President Du Zhigang and IEEE Staff Executive, Corporate Strategy Matthew S. Loeb signed a new Memorandum of Understanding. In addition to smart grid, the new agreement includes cooperation on ultra high voltage (UHV) DC transmission and new projects of significant value to the Chinese and international communities. Also shown in this photo are, from left: Zhang Huijun, SGCC Smart Grid Department; Guo Guochuan, SGCC chief economist; Shu Yinbiao, SGCC executive vice president; W. C. Adams, IEEE-SA president; Judith Gorman, IEEE-SA managing director; and Paul Nikolich, Don Wright and James Hughes, all 2010 IEEE-SA Board of Governors members.

IEEE STANDARDS ASSOCIATION (IEEE-SA) MARKS 2010 WITH INTERNATIONAL OUTREACH, MAJOR ANNIVERSARY AND "GET" STANDARD OFFER

A globally recognized standards-setting body, IEEE-SA is participating in shaping the framework of standards and protocols for smart grid, a worldwide effort that will use information technology to deliver next-generation electricity efficiently, reliably and securely.

In Bahrain, IEEE-SA hosted a full-day standards workshop for more than 100 participants during the IEEE Energy Conference 2010, an international forum on the creation of a global sustainable energy infrastructure.

In China, IEEE-SA signed a Memorandum of Understanding with State Grid Corporation of China (SGCC), the world's largest electrical utility company. The two organizations will cooperate on areas of mutual interest, including smart grid. Other activities included IEEE 802 meetings organized by the Shanghai Institute of Microsystem Information Technology and the first meeting of test technology for a Household Appliances Study Group in Qingdao.

During 2010, IEEE-SA celebrated the 30th anniversary of the IEEE 802® LAN/MAN Standards Committee that developed interoperable network standards for computers and office equipment in local and metropolitan networks, and groundbreaking standards for the Ethernet, Wi-Fi and Bluetooth.

IEEE-SA also launched Get IEEE 1685™, a funded program that enables users to download the standard at no charge. IEEE 1685™ is used in highly automated design environments and provides industry with an easier, more affordable approach in using intellectual property blocks than previously available. The standard is based on material developed by The SPIRIT Consortium, now part of Accellera, an industry organization. The copyright was transferred to IEEE to aid the completion of a standard that would be widely accepted by industry.

E-Scientia, an interactive exhibit for pre-university students that demonstrates some of the challenges of space flight, was dedicated in July 2010 in Espacio Ciencia, Uruguay's science and technology museum in Montevideo. A large structure built to resemble a space ship, E-Scientia is equipped with the latest electronic equipment that would-be space travelers use to solve typical problems concerning energy, monitoring and detection, environmental sensing, and communication, among others. Led by IEEE Senior Member Marcel Keschner, a team of Uruguayan IEEE members conceived and built the exhibit. At the dedication, from left: IEEE Member Nicolás Daoudian; IEEE Member Alejandro Lagos; IEEE Senior Member and 2010 IEEE Uruguay Section Chair Miguel Aumento; Uruguay Vice Minister of Education & Culture Maria Simon; Uruguay Senator and First Lady Lucia Topolansky; IEEE 2010 President-elect Moshe Kam; Keschner; and IEEE Senior Member Horacio Lasala.

RESHAPING ENGINEERING EDUCATION TO MEET GLOBAL INDUSTRY NEEDS

With IBM as its partner, IEEE is working to redesign engineering education to provide critical interdisciplinary skills such as leadership, communications and management for tomorrow's engineers.

In April in Dublin, more than 150 representatives from academia, engineering associations, governments and high-tech companies in 33 countries explored how to prepare engineering and computer science students for the workplace during the next 15 years.

In other programs to help improve worldwide engineering education:

- At Tianjin University in China, more than 190 educators and government officials attended an IEEE conference on reforming higher engineering education. Topics ranged from trends in international cooperation to accreditation.

- Technical English workshops designed for world regions where English is not the native language were held for the first time in Beijing and in Abu Dhabi, United Arab Emirates, as well as in St. Petersburg, Russia, where IEEE launched the program in 2007.
- The Caribbean Council for Engineering and Technology, an independent accrediting body that IEEE assisted with planning, programming and funding, prepared to conduct its first accreditation visit in early 2011 at the University of the West Indies in Trinidad.

The value of TryEngineering.org was evident in 2010 with more than 6.2 million visitors – a 20 percent increase from the previous year. Many new features and expanded, multi-media content were added to the Web site, which was created by IEEE and IBM for students, parents, teachers and school counselors. Content added during 2010 includes 15 new lesson plans for a total of 86 available at no charge to teachers, a solar auto racing game and enhancements to the "Find a University Feature." Besides English, TryEngineering.org is available in seven other languages: Chinese, French, German, Japanese, Russian, Portuguese and Spanish.

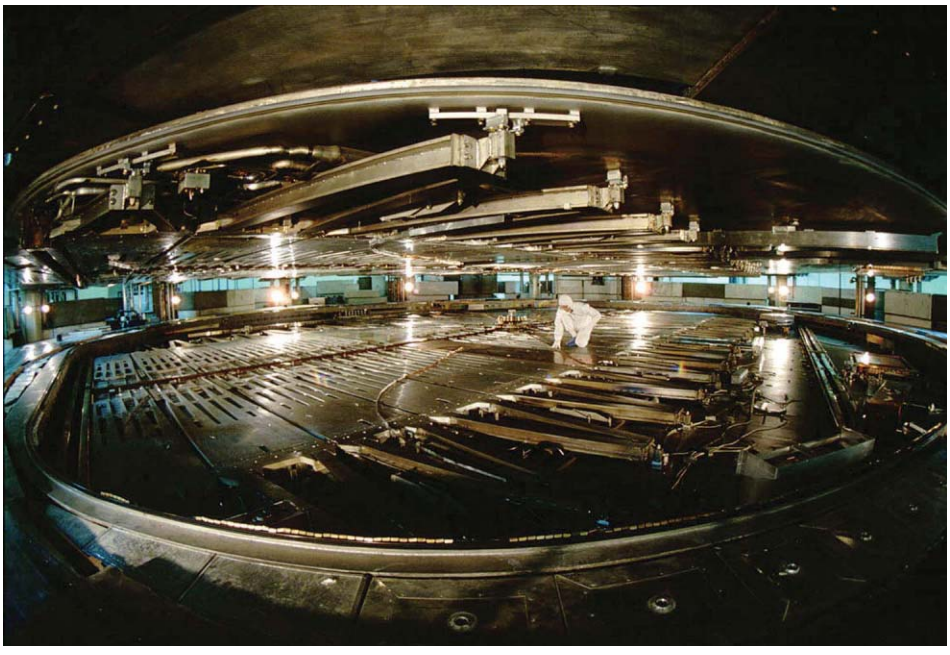
IEEE MILESTONES

The IEEE Milestones in Electrical Engineering and Computing program added 11 exceptional historical achievements to the more than 100 recognized around the world since the program's inception in 1983. In addition to those featured here, all IEEE Milestones are described at www.ieeeghn.org.

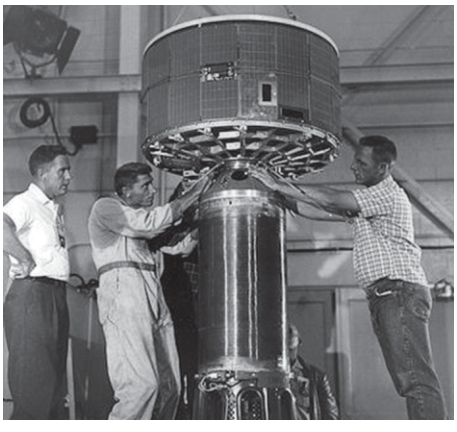
Discovery of Radio Conduction (Branly Coherer), 1890. At the Institut Catholique de Paris, Édouard Branly discovered radioconduction, now called the Branly Effect, which led to the first practical wireless signal receiver. Branly's discovery revolutionized communication; only 16 years later, Guglielmo Marconi demonstrated the first wireless transatlantic communication.

Commercialization and Industrialization of Photovoltaic (PV) Cells, 1959–1983. Starting in 1959 with research into monocrystal PV cells, Sharp Corporation in Nara and Osaka, Japan, pioneered the development and commercialization of such cells for a variety of consumer products including the world's first transistor radio and first PV-installed calculator and wristwatch.

Invention of Public-key Cryptography, 1969–1975. Underpinning critical standards for the Internet, this form of secure communication was discovered by researchers James Ellis, Clifford Cocks and Malcolm Williamson while working at the Government Communications Headquarters in Cheltenham, England. Others published well-received papers about similar discoveries before their top-secret work was declassified in 1997.



During maintenance, the lid of the cyclotron vacuum tank can be raised to permit access. The lone figure near the center of the photo provides a sense of scale.



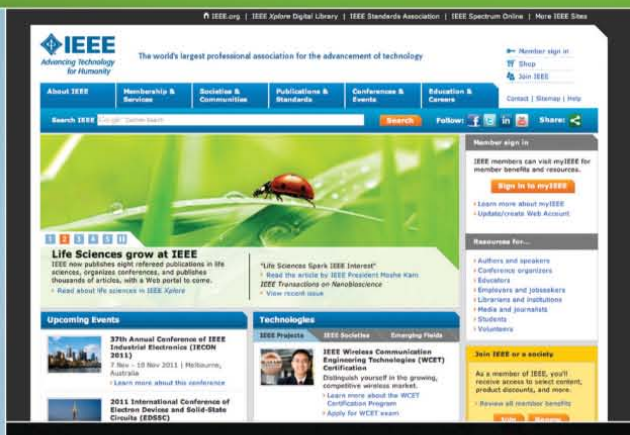
Workers make final adjustments to TIROS 1 before the meteorological satellite was launched into orbit in 1960.

TIROS 1—Television Infra-Red Observation Satellite, 1960. With the former RCA Labs in Princeton, NJ, USA, the National Aeronautical and Space Administration launched TIROS 1 to capture and transmit video images of Earth's weather patterns. The success of the world's first meteorological satellite expanded the use of satellite video technology for environmental and related applications.

First Working Laser, 1960. A transformative 20th century technology, the laser was developed at Hughes Research Lab, Malibu, CA, USA. It is critical to more than 55,000 patents granted in the United States alone. Applications range from telecommunications, manufacturing, and medical diagnostics and surgery to environmental sensing, space exploration and entertainment.

The TRIUMF Cyclotron, 1974. The first 500 MeV proton beam was extracted from the cyclotron at the TRIUMF Laboratory, in Vancouver, British Columbia, Canada's national laboratory for particle and nuclear physics. TRIUMF has used proton beams and secondary beams to conduct pioneering studies that have advanced nuclear physics, particle physics, molecular and materials science, and nuclear medicine.

Serving Members



Above, Left • 2010 IEEE President Pedro Ray lights a traditional celebratory lamp at the dedication of IEEE's office in Bangalore. From left: Matthew Loeb, IEEE Staff Executive, Corporate Strategy, and IEEE Senior Member Mini S. Thomas, the 2010–2011 vice chair for Member Development, IEEE Membership and Geographic Activities.

Above, Right, Top • IEEE's Web site, IEEE.org, features a dynamic, visually appealing new design that helps users locate what they're seeking faster than ever. Introduced in March 2010, the new home page also has improved navigation to permit easy movement between different IEEE sites.

NEW OFFICE OPENS IN INDIA; SINGAPORE EXPANDS OPERATIONS

In a lamp lighting ceremony on 29 October, IEEE President Pedro Ray, along with local IEEE volunteers, members and staff, inaugurated IEEE's India office in the central business district of Bangalore.

The location was selected to provide IEEE members and the technology community in India with educational and standards-oriented services and programs. The office also will address professional development and accreditation, and will provide information to members, technology-oriented local corporations and government entities about standards development and implementation, and other activities that advance the profession.

Opposite, Right, Below • Eta Kappa Nu, also known as HKN, a nonprofit public-service organization with nearly 200 university chapters, in 2010 became the honor society of IEEE. The merger, which formed IEEE-HKN, has expanded the organization's operations and chapters beyond North America. Celebrating the merger are, from left: IEEE Foundation President Richard J. Gowen, 2009 IEEE President John R. Vig, and then IEEE-HKN President Bruce A. Eisenstein. Gowen and Eisenstein also were, respectively, 1984 and 2000 IEEE presidents.

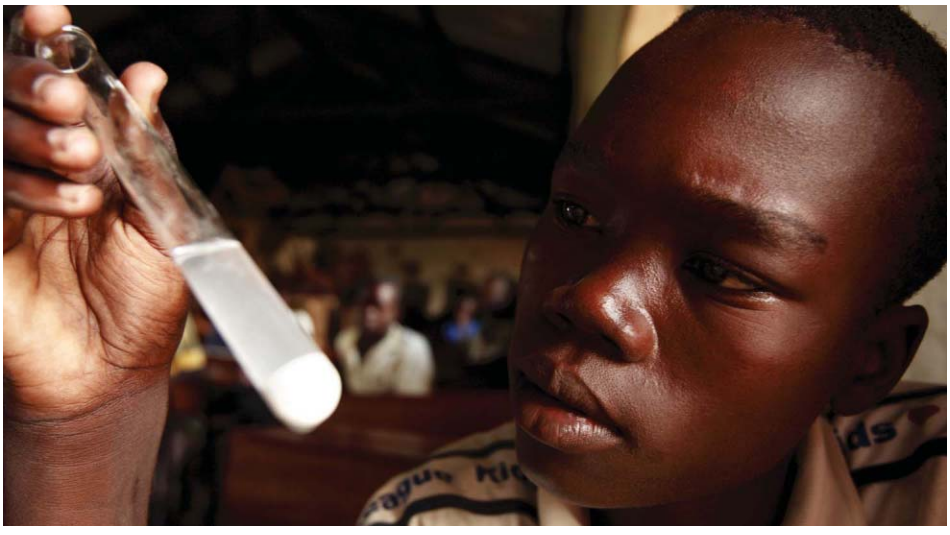
In Singapore, IEEE relocated its office to Solaris@Fusionopolis to be at the heart of Singapore's science and engineering research community. The move permits IEEE to expand its services for the research and development community and provides greater support for growing membership and activities in the Asia Pacific Region. IEEE planned and organized the move in collaboration with the Agency for Science, Technology and Research, Singapore's lead public research agency, and the Singapore Economic Development Board, the top government agency charged with enhancing Singapore's position as a global business center.

IEEE also has offices in Beijing and Tokyo.

REDESIGNED IEEE WEB SITE REFLECTS THE DYNAMIC IEEE BRAND

How do you present the scope and excitement of the world's largest technical professional association to the more than five million users from over 200 countries who visit the IEEE Web site each year? That was the challenge facing IEEE's Corporate Web team, whose two-year effort was introduced to a global audience in March 2010.

IEEE.org features a dynamic, visually appealing new design that helps users find the information and resources they want faster and more easily. The result of extensive research and testing, the site now more fully represents the breadth of IEEE and serves a broader range of users.



This photo is part of a fast-paced video in 2010 that helped to introduce the IEEE tagline, "Advancing Technology for Humanity." The tagline was selected after extensive worldwide research among potential audiences. The video illustrates how the technological contributions by IEEE members benefit the world.

The gateway offers a more consistent user experience and an improved look and feel that better reflects the IEEE brand. The new home page also has improved navigation that permits easy movement between primary IEEE sites.

PUBLIC VISIBILITY CONTINUES BRAND AWARENESS, THOUGHT LEADERSHIP EFFORTS

The IEEE Public Visibility Initiative continued to build awareness in 2010 for IEEE and recognition of the organization as a thought leader on prominent issues.

The goal of this multi-year communications program is to raise IEEE global visibility and increase public understanding of how engineering, computing and technology benefit humanity.

IEEE Tagline

"Advancing Technology for Humanity" was introduced in 2010 as IEEE's new tagline—a concise reminder that members' contributions in engineering and other technology areas are helping to create a better tomorrow.

The tagline was launched with a fast-paced video illustrating how innovations by IEEE members positively affect the world. The tagline was selected after extensive global research among pre-university students, university students, professionals and members.

Thought Leadership

To position IEEE as a thought leader on major global issues, IEEE members were featured in expert forums throughout the year around the world. During separate visits to the White House, IEEE Member and IEEE Chief Information Officer Alexander Pasik and IEEE Member and Executive Director/Chief Operating Officer E. James Prendergast discussed the future of cloud computing and smart grid standards, respectively, with administration officials and representatives from leading technology organizations and companies. In Japan, Dr. Kazuhiro Kosuge, IEEE Fellow and president of the IEEE Robotics and Automation Society, discussed the future of robotics at a press seminar attended by 19 journalists. In London, IEEE Fellow Stuart Lipoff addressed the IEEE 3DTV

Conference, the premier global forum about new research and technological advances on 3D television.

The Brand Ambassadors Program, in which IEEE members who are leaders in the digital world offer their insights on technology topics, was launched in late 2010. Early results include news articles on technology innovation and global competitiveness featuring such luminaries as IEEE Life Fellow Norman Augustine and IEEE Fellow Sophie Vandebroek.

Public Relations Campaign

The global PR campaign continued to cover timely technical topics of IEEE interest, ranging from healthcare and engineering education to consumer electronics, energy, the environment, security and earth observation. News coverage quoting IEEE experts increased more than 30 percent over the same period in 2009 on these topics, and IEEE experienced a 24 percent increase in media inquiries.

IEEE.tv MOBILE WEB SITE WINS PRESTIGIOUS AWARD, GAINS USERS

Introduced in October 2010, a Web site that enables access to IEEE's popular Internet-based TV network using a smart phone won the prestigious 2010 Jesse H. Neal Award for Mobile Devices in March 2011. The Neal Awards are among the most coveted honors for the U.S. business media industry.

Users of the iPhone®, iPod Touch® and devices that run on the Android™ operating system had been able to access the IEEE.tv site through their portable devices for some time; however, the mobile version of IEEE.tv has a simpler design that makes it easier to load, view and navigate on the small displays. Smart-phone users can also see screen shots and quick descriptions of videos without having to zoom in or wait for new pages to load. More than 300 videos are available.

Left, IEEE Member Alexander Pasik, who is IEEE Chief Information Officer, joined other representatives from leading technology organizations for a White House meeting to discuss the future of cloud computing. With him, from left: IEEE Fellow Dan Reed, Microsoft® corporate vice president, Technology Strategy and Policy and Extreme Computing Group; Patrick Gallagher, director, National Institute of Standards and Technology; Nick Combs, chief technology officer, EMC Federal; and Joe Bhatia, CEO, American National Standards Institute. Pasik's visit marked the third White House invitation to an IEEE leader in a year.

IEEE COLLABORATES WITH MICROSOFT® TO HELP SOFTWARE DEVELOPERS

IEEE and Microsoft Corp. are partnering to offer student and graduate student members free access to 300 of Microsoft's development software titles, free software training, and the ability to learn about job opportunities at major software companies. IEEE Student Members can receive free training on Microsoft's development software on the company's "Students to Business" Web site, which also offers links to internships and jobs at Microsoft and its partners. In addition, students can access career advice posted in the site's Career Resources section, and utilize opportunities to learn about career-related topics from Microsoft developers.

As part of the agreement, Microsoft is raising awareness of IEEE at some of the company's events. At Microsoft's Imagine Cup 2010 World Finals in Warsaw, IEEE Fellows were judges for the competition in which students vied to solve some of the world's toughest problems by applying software and gaming, as well as embedded sensors and other technologies.

IEEE-USA's 2010 Government Fellows contributed their technology expertise and experience to U.S. policymakers while learning about the public policy process. From left: IEEE Senior Member John (Jack) Cederquist worked on energy and environmental issues for Senator John Tester; IEEE Senior Member L. Jean Camp served on the staff of Congressman Bob Etheridge; and IEEE Senior Member Norman Lerner was a senior advisor to the U.S. Department of State's CITEL/Organization of American States (Inter-American Telecommunication Commission).

Previous Page | Contents | Zoom in | Zoom out | Front Cover | Search Issue | Next Page

A monumental celebration in many respects, the first IEEE Day in Egypt was also organized to honor the 55th anniversary of the IEEE Egypt Section. Some 250 members from throughout the nation met in Cairo, where the festivities included an excursion to the nearby Sphinx and Pyramids.

FIRST IEEE DAY CELEBRATION SPANS SIX CONTINENTS

IEEE Member Salima Kaissi's proposal for an annual worldwide IEEE Day sparked 75 celebrations in October 2010 involving thousands of people on six continents.

In Uruguay, for example, members of that nation's IEEE section celebrated by holding several lectures, while student members at the Princess Sumaya University for Technology in Amman, Jordan, conducted events promoting Linux and other open-source software. Kaissi's idea was one of the winning entries in the 2010 IEEE Member and Geographic Activities (MGA) Challenge that invited ideas for projects that would provide products and services and increase the value of IEEE membership. Kaissi was inspired by the global 125th IEEE anniversary celebration in 2009.

BELARUS, NEW ZEALAND, ESTONIA TEAMS WIN IEEEXtreme 4.0 CONTEST

A team from Belarusian State University, Minsk, Belarus, won first place in the 2010 IEEEXtreme, the annual 24-hour online competition for Student Members. A team from the University of Auckland, New Zealand, took second place, and another, from the University of Tartu, Estonia, took third place.

The 755 participating teams were composed of nearly 2,500 IEEE Student Members in 50 countries. Each team was composed of up to three Student or Graduate Student Members and was given a set of 17 programming problems and four bonus problems to solve. Teams could tackle as many as they liked, but the more they answered, the more points they could score.

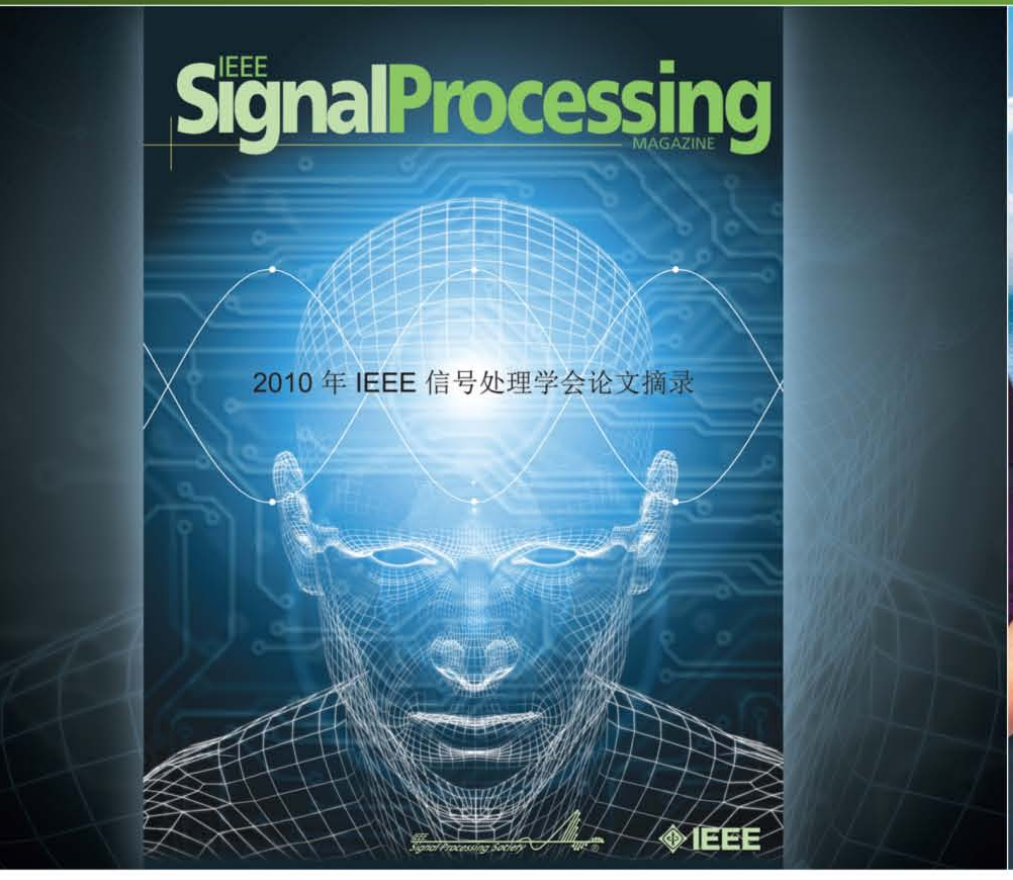
The Belarus team completed all the problems correctly in 18 hours. Each team member received an all-expenses-paid trip to an IEEE technical conference of his or her choice.

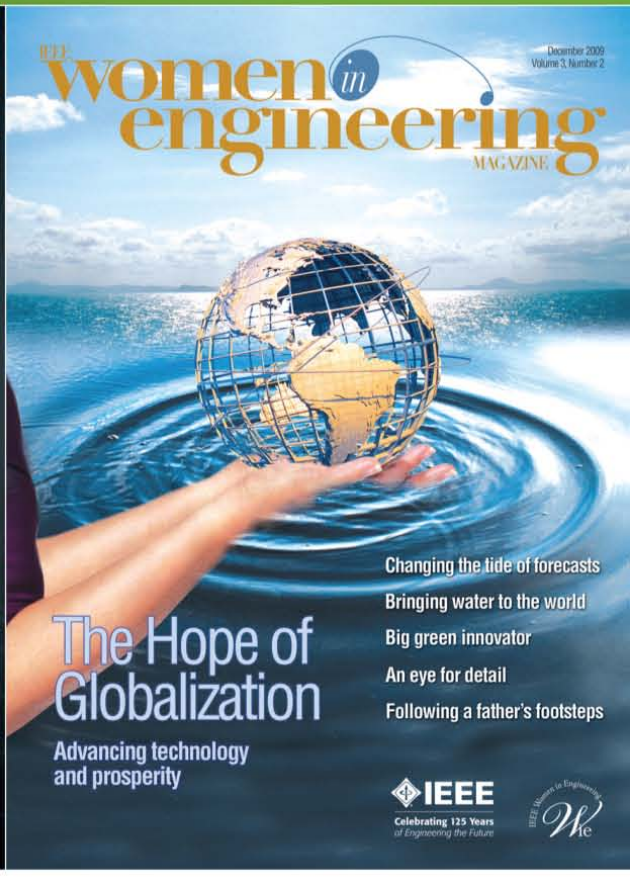
FOCUSING ON SUPPORT FOR MEMBERS' CAREERS AND ENGAGEMENT

In supporting the public policy and career interests of U.S. members and all U.S. engineers, IEEE-USA in 2010 provided career assistance to U.S. engineering and computer professionals, as well as supporting entrepreneurs and consultants. The Washington, D.C.-based unit also enhanced its emphasis on member engagement and public awareness through efforts such as these:

- A panel discussion on future engineering skills during the Georgia Institute of Technology Future MediaFest presented recommendations on how graduating engineers and mid-career professionals can adapt to the digital era for greater success.
- Twenty-three eBooks were published and a series of 21 well-attended webinars on career and professional topics were conducted, including webinar collaborations with IEEE Women in Engineering, IEEE Graduates of the Last Decade, the *IEEE Spectrum* Job Site and entrepreneurial expert Dr. Dileep Rao.
- *IEEE-USA in Action*, a quarterly, online publication, was launched to keep members better informed about programs, products, services and activities.

Products and Services





Above, Left • The first IEEE publication in Chinese, this special issue of *IEEE Signal Processing Society Magazine* was distributed in 2010 at the society's International Conference on Image Processing in Hong Kong, and was also available through the society's online newsletter. This Chinese translation is the first step in the society's efforts to enhance its visibility among non-English speaking audiences. According to the June 2010 *Journal Citations Reports*, which measures the frequency of journal citations in research, *IEEE Signal Processing Society Magazine* ranks highest among all electrical and electronics journals.

Above, Right • The November 2009 issue of *IEEE Women in Engineering Magazine* received top honors in 2010 for "One-of-a-Kind Green Publications" from APEX Awards for Communications Excellence, a U.S.-based competition. An article in that same issue, "The Popovic Sisters: Following a Father's Footsteps," by Heather Wax, also was honored in the interviews and personal profiles category.

IEEE PUBLICATIONS CONTINUE TO LEAD IN VALUE

IEEE continues to maintain a healthy lead in technical journal citations, reinforcing the credibility and technical depth of these publications.

The annual *Journal Citation Report* (JCR), which ranks the frequency of journal citations in research, showed that IEEE publishes 16 of the top 20 journals in electrical and electronics engineering, nine of the top 10 journals in telecommunications and six of the top 10 journals in computer science, hardware and architecture. JCR is published by Thomson Reuters.

In March 2011, a related report showed that IEEE journals and conference proceedings received over 127,000 patent citations—nearly three times as many as any other publisher. The report, which examined U.S. patents from 1997 through 2010 by the top 25 patenting organizations, was conducted by 1790 Analytics LLC, a U.S.-based consulting firm that analyzes patent trends for the investment community.

IEEE Xplore® Digital Library Redesign a Hit with Users

The redesigned IEEE Xplore® digital library has been enthusiastically accepted by its users—and gained many new ones—since it was launched in February 2010.

In March 2010, the first full month of operation for the redesigned site, usage hit an all-time high of 8.5 million PDFs downloaded by users. In addition, monthly usage averaged a record 7.3 million. Total downloads from the site exceeded 86 million for the year.

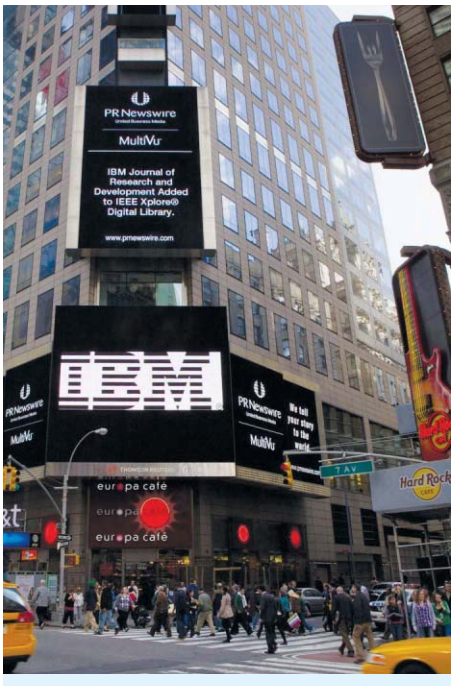
Following the most significant redesign since IEEE Xplore® was launched in 2000, the site gives users new browse options and significantly improved search capabilities. New personalization features allow individual users to create and save their browse and search preferences, save individual search queries and receive alerts via email or RSS feed whenever a new article is posted that matches their saved searches.

Also in 2010, the *IBM Journal of Research and Development*, which includes the *IBM Systems Journal*, became the second major addition from a non-IEEE source available through IEEE Xplore®. Since 2009, The American Institute of Physics/ American Vacuum Society (AIP/AVS) Applied Physics Library has provided users with access to full-text articles from five AIP/AVS journals.

Open Access Plan Approved

The IEEE Board of Directors approved an approach in August to address open access to IEEE publications. Open access is a movement to make scholarly content available through the Internet at no cost to users.

IEEE Magnetics Letters, newly published in 2010, and *IEEE Photonics Journal* already allow authors to select open access by paying a per-article publication fee. The IEEE Open Access program, to be formally introduced in 2011, will extend this option to all IEEE journals. In IEEE's experimental approach, known as hybrid open access, paid subscriptions will continue to support the overall publishing program, but articles supplemented by author fees will be free through IEEE Xplore®.



An electronic sign in New York City's Times Square announced the news when the prestigious *IBM Journal of Research and Development* became the second major addition from a non-IEEE source to be offered through IEEE Xplore®.

Five New Publications Introduced

In addition to *IEEE Magnetics Letters*, a rapid-publication, primarily electronic journal published by the IEEE Magnetics Society, these four other IEEE publications were introduced in 2010:

- *IEEE Transactions on Smart Grid* is a cross-disciplinary publication on energy generation, transmission, distribution and delivery sponsored by the IEEE Communications, Computational Intelligence, Computer, Control Systems, Industrial Electronics, Industry Applications, Instrumentation and Measurement, Power Electronics, Power & Energy, and Signal Processing societies.
- *IEEE Transactions on Sustainable Energy* publishes research on energy generation, transmission, distribution and delivery and is sponsored by these societies: Industrial Electronics, Industry Applications, Instrumentation and Measurement, Oceanic Engineering, Photonics, Power Electronics, Power & Energy, and Social Implications of Technology.
- *IEEE Biometrics Compendium* is the first IEEE virtual journal and is a collection of previously published IEEE papers chosen by biometrics experts, with topical commentary from technology experts. It is sponsored by the IEEE Biometrics Council.
- *IEEE Transactions on Affective Computing* is an archival journal on the design of systems to recognize, interpret and simulate human emotions. The IEEE Computer Society is the sponsor.

IEEE MEMBERSHIP SURPASSES 400,000 MARK

In 2010, IEEE membership reached a new high, with 407,541 members—a 2.7 percent increase over 2009. IEEE has seen its membership grow two percent on average annually over the past seven years. Despite the global economic environment, total membership increased seven percent from 2008 to 2010, and student membership grew 21 percent, reaching 100,000 for the first time in 2010.

These gains came primarily from growth in Asia and the Pacific Rim (Region 10), Latin America (Region 9), Europe/Middle East/Africa (Region 8) and Canada (Region 7). Collectively, the six U.S. regions declined 1.3 percent.

Region 10 remained the largest with 90,593 members. Members in Regions 7 through 10 constituted 49 percent of the total, up from 46.5 percent the previous year. The number of women members grew slightly to 10 percent of the total membership.

Graduate student memberships grew 5.7 percent to 40,446. Undergraduate student numbers increased 5.8 percent, with the largest gains in Region 10 and Region 9. Region 8 also showed a gain in this category.

Society membership grew 3.5 percent, with 20 of the 38 IEEE societies showing an increase. Societies with the most gains were IEEE Communications, up 15 percent and surpassing the 50,000-member mark; IEEE Product Safety Engineering, up 27.3 percent; IEEE Power & Energy, up 12.3 percent, and IEEE Robotics and Automation, up 10.8 percent.

12TH RECORD YEAR FOR IEEE INTELLECTUAL PROPERTY SALES

IEEE intellectual property sales increased 9.7 percent over 2009, driven primarily by sales for the IEEE/IET Electronic Library (IEL). This was the 12th consecutive year that IEL grew by at least US$10 million. IEL is the largest and most comprehensive IEEE digital library package offered to academic institutions, corporations and libraries.

Institutional sales continued to grow in 2010. For example, in China, 13 more universities were added for a total of 113. IEEE also signed 100 more universities in India, for a total of 600.

Worldwide, 97 of the top 100 technical universities subscribe to IEL; in the U.S., the top 50 engineering schools do so. Moreover, 20 of the top 25 semiconductor companies, nine of the top 10 aerospace companies and eight of the top 10 telecommunications companies subscribe.

BIG SUCCESSES FOR TWO IEEE eBOOK OFFERINGS

IEEE members and customers enthusiastically greeted two new IEEE eBook offerings.

In February, the IEEE-Wiley eBooks Library of more than 400 titles was introduced as a stand-alone subscription in IEEE Xplore®. At the same time, IEEE eBook Classics—220 pre-2007 IEEE Press titles—was launched as a member benefit, at no charge to IEEE members.

Many large university and corporate libraries signed up for the subscription product, and the non-commercial IEEE eBook Classics found a welcome reception among IEEE members. Thanks to a special member promotion, there were more than 76,000 uses of the new "Classics" tab in IEEE Xplore® in April alone.

Plans call for expanding the IEEE-Wiley eBooks Library in 2011 by at least 40 more titles and adding eBooks from other IEEE entities.

GOODBYE, IEEE EXPERT NOW; HELLO, IEEE eLEARNING LIBRARY

The makeover in 2010 of the former IEEE Expert Now program was so extensive that it has been renamed the IEEE eLearning Library.

It now includes more than 200 courses and webinars from universities, training organizations and IEEE units, along with tutorials from IEEE workshops and conferences.

The IEEE eLearning Library contains short, online courses in core and emerging technologies such as biometrics, fiber optics and smart grid. Each course is developed and peer-reviewed by experts, and the IEEE Learning Management System—the eLearning Library host platform—translates the site navigation into more than 100 languages, including Farsi and Mandarin. Upon successful course completion, users can print certificates for professional development hours or continuing education units, for which IEEE is an authorized provider. There is a selection of free courses, and IEEE members receive a 50 percent discount on others.

IEEE is also participating in the iTunes® U Beyond Campus program, accessible by more than 100 million iTunes users. Besides tutorials, IEEE will offer audio and video programs, PDFs and eBooks.

IEEE Spectrum Executive Editor Glenn Zorpette was part of an elite group of seven journalists chosen by the U.S. National Science Foundation to visit key research facilities in 2010 in Antarctica. Shown here standing at the South Pole, Zorpette recorded a 13-part podcast radio show while on the icy continent. The podcast series was released on *IEEE Spectrum Online*, the magazine's award-winning Web site and subsequently received a 2010 Jesse H. Neal Award for best subject-related series. Zorpette also wrote two feature articles for the print edition describing scientific research in Antarctica that makes use of advanced-technology facilities.

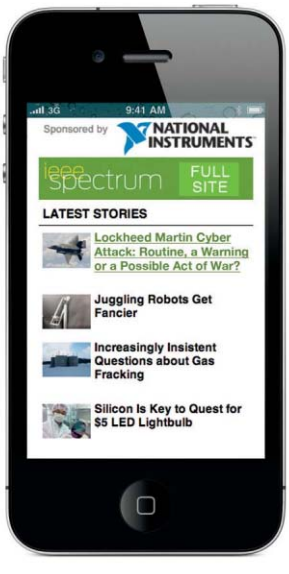
NEW EDITORIAL AWARDS AND MOBILE SITE FOR *IEEE SPECTRUM*

IEEE Spectrum received three prestigious Jesse H. Neal Awards from America Business Media (ABM) for editorial excellence.

- Best Subject-related Series of Articles: *IEEE Spectrum's* "Antarctica: Life on the Ice" by Glenn Zorpette, executive editor
- Best Web site: *IEEE Spectrum Online*, under the leadership of Harry Goldstein, editorial director, digital
- Best Blogs: *IEEE Spectrum Online's* "Automaton" by Erico Guizzo, senior associate editor

ABM is a trade association for publishers of nearly 6,000 print and online titles with an audience of more than 100 million.

In early 2011, *IEEE Spectrum* introduced a mobile version of its Web site, reorganized for users' convenience with featured content selected by the editors and direct links to all *IEEE Spectrum Online* blogs.



The mobile version of the *IEEE Spectrum* Web site permits on-the-go readers to easily keep up with technology news. The mobile home page lists the latest stories at the top, followed by additional featured content selected by the editors during the week. The bottom of the home page has links to *Spectrum* blogs.

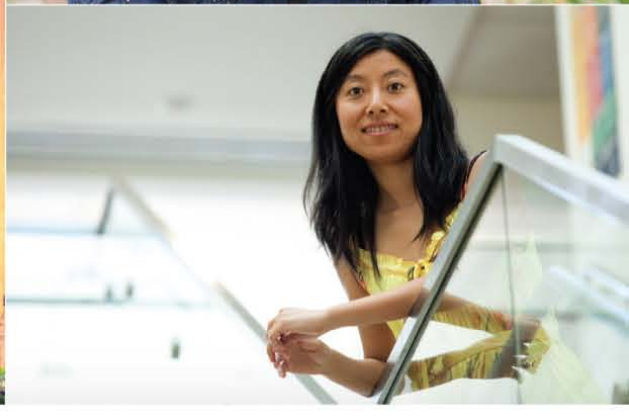
A NEW RECORD: 1,324 IEEE CONFERENCES

Throughout 2010, more than 477,000 people attended a record number of IEEE conferences held in 79 countries. Of these conferences, 78 percent were located outside the United States.

A few of these conferences:

- More than 150 engineers, healthcare providers, industry leaders and policy makers attended the first American Medical Association and IEEE Engineering in Medicine and Biology Society Conference on Medical Technology and Individualized Healthcare in March in Washington, D.C. Speakers addressed how engineers and physicians can work together to create low-cost, effective treatment plans for patients using genomically-determined patient profiles.
- At the International Geoscience and Remote Sensing Symposium in July in Honolulu, the 2,000 registrants met with a dual purpose; besides celebrating the 30th anniversary of this global meeting, they were introduced to community remote sensing—a new field combining remote sensing with citizen sharing and social networks to enhance the data received from traditional sources.
- The 2nd IEEE International Conference on Sustainable Energy Technologies in Kandy, Sri Lanka, featured 112 technical papers from 22 countries. Attendees included 125 leaders from the energy sector, electrical power companies, manufacturing industries, research institutes and educational bodies.

Awards, Fellows and Honors



ANDREW J. VITERBI RECEIVES IEEE MEDAL OF HONOR

2010 IEEE President Pedro Ray (left) presented the IEEE Medal of Honor to Andrew J. Viterbi in Montreal, Quebec, Canada, during the 2010 IEEE Honors Ceremony.

Viterbi received the IEEE's highest honor for seminal contributions to communications technology that is now used in most digital cellular phones, satellite receivers, voice recognition and even DNA sequence analysis. An IEEE Life Fellow, Viterbi is co-founder of QUALCOMM, Inc., headquartered in San Diego, California.

The 2010 IEEE Medal of Honor was sponsored by the IEEE Frank A. Cowan Fund and the IEEE Foundation. In all, President Ray presented 21 medals and recognitions to 27 individuals at the 2010 Honors Ceremony, which was attended by some 400 guests.

IEEE Senior Member Michal Lipson (above, top) and IEEE Member Dawn Song (below) were named 2010 MacArthur Fellows. Dr. Lipson, an optical physicist and an associate professor at Cornell University in Ithaca, New York, USA, is conducting research in nano-photonics. Dr. Song, a computer security specialist and associate professor at the University of California, Berkeley, applies rigorous theoretical methods to prevent malware attacks on online banking, medical devices and systems, and users' privacy. Headquartered in Chicago, The MacArthur Foundation awards unrestricted fellowships "to talented individuals who have shown extraordinary originality and dedication in their pursuits and a marked capacity for self direction."

Photos: The MacArthur Foundation

IEEE Medal of Honor

Andrew J. Viterbi
Viterbi Group, LLC
San Diego, CA, USA

Sponsors: *IEEE Frank A. Cowan Fund and IEEE Foundation*

IEEE Alexander Graham Bell Medal

John M. Cioffi
ASSIA Inc.
Redwood City, CA, USA

Sponsor: *Alcatel-Lucent Bell Labs*

IEEE Edison Medal

Ray Dolby
Dolby Laboratories, Inc.
San Francisco, CA, USA

Sponsor: *Samsung Electronics Company, Ltd.*

IEEE James H. Mulligan, Jr. Education Medal

Randy Howard Katz
University of California, Berkeley
Berkeley, CA, USA

Sponsors: *MathWorks, Inc., Pearson Education, Inc., National Instruments Foundation and IEEE Life Members Committee*

IEEE Medal for Environmental and Safety Technologies

Larry Chalfan
Zero Waste Alliance
Portland, OR, USA

Viccy Salazar
US EPA Region 10
Seattle, WA, USA

Wayne Rifer
Green Electronics Council
Portland, OR, USA

Sponsor: *Toyota Motor Corporation*

IEEE Founders Medal

Paul Edward Gray
Massachusetts Institute of Technology
Cambridge, MA, USA

Sponsor: *IEEE Foundation*

IEEE Richard W. Hamming Medal

Whitfield Diffie
Revere Security
Dallas, TX, USA

Martin E. Hellman
Stanford University
Stanford, CA, USA

Ralph C. Merkle
Institute for Molecular Manufacturing
Palo Alto, CA, USA

Sponsor: *QUALCOMM, Inc.*

IEEE Medal for Innovations in Healthcare Technology

Ronald Nutt
Advanced Biomarker Technologies
Knoxville, TN, USA

David William Townsend
Singapore Bioimaging Consortium
Helios, Singapore

Sponsor: *IEEE Engineering in Medicine and Biology Society*

IEEE Jack S. Kilby Signal Processing Medal

Ronald W. Schafer
Hewlett-Packard Laboratories
Palo Alto, CA, USA

Sponsor: *Texas Instruments, Inc.*

IEEE Jun-ichi Nishizawa Medal

Richard M. Swanson
SunPower Corporation
San Jose, CA, USA

Sponsors: *The Federation of Electric Power Companies, Japan and the Semiconductor Research Foundation*

IEEE Robert N. Noyce Medal

James C. Morgan
Applied Materials, Inc.
Santa Clara, CA, USA

Sponsor: *Intel Foundation*

IEEE Dennis J. Picard Medal for Radar Technologies and Applications

Alfonso Farina
SELEX Sistemi Integrati
Rome, Italy

Sponsor: *Raytheon Company*

IEEE Medal in Power Engineering

Prabha S. Kundur
Kundur Power Systems Solutions, Inc.
Toronto, Ontario, Canada

Sponsors: *IEEE Industry Applications, Industrial Electronics, Power Electronics and Power & Energy Societies*

IEEE Simon Ramo Medal

Barry Boehm
University of Southern California
Los Angeles, CA, USA

Sponsor: *Northrop Grumman Corporation*

IEEE John von Neumann Medal

John Hopcroft
Cornell University
Ithaca, NY, USA

Jeffrey D. Ullman
Stanford University
Stanford, CA, USA

Sponsor: *IBM Corporation*

IEEE Haraden Pratt Award

Raymond David Findlay
McMaster University
Hamilton, Ontario, Canada

Sponsor: *IEEE Foundation*

IEEE Richard M. Emberson Award

James M. Tien
University of Miami
Coral Gables, FL, USA

Sponsor: *IEEE Technical Activities Board*

IEEE Corporate Innovation Recognition

Samsung Electronics Co., Ltd.
Suwon-city, Gyeonggi-do, Korea

Sponsor: *IEEE*

IEEE Ernst Weber Engineering Leadership Recognition

Hidehito Obayashi
Hitachi High-Technologies Corporation
Tokyo, Japan

Sponsor: *IEEE*

IEEE Honorary Membership

N.R. Narayana Murthy
Infosys Technologies, Ltd.
Bangalore, India

Sponsor: *IEEE*

IEEE/RSE Wolfson James Clerk Maxwell Award

Amar G. Bose
Bose Corporation
Framingham, MA, USA

Funder: *Wolfson Microelectronics plc*

2010 CLASS OF IEEE FELLOWS

In 2010, 309 IEEE Senior Members were elevated to the grade of IEEE Fellow. This honor is the highest membership grade that any IEEE member can achieve and is presented annually to no more than one tenth of one percent of the voting membership as of 31 December of the preceding year. The IEEE Fellow grade recognizes outstanding members for their significant accomplishments in advancing engineering, science and technology and for their contributions to the IEEE mission.

OTHER MAJOR 2010 IEEE AWARDS

At ceremonies around the world during 2010, eminent engineers and other outstanding technical professionals were presented with 28 technical field awards, two IEEE teaching awards, and one prize paper award.

IEEE Cledo Brunetti Award
Ghavam G. Shahidi
IBM T.J. Watson Research Center
Yorktown Heights, NY, USA

Sponsors: *Brunetti Bequest and Taiwan Semiconductor Manufacturing Company (TSMC)*

IEEE Components, Packaging and Manufacturing Technology Award
Herbert Reichl
Technical University of Berlin
Berlin, Germany

Sponsor: *IEEE Components, Packaging, and Manufacturing Technology Society*

IEEE Control Systems Award
Graham C. Goodwin
University of Newcastle
Callaghan, NSW, Australia

Sponsor: *IEEE Control Systems Society*

IEEE Electromagnetics Award
Thomas B.A. Senior
University of Michigan
Ann Arbor, MI, USA

Sponsors: *IEEE Antennas and Propagation, IEEE Electromagnetic Compatibility, IEEE Microwave Theory and Techniques, and IEEE Geoscience and Remote Sensing Societies*

IEEE James L. Flanagan Speech and Audio Processing Award
Sadaoki Furui
Tokyo Institute of Technology
Tokyo, Japan

Sponsor: *IEEE Signal Processing Society*

IEEE Andrew S. Grove Award
Bijan Davari
IBM T.J. Watson Research Center
Yorktown Heights, NY, USA

Sponsor: *IEEE Electron Devices Society*

IEEE Herman Halperin Electric Transmission and Distribution Award
Carlos Katz
Cable Technology Laboratories, Inc.
New Brunswick, NJ, USA

Sponsors: *The Robert and Ruth Halperin Foundation, in memory of Herman and Edna Halperin, and IEEE Power & Energy Society*

IEEE Masaru Ibuka Consumer Electronics Award
James Barton
TiVo, Inc.
Alviso, CA, USA

Sponsor: *Sony Corporation*

IEEE Internet Award
Stephen Deering
Retired
West Vancouver, BC, Canada

Sponsor: *Nokia Corporation*

IEEE Reynold B. Johnson Data Storage Device Technology Award
David B. Bogy
University of California, Berkeley
Berkeley, CA, USA

Sponsor: *Hitachi Global Storage Technologies*

IEEE Reynold B. Johnson Information Storage Systems Award
Moshe Yanai
IBM Corporation
Waltham, MA, USA

Sponsor: *IEEE Reynold B. Johnson Information Storage Systems Award Fund*

IEEE Richard Harold Kaufmann Award
Gerald T. Heydt
Arizona State University
Tempe, AZ, USA

Sponsor: *IEEE Industry Applications Society*

IEEE Gustav Robert Kirchhoff Award
Hitoshi Watanabe
Soka University
Tokyo, Japan

Sponsor: *IEEE Circuits and Systems Society*

IEEE Koji Kobayashi Computers and Communications Award
Larry Peterson
Princeton University
Princeton, NJ, USA

Sponsor: *NEC Corporation*

IEEE William E. Newell Power Electronics Award
Akio Nakagawa
Nakagawa Consulting Office
Chigasaki, Japan

Sponsor: *IEEE Power Electronics Society*

IEEE Fellow Anita K. Jones (center) received the National Academy of Engineering (NAE) 2010 Arthur M. Bueche Award. A University Professor Emerita at the University of Virginia, Dr. Jones was honored for her contributions to U.S. science and technology policy, including directing the U.S. Department of Defense science and technology program. Shown here with Dr. Jones are (from left) NAE President Charles M. Vest and 2010 NAE Awards Committee Chair Rod C. Alferness. **Photo: National Academy of Engineering**

IEEE Fellow Ingrid Daubechies (center) was presented with The Franklin Institute's (FI) Benjamin Franklin Medal in Electrical Engineering to recognize her work that improves image compression efficiency as used in digital photography. Dr. Daubechies is a mathematics professor at Princeton University, Princeton, New Jersey, USA. Shown with her are (from left) Dennis Wint, Franklin Institute president and CEO, and IEEE Fellow Moeness Amin of Villanova University, Villanova, Pennsylvania, USA. **Photo: The Franklin Institute**

IEEE Life Fellow Jose F. Valdez C. (left) received the prestigious 2010 Outstanding Senior Entrepreneur Award from Prima AFP, Peru's largest private pension fund. Dr. Valdez is vice president of Cosapi, Inc., a major engineering and construction company and is also a past chair of ICACIT, the body that accredits engineering, computing and technical programs in Peru. With him is Rubén Loaiza, CEO of Prima AFP.

IEEE Life Fellow Shun-ichi Iwasaki (left) received the 2010 Japan Prize in the industrial production and production technology field. Dr. Iwasaki, who is director of Tohoku Institute of Technology and professor emeritus at Tohoku University in Japan, was honored for his pioneering perpendicular recording method for high-density magnetic recording technology. Presenting the Japan Prize to Dr. Iwasaki is Dr. Masao Ito, president of The Japan Prize Foundation. **Photo: The Japan Prize Foundation**

IEEE Daniel E. Noble Award for Emerging Technologies

Takehisa Yaegashi
Cordia Corporation, Ltd.
Shizuoka, Japan

Shoichi Sasaki
Keio University Graduate School of System Design and Management
Yokohama, Japan

Shinichi Abe
Toyota Motor Corporation
Aichi, Japan

Sponsor: *Motorola Foundation*

IEEE Frederik Philips Award

John E. Kelly, III
IBM Research
Yorktown Heights, NY, USA

Sponsor: *Philips Electronics NV*

IEEE Photonics Award

Ivan Paul Kaminow
University of California, Berkeley
Berkeley, CA, USA

Sponsor: *IEEE Photonics Society*

IEEE Emanuel R. Piore Award

Nancy Lynch
Massachusetts Institute of Technology
Cambridge, MA, USA

Sponsor: *IEEE Emanuel R. Piore Award Fund*

IEEE Judith A. Resnik Award

Surendra Pal
ISRO Satellite Centre and Navigation Program
Bangalore, India

Sponsors: *IEEE Aerospace and Electronic Systems, IEEE Control Systems, and IEEE Engineering in Medicine and Biology Societies*

IEEE Robotics and Automation Award

Toshio Fukuda
Nagoya University
Nagoya, Japan

Sponsor: *IEEE Robotics and Automation Society*

IEEE Frank Rosenblatt Award

Michio Sugeno
European Center for Software Computing
Mieres, Spain

Sponsor: *IEEE Computational Intelligence Society*

IEEE David Sarnoff Award

Mark J.W. Rodwell
University of California, Santa Barbara
Santa Barbara, CA, USA

Sponsor: *Sarnoff Corporation*

IEEE Donald O. Pederson Award in Solid-State Circuits

Takayasu Sakurai
University of Tokyo
Tokyo, Japan

Sponsor: *IEEE Solid-State Circuits Society*

IEEE Charles Proteus Steinmetz Award

Richard DeBlasio
National Renewable Energy Laboratory
Golden, CO, USA

Sponsor: *IEEE Standards Association*

IEEE Eric E. Sumner Award

Reinaldo A. Valenzuela
Alcatel-Lucent Bell Labs
Holmdel, NJ, USA

Sponsor: *Alcatel-Lucent Bell Labs*

IEEE Nikola Tesla Award

Paul C. Krause
PC Krause and Associates, Inc.
West Lafayette, IN, USA

Sponsors: *The Grainger Foundation and IEEE Power & Energy Society*

IEEE Kiyo Tomiyasu Award

Tsu-Jae King Liu
University of California Berkeley
Berkeley, CA, USA

Sponsors: *Dr. Kiyo Tomiyasu, IEEE Geoscience and Remote Sensing Society, IEEE Microwave Theory and Techniques Society and KDDI R&D Laboratories, Inc.*

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University of Edinburgh
Edinburgh, Scotland

For his paper entitled: "The Fundamentals of Electromagnetic Theory Revisited," *IEEE Antennas and Propagation Magazine,* Volume 50, Issue 1, Feb. 2008, pp. 19–65

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Previous Page | Contents | Zoom in | Zoom out | Front Cover | Search Issue | Next Page

MESSAGE FROM THE TREASURER

The IEEE Statement of Financial Position reflects total assets of US$443 million at 31 December 2010. This represents approximately a 16.5 percent increase from 2009, while IEEE total liabilities of US$180.6 million increased by approximately 19.6 percent over the same period. Overall, IEEE Net Assets ("Reserves") increased to US$262.4 million from the 2009 year-end balance of US$229.2 million, due to investment gains and an operating net surplus.

In 2010, IEEE had total revenues of US$392.9 million, an increase of US$3.2 million from 2009, as shown by the Statement of Activities. The increase in revenue was primarily due to the following:

1. Intellectual property (IP) revenue increased US$15.9 million or 11.2 percent, primarily due to sales of the IEEE Electronic Library (IEL), which represented US$12.8 million of the increase.
2. Conference event revenue increased US$10.0 million or 12.0 percent, exclusive of intellectual property revenue from conference proceedings included above. The increase between 2010 and 2009 was primarily due to the Transmission & Distribution (T&D) conference revenue in 2010 of US$7.7 million. This conference is held every other year.
3. Member Dues revenue increased US$1.5 million.
4. Standards Association revenue exclusive of intellectual property revenue from IEL and ISOL included above increased US$1.3 million.
5. Societies Member & Non Member revenue decreased US$1.7 million.
6. Net investment revenue decreased US$24.4 million; total net investment income was US$25.8 million in 2010 versus net investment income of US$50.2 million in 2009.

The operating surplus in 2010 was US$22.1 million, an increase of US$0.7 million from 2009, coupled with investment gains and other items of US$11.1 million, contributed to an overall net surplus of US$33.2 million.

IEEE received an unqualified opinion from Mitchell & Titus, LLP in the Report of Independent Auditors. The independent auditors met with the IEEE Audit Committee to discuss the scope and results of their audit, their review on the adequacy of internal accounting controls, and the quality of financial reporting prior to issuing their opinion.

IEEE is tax exempt under Section 501(c)(3) of the Internal Revenue Code. The IEEE Foundation is a separately incorporated affiliate of IEEE; accordingly, its audited financial statements are not included in the accompanying documents.

I submit these reports with confidence that IEEE continues to be a financially sound organization.

Peter W. Staecker, 2010 IEEE Treasurer

REPORT OF INDEPENDENT AUDITORS

The Board of Directors The Institute of Electrical and Electronics Engineers, Inc.

We have audited the accompanying statements of financial position of The Institute of Electrical and Electronics Engineers, Inc. (the Institute) as of December 31, 2010 and 2009, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Institute's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of The Institute of Electrical and Electronics Engineers, Inc. at December 31, 2010 and 2009, and the changes in its net assets and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

June 15, 2011
New York, New York

Member firm of Ernst & Young Global, Ltd.

Statements of Financial Position
December 31, 2010 and 2009

	December 2010	December 2009
Assets		
Current assets		
Cash and cash equivalents	$ 10,298,200	$ 10,221,900
Accounts receivable, less allowance for doubtful accounts of $455,500 in 2010 and $1,449,600 in 2009	17,236,300	15,356,000
Inventories, prepaid expenses, and other assets	15,114,400	14,743,400
Investments	346,531,300	293,132,800
Total current assets	389,180,200	333,454,100
Long-term investments	191,400	191,400
Land, buildings, and equipment, net of accumulated depreciation and amortization	53,582,200	46,507,800
Total assets	**$ 442,953,800**	**$ 380,153,300**
Liabilities and Net Assets		
Current liabilities		
Accounts payable and accrued expenses	$ 42,683,500	$ 20,401,800
Current portion of accrued pension and other benefits expense	209,200	206,700
Deposits by IEEE Foundation, Incorporated	27,371,900	1,603,600
Trading liabilities	611,500	247,600
Debt obligations	4,889,800	5,986,800
Current portion of capital lease obligations	1,351,700	1,236,100
Deferred income		
Dues and assessments	37,455,500	38,314,200
Subscriptions and other	56,252,300	66,931,200
Total current liabilities	170,825,400	134,928,000
Long-term liabilities		
Obligations under capital leases, less current portion	2,513,600	1,895,000
Accrued pension and other benefits expense, less current portion	7,244,900	14,172,900
Total liabilities	180,583,900	150,995,900
Commitments		
Net assets		
Unrestricted	259,180,700	226,380,000
Temporarily restricted	2,997,800	2,586,000
Permanently restricted	191,400	191,400
Total net assets	262,369,900	229,157,400
Total liabilities and net assets	**$ 442,953,800**	**$ 380,153,300**

The accompanying notes are an integral part of these financial statements.

Statement of Activities
For the Year Ended December 31, 2010

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenue				
Membership and public imperatives	$ 66,330,200	$ 471,100	$ —	$ 66,801,300
Periodicals	134,648,400	—	—	134,648,400
Conferences	138,317,300	—	—	138,317,300
Standards	25,319,800	515,500	—	25,835,300
Investment income, net	25,794,700	28,700	—	25,823,400
Other income	1,489,800	—	—	1,489,800
Net assets released from restrictions	603,500	(603,500)	—	—
Total revenue	392,503,700	411,800	—	392,915,500
Expenses				
Program services				
Membership and public imperatives	95,223,300	—	—	95,223,300
Periodicals	120,633,000	—	—	120,633,000
Conferences	112,604,200	—	—	112,604,200
Standards	20,134,700	—	—	20,134,700
Total program services	348,595,200	—	—	348,595,200
Supporting services				
General and administrative	8,267,700	—	—	8,267,700
Total expenses	356,862,900	—	—	356,862,900
Pension and related benefits expense other than net periodic pension cost	2,840,100	—	—	2 ,840,100
Change in net assets	32,800,700	411,800	—	33,212,500
Net assets, beginning of year	226,380,000	2,586,000	191,400	229,157,400
Net assets, end of year	**$ 259,180,700**	**$ 2,997,800**	**$ 191,400**	**$ 262,369,900**

The accompanying notes are an integral part of these financial statements.

Statement of Activities
For the Year Ended December 31, 2009

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenue				
Membership and public imperatives	$ 63,114,100	$ 286,000	$ —	$ 63,400,100
Periodicals	126,319,900	—	—	126,319,900
Conferences	124,403,100	—	—	124,403,100
Standards	23,661,900	557,900	—	24,219,800
Investment income, net	50,154,600	54,600	—	50,209,200
Other income	1,108,300	—	—	1,108,300
Net assets released from restrictions	623,400	(623,400)	—	—
Total revenue	389,385,300	275,100	—	389,660,400
Expenses				
Program services				
Membership and public imperatives	87,156,300	—	—	87,156,300
Periodicals	106,627,100	—	—	106,627,100
Conferences	100,279,900	—	—	100,279,900
Standards	20,262,600	—	—	20,262,600
Total program services	314,325,900	—	—	314,325,900
Supporting services				
General and administrative	11,363,200	—	—	11,363,200
Total expenses	325,689,100	—	—	325,689,100
Credit for pension and related benefits other than net periodic pension cost	7,120,600	—	—	7,120,600
Change in net assets	70,816,800	275,100	—	71,091,900
Net assets, beginning of year	155,563,200	2,310,900	191,400	158,065,500
Net assets, end of year	**$ 226,380,000**	**$ 2,586,000**	**$ 191,400**	**$ 229,157,400**

The accompanying notes are an integral part of these financial statements.

Statement of Cash Flows
For the Years Ended December 31, 2010 and 2009

	Year Ended December 31 2010	2009
Operating Activities		
Change in net assets	$ 33,212,500	$ 71,091,900
Adjustments to reconcile change in net assets to net cash provided by operating activities		
Depreciation and amortization expense	10,046,400	9,359,200
Net assets from Eta Kappa Nu (HKN) acquisition	(79,400)	—
Net realized and unrealized gains from investments	(20,893,000)	(45,712,500)
Change in fair value of interest rate swaps	(77,000)	(128,300)
Change in assets and liabilities		
Accounts receivable, net	(1,880,300)	2,019,900
Inventories, prepaid expenses, and other assets	(371,000)	(1,326,100)
Accounts payable and accrued expenses	22,422,100	(8,954,300)
Accrued pension and other benefits expense	(6,925,500)	(9,345,500)
Deposits by IEEE Foundation, Incorporated	25,768,300	(442,900)
Deferred income	(12,345,600)	17,973,800
Net cash provided by operating activities	48,877,500	34,535,200
Investing Activities		
Proceeds from sale of investments	478,440,000	164,514,700
Proceeds from sale of land, buildings, and equipment	1,000	—
Proceeds from HKN acquisition	483,400	—
Purchase of land, buildings and equipment	(14,955,500)	(10,503,300)
Purchases of investments	(510,581,600)	(186,165,100)
Net cash used in investing activities	(46,612,700)	(32,153,700)
Financing Activities		
Change in cash overdraft	263,600	323,800
Payment of debt obligations	(1,020,000)	(970,000)
Payment of capital lease obligations	(1,432,100)	(1,595,900)
Net cash used in financing activities	(2,188,500)	(2,242,100)
Net increase in cash and cash equivalents	76,300	139,400
Cash and cash equivalents, beginning of year	10,221,900	10,082,500
Cash and cash equivalents, end of year	$ 10,298,200	$ 10,221,900
Supplemental Data		
Interest paid	$ 713,700	$ 729,000
Noncash items		
Acquisition of equipment through capital lease obligation	$ 2,166,300	$ 1,514,900

The accompanying notes are an integral part of these financial statements.

NOTE 1 ORGANIZATION AND NATURE OF OPERATIONS

The objectives of The Institute of Electrical and Electronics Engineers, Inc. (the Institute, or IEEE) are (a) scientific and educational, directed toward the advancement of the theory and practice of electrical engineering, electronics engineering, computer engineering, computer sciences, and the allied branches of engineering and related arts and sciences and (b) professional, directed toward the advancement of the standing of the members of the profession it serves.

Implementation of the Institute's objectives is performed primarily through regions, sections, societies, and councils and their financial results are incorporated in the accompanying Institute's financial statements. These units were formed to serve the specialized technical interests of members and to coordinate these with the local activities of the sections and the broader activities of the Institute. The societies and councils promote the technical interests of their members through symposia, conferences, and various publications.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The Institute's financial statements are presented in conformity with U.S. generally accepted accounting principles and have been prepared on the accrual basis of accounting.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires that management make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Financial Statements

Resources are reported for accounting purposes into separate classes of net assets based on the existence or absence of donor-imposed restrictions. In the accompanying financial statements, net assets with similar characteristics have been combined into similar categories as follows:

Permanently restricted: Net assets subject to donor-imposed stipulations that are maintained permanently by the Institute. Such assets primarily include the Institute's permanent endowment funds. The principal of these endowments cannot be expended. The income earned can only be used as designated by the donor, and is then recorded as temporarily restricted.

Temporarily restricted: Net assets used by the Institute and subject to donor-imposed stipulations that can be fulfilled by actions of the Institute pursuant to those stipulations or that expire by the passage of time. These temporarily restricted net assets are designated principally for awards, medals, and specific projects.

Unrestricted: Net assets that are not subject to donor-imposed stipulations. Unrestricted net assets may be designated for specific purposes by action on behalf of the Board of Directors or may otherwise be limited by contractual agreements with outside parties. Unrestricted net assets can be utilized to carry out any of the purposes of the Institute.

The Institute's endowment consists of individual funds established for a variety of purposes and includes donor-restricted endowment funds. As required by U.S. generally accepted accounting principles, net assets associated with endowment funds are classified and reported based on the existence or absence of donor-imposed restrictions.

Expenses are generally reported as decreases in unrestricted net assets. Expiration of donor-imposed stipulations that simultaneously increase unrestricted net assets and decrease temporarily restricted net assets are reported as net assets released from restrictions. Temporarily restricted revenues received and expended during the same fiscal year are recorded as unrestricted revenues and expenses in the statements of activities.

The financial statements of the Institute should be read in conjunction with the financial statements of IEEE Foundation, Incorporated, a related organization (see Note 14).

Revenue Recognition

Revenue from membership dues and yearly periodical subscriptions is recognized on a straight-line basis over the period to which it pertains. Amounts received in advance are included in deferred income.

Revenue and expense from conferences are recorded on the accrual basis in the year the conferences are held. Amounts received in advance are included in deferred income.

Revenue from contributions is recorded at its fair value in the period received, including unconditional promises to give, and is classified based upon the existence or absence of donor-imposed restrictions.

Contributions received by the Institute are primarily private and governmental grants and contain donor-imposed restrictions as to their use. These restrictions are usually fulfilled within a two-year period by satisfying the respective restrictions. Standards revenue primarily includes revenue from periodical subscriptions, publications, and standards development groups, which are similar to conferences.

Cash and Cash Equivalents

Cash and cash equivalents include highly liquid, short-term investments purchased with maturities of three months or less from the date of acquisition.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount and do not bear interest. Management reviews a customer's credit history before extending credit. The Institute maintains allowances for doubtful accounts against certain billed receivables based upon the latest information available regarding whether receivables are ultimately collectible. Assessing the collectability of customer receivables requires management's judgment. The Institute determines its allowance for doubtful accounts by specifically analyzing individual accounts receivable, historical bad debts, customer creditworthiness, current economic conditions, and accounts receivable aging trends. Valuation reserves are periodically re-evaluated and adjusted as more information about the ultimate collectability of accounts receivable becomes available. Upon determination that a receivable is uncollectible, the receivable balance and any associated reserve are written off.

Investments

Investments, except special funds, are carried at fair value, which is generally determined on the basis of quoted market prices (see Note 3). Special funds are managed by an investment adviser and management group of companies (the Investment Manager) and invested in trusts, which, in turn, are invested primarily in marketable U.S. equity and debt securities. The special funds investments are carried at the unit price computed by the Investment Manager based on the fair value of the respective funds' net assets. There are no sale restrictions on the redemption of these funds. These funds require approximately one week after the trade date for cash to be wired back to the Institute. The Institute invests in these funds for diversification of its investment portfolio. (See Note 12 for more information regarding the fair value measurement of these investments.)

Realized gains and losses on sales of investments are determined on an average cost basis. Purchases and sales of securities are recorded on a trade date basis.

Land, Buildings, and Equipment

Land, buildings, and equipment are stated at cost, including interest expense capitalized during the period of construction of the asset, or period of development until the time that it is ready for intended use, in the case of internal-use software. Depreciation is provided on a straight-line basis over the estimated useful life of the asset. Buildings, furniture, and equipment are depreciated over periods ranging from three to 35 years. Assets under capital leases are depreciated over the term of the lease. Building improvements are amortized over 20 years.

Upon retirement or other disposition of fixed assets, the cost and related accumulated depreciation are removed from the accounts and the resulting gains or losses, if any, are reflected in the statements of activities.

Accounts Payable and Accrued Expenses

Cash overdrafts are included in accounts payable and accrued expenses. At December 31, 2010 and 2009, cash overdrafts amounted to $2,147,700 and $1,884,100, respectively.

Risks and Uncertainties

The Institute invests in several investment securities, which are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term. Such changes could materially affect the amounts reported in the statements of financial position.

Interpretation of Relevant Law

On September 17, 2010, the State of New York enacted the New York Prudent Management of Institutional Funds Act (NYPMIFA), a modified version of the Uniform Prudent Management of Institutional Funds Act, which superseded the State of New York Uniform Management of Institutional Funds Act (the prior law). The Institute is evaluating the effect of NYPMIFA on the investment, appropriation, and management of its institutional funds and is establishing procedures to comply with its provisions.

Recent Accounting Pronouncement

In January 2010, the Financial Accounting Standards Board (FASB) issued updated guidance that requires new fair value disclosures about significant transfers between Level 1 and Level 2 measurement categories and separate presentation of purchases, sales, issuances, and settlements within the rollforward of Level 3 activity. This updated fair value guidance clarifies the disclosure requirements about the level of disaggregation and valuation techniques and inputs. The new guidance is effective for interim and annual reporting periods beginning after December 15, 2009, except for the disclosures about purchases, sales, issuances, and settlements in the rollforward of Level 3 activity, which are effective for interim and annual reporting periods beginning after December 15, 2010. The adoption of these enhanced disclosures did not have significant implications to the Institute.

NOTE 3 INVESTMENTS

Investments and trading liabilities at December 31, 2010 and 2009 consisted of the following:

	2010 Cost	2010 Fair Value	2009 Cost	2009 Fair Value
Investments				
Short-term investments				
Due from brokers and accrued interest	$ 14,000	$ 14,000	$ —	$ —
Term deposits	1,956,300	1,956,300	1,856,400	1,856,400
Cash and cash equivalents	—	—	723,000	723,000
Money market funds	63,075,400	63,075,400	59,628,000	59,628,000
	65,045,700	65,045,700	62,207,400	62,207,400
Equity investments				
Equity securities	101,647,700	120,089,700	86,063,900	94,869,800
Mutual funds	54,167,700	49,831,900	54,589,100	47,630,300
Overnight investments	4,139,500	4,139,500	1,675,900	1,675,900
Due from brokers and accrued interest and fees	279,900	279,900	127,200	127,200
	160,234,800	174,341,000	142,456,100	144,303,200
Fixed-income investments				
U.S. Government obligations	13,664,000	13,573,300	—	—
Term deposits	808,100	808,100	414,700	414,700
Overnight investments	37,500	37,500	—	—
Mutual funds	81,096,300	82,487,200	71,427,000	69,864,300
Due from brokers and accrued interest and fees	107,500	107,500	—	—
	95,713,400	97,013,600	71,841,700	70,279,000
Special funds				
Investment in commingled trusts	8,208,500	10,322,400	17,843,300	16,534,600
	8,208,500	10,322,400	17,843,300	16,534,600
Total investments	329,202,400	346,722,700	294,348,500	293,324,200
Trading liabilities				
Short-term investments				
Due to brokers and accrued fees	(5,200)	(5,200)	(17,600)	(17,600)
Equity investments				
Due to brokers and accrued fees	(597,900)	(597,900)	(208,100)	(208,100)
Fixed income investments				
Due to brokers and accrued fees	(8,400)	(8,400)	(21,900)	(21,900)
Total trading liabilities	(611,500)	(611,500)	(247,600)	(247,600)
Net investments	$ 328,590,900	$ 346,111,200	$ 294,100,900	$ 293,076,600

NOTE 4 INVESTMENT INCOME (LOSS)

Net investment income (loss) for the years ended December 31, 2010 and 2009 consisted of the following:

	2010	2009
Interest and dividends	$ 4,930,400	$ 4,496,700
Realized gains (losses), net	2,348,400	(6,286,300)
Change in net unrealized gains	18,544,600	51,998,800
	$ 25,823,400	$ 50,209,200

Investment expense amounted to $626,400 and $595,100 in 2010 and 2009, respectively, and is netted against investment income.

NOTE 5 LAND, BUILDINGS, AND EQUIPMENT

Fixed assets, carried at cost, and the related accumulated depreciation and amortization at December 31, 2010 and 2009 consisted of the following:

	2010 Cost	2010 Accumulated Depreciation and Amortization	2009 Cost	2009 Accumulated Depreciation and Amortization
Buildings	$ 17,956,300	$ 11,048,700	$ 17,956,300	$ 10,560,300
Furniture and equipment	66,238,900	42,529,700	63,001,200	39,066,000
Building improvements	9,988,100	3,330,500	7,985,900	2,805,400
	94,183,300	56,908,900	88,943,400	52,431,700
Land	873,000	—	874,000	—
Information systems upgrade in process	15,434,800	—	9,122,100	—
Total	$ 110,491,100	$ 56,908,900	$ 98,939,500	$ 52,431,700

Furniture and equipment include assets under capital leases of $7,134,700 and $5,469,000 as of December 31, 2010 and 2009, respectively. Accumulated amortization of assets recorded under capital leases amounted to $3,287,900 and $2,705,400 at December 31, 2010 and 2009, respectively.

NOTE 6 DEBT OBLIGATIONS

Debt obligations at December 31, 2010 and 2009 consisted of loans from proceeds of bonds issued by the New Jersey Economic Development Authority (NJEDA), as follows:

	2010	2009
NJEDA 2001 Series A Bonds, variable rate, annual principal and sinking fund payments through April 1, 2014 (the "Series A Bonds"); collateralized by irrevocable direct-pay letter of credit issued by Wachovia Bank, a Wells Fargo Company.	$ 3,145,000	$ 3,850,000
NJEDA 2001 Series B Bonds, variable rate, annual principal and sinking fund payments through April 1, 2014 (the "Series B Bonds"); collateralized by irrevocable direct-pay letter of credit issued by Wachovia Bank, a Wells Fargo Company.	1,435,000	1,750,000
	4,580,000	5,600,000
Liability under swap agreements		
Series A Bonds	214,300	269,200
Series B Bonds	95,500	117,600
	$ 4,889,800	$ 5,986,800

The Series A Bonds consisted of variable-rate bonds issued in the aggregate amount of $7,065,000 on May 10, 2001 for the purpose of advance refunding a portion of the 1994 Bonds to take advantage of lower interest rates. The advance refunding resulted in the defeasance and legal extinguishment of the callable portion of the 1994 Bonds due from 2005 to 2014 totaling $6,390,000. In conjunction with the issuance of the Series A Bonds, the Institute entered into a swap agreement on April 24, 2001 with Wachovia Bank, a Wells Fargo Company, whereby the Institute's interest rate obligation is fixed at 4.55% per year (the Series A Swap). The underlying notional amount of the Series A Swap amortizes through April 1, 2014 and matches the outstanding balance of the Series A Bonds, which amounted to $3,145,000 and $3,850,000 as of December 31, 2010 and 2009, respectively. The estimated fair value of the Series A Swap reflects a liability of approximately $214,300 and $269,200 at December 31, 2010 and 2009, respectively. The Series A Bonds are due on April 1, 2014, but are subject to a mandatory annual sinking fund redemption on April 1 of each year in amounts ranging from $735,000 in 2011 to $840,000 in 2014.

The Series B Bonds consist of variable-rate bonds issued in the aggregate amount of $3,810,000 on September 28, 2001 to permanently finance the renovation of a 15,000-square-foot warehouse facility into a new computer center and related equipment purchases and installations. In conjunction with the issuance of the Series B Bonds, the Institute entered into a swap agreement on August 22, 2001 with Wachovia Bank, whereby the Institute's interest rate obligation is fixed at 4.34% per year (the Series B Swap). The underlying notional amount of the Series B Swap amortizes through April 1, 2014 and matches the outstanding balance of the Series B Bonds, which amounted to $1,435,000 and $1,750,000 as of December 31, 2010 and 2009, respectively. The estimated fair value of the Series B Swap reflected a liability of approximately $95,500 and $117,600 at December 31, 2010 and 2009, respectively. The Series B Bonds are due on April 1, 2014, but are subject to a mandatory annual sinking fund redemption on April 1 of each year in amounts ranging from $335,000 in 2011 to $385,000 in 2014.

An irrevocable standby Letter of Credit and Reimbursement Agreement with Wachovia Bank, dated May 1, 2001 and amended on September 1, 2001, collateralizes both Series A and Series B Bonds. The letter of credit is available if any of the Series A or Series B Bonds are tendered and are unable to be remarketed. If the letter of credit is used, the Institute would be required to reimburse Wachovia Bank on demand, including certain fees and charges. U.S. generally accepted accounting principles require that the current portion of long-term debt for bonds subject to such demand purchase option be calculated based on the letter of credit terms. Accordingly, at December 31, 2010 and 2009, the entire amount outstanding on the Series A and Series B Bonds are classified as a current liability in the accompanying statements of financial position.

The letter of credit amounted to $4,649,300 and $5,684,700 at December 31, 2010 and 2009, respectively.

Future scheduled principal repayments required under the NJEDA Bond Agreements as of December 31, 2010 are as follows:

2011	$ 1,070,000
2012	1,115,000
2013	1,170,000
2014	1,225,000
Total	$ 4,580,000

The Institute maintains a $25,000,000 credit facility consisting of $13,750,000 with Wachovia Bank and $11,250,000 with JPMorgan Chase Bank, N.A. (previously The Bank of New York) under a revolving credit agreement dated February 28, 2002, as amended. The Institute is charged commitment fees, which amounted to $126,700 in 2010 and $96,300 in 2009, on the unused portion of the credit facility. The credit facility was not utilized in 2010 and 2009; the Institute had no outstanding borrowings under the credit facility in either year. On April 27, 2009, the expiration date of the revolving credit agreement, as amended, was extended until August 31, 2011.

As of December 31, 2010, the amount of the line of credit for issuing standby letters of credit was $291,900 with HSBC Bank USA, N.A. The Institute is charged 1% of the face amount, upon issuance, of the standby letters of credit.

The Institute is required to maintain certain financial ratios under the amended and restated Letter of Credit and Reimbursement Agreement with Wachovia Bank, and the revolving credit agreement with Wells Fargo & Company and JPMorgan Chase Bank, N.A. At December 31, 2010, the Institute is in compliance with these financial covenants.

Interest expense, net of amounts capitalized of $73,400 in 2010 and $141,700 in 2009, amounted to $640,300 for 2010 and $587,300 for 2009.

NOTE 7 OBLIGATIONS UNDER CAPITAL LEASES

The approximate annual rental payments for obligations under capital leases are as follows:

Year	Amount
2011	$ 1,573,000
2012	1,282,900
2013	873,000
2014	594,000
2015	220,000
Total	4,542,900
Less: Amount representing interest imputed at an average rate of 5.2%	677,600
Present value of minimum lease payments	$ 3,865,300

NOTE 8 COMMITMENTS AND CONTINGENCIES

At December 31, 2010, minimum rental commitments under noncancelable operating leases for office space and computer equipment are as follows:

Year	Amount
2011	$ 2,101,900
2012	1,851,700
2013	1,076,900
2014	816,600
2015	836,300
Thereafter	2,742,600
	$ 9,426,000

The leases for the office space are subject to escalation. Total rent expense for noncancelable operating leases amounted to $2,810,700 and $2,677,300 in 2010 and 2009, respectively.

At December 31, 2010, the Institute had an irrevocable standby letter of credit in the amount of $583,000 with Wachovia Bank, which serves as a security deposit as required by the terms of its lease agreement with Park Avenue Building Company, LLC.

The Institute is currently involved in certain litigation and claims arising in the ordinary course of business. Its management believes that the amount of any liability arising out of these actions that may be sustained, if any, beyond existing insurance liability coverages would not have a material impact on the accompanying financial statements.

NOTE 9 PENSION AND OTHER POSTRETIREMENT BENEFITS

The Institute sponsors two qualified pension plans and one nonqualified pension plan and other postretirement benefit plans for its employees. In November 2006, the Board of Directors approved the freezing of the qualified employee benefit plans as of June 30, 2007 and the implementation of a defined contribution plan effective July 1, 2007.

The following tables provide a reconciliation of the changes in the plans' benefit obligations and fair value of assets over the two-year period ended December 31, 2010, and a statement of the funded status as of December 31 of both years:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Reconciliation of benefit obligation				
Obligation at January 1	$ 68,180,000	$ 64,331,200	$ 3,515,200	$ 3,184,900
Service cost	255,000	255,000	162,900	155,600
Interest cost	3,697,200	3,741,100	197,100	189,100
Actuarial loss	5,089,300	2,737,700	218,400	174,800
Benefit payments	(3,867,200)	(2,885,000)	(150,500)	(189,100)
Obligation at December 31	$ 73,354,300	$ 68,180,000	$ 3,943,100	$ 3,515,300
Reconciliation of fair value of plan assets				
Fair value of plan assets at January 1	$ 57,315,600	$ 43,791,000	$ —	$ —
Actual return on plan assets	6,477,200	11,891,900	—	—
Employer contributions	9,917,700	4,517,700	150,500	189,100
Benefit payments	(3,867,200)	(2,885,000)	(150,500)	(189,100)
Fair value of plan assets at December 31	$ 69,843,300	$ 57,315,600	$ —	$ —
Funded status				
Funded status at December 31	$ (3,511,000)	$ (10,864,300)	$ (3,943,100)	$ (3,515,300)

The accumulated benefit obligation for all defined benefit pension plans was $73,354,400 at December 31, 2010 and $68,180,000 at December 31, 2009.

At December 31, the funded status of the plans is reported in the statements of financial position as follows:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Current liabilities	$ (17,700)	$ (17,700)	$ (191,500)	$ (189,000)
Noncurrent liabilities	(3,493,300)	(10,846,600)	(3,751,600)	(3,326,300)
Net amount recognized	$ (3,511,000)	$ (10,864,300)	$ (3,943,100)	$ (3,515,300)

Amounts recognized in changes in unrestricted net assets for the year ended December 31 consisted of:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Net (gains) loss	$ 2,678,100	$ (7,203,100)	$ 241,300	$ 161,800
Prior service cost	(300)	(300)	(33,200)	(33,200)
Net transition obligation	—	—	(45,800)	(45,800)
Total	$ 2,677,800	$ (7,203,400)	$ 162,300	$ 82,800

Cumulative amounts recognized in changes in unrestricted net assets and not yet recognized in net periodic benefit cost as of December 31 consisted of:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Net loss	$ 15,833,500	$ 13,155,500	$ 870,200	$ 628,900
Prior service cost	200	500	56,200	89,400
Net transition obligation	—	—	183,000	228,800
Total	$ 15,833,700	$ 13,156,000	$ 1,109,400	$ 947,100

Information for benefit plans with an accumulated benefit obligation in excess of plan assets as of December 31 consisted of:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Projected benefit obligation	$ 73,354,300	$ 68,180,000	$ 3,943,100	$ 3,515,300
Accumulated benefit obligation	73,354,300	68,180,000	—	—
Fair value of plan assets	69,843,300	57,315,600	—	—

The following table provides the components of net periodic benefit cost for the plans for 2010 and 2009:

	Pension Benefits		Other Benefits	
	2010	2009	2010	2009
Service cost	$ 255,000	$ 255,000	$ 162,900	$ 155,600
Interest cost	3,697,200	3,741,100	197,100	189,000
Expected return on plan assets	(4,576,800)	(3,171,300)	—	—
Amortization of transition obligation	—	—	45,800	45,800
Amortization of prior service cost	300	300	33,200	33,200
Amortization of net loss	511,000	1,220,100	18,600	13,000
Net periodic (benefit) cost	$ (113,300)	$ 2,045,200	$ 457,600	$ 436,600

The estimated amount of net unrestricted assets to be recognized as net periodic benefit cost in the next fiscal year is as follows:

	Pension Benefits 2010	Other Benefits 2010
Transition obligation	$ —	$ 45,800
Prior service cost	200	33,200
Net loss	727,400	8,400
Total	$ 727,600	$ 87,400

The prior service costs are amortized on a straight-line basis over the average remaining service period of active participants. Gains and losses in excess of 10% of the greater of the benefit obligation and the market-related value of assets are amortized over the average remaining service period of active participants.

The Institute has multiple noncontributory, nonpension postretirement benefit plans.

The assumptions used in the measurement of the Institute's benefit obligation are shown in the following table:

	Pension Benefits 2010	Pension Benefits 2009	Other Benefits 2010	Other Benefits 2009
Assumptions as of December 31				
Discount rate	5.25%	5.75%	5.25%	5.75%
Rate of compensation increase	N/A	N/A	N/A	N/A

The assumptions used in the measurement of the net periodic benefit cost are shown in the following table:

	Pension Benefits 2010	Pension Benefits 2009	Other Benefits 2010	Other Benefits 2009
Weighted-average assumptions as of January 1				
Discount rate	5.75%	6.00%	5.75%	6.00%
Expected return on plan assets	7.50%	7.50%	N/A	N/A
Rate of compensation increase	N/A	N/A	N/A	N/A

The health care plan benefits are a flat dollar reimbursement to the retirees toward health care premiums. An increase in the reimbursement amount is not assumed.

Plan Assets

IEEE determines its assumptions for the expected rate of return on plan assets for its retirement plans based on ranges of anticipated rates of return for each asset class. A weighted range of nominal rates is then determined based on target allocations for each asset class. IEEE considers the expected rate of return to be a longer-term assessment of return expectations and does not anticipate changing this assumption annually unless economic conditions change significantly. The expected rate of return for each plan is based upon its expected asset allocation. Market performance over a number of earlier years is evaluated covering a wide range of economic conditions to determine whether there are reliable reasons for projecting forward any past trends.

IEEE's pension and postretirement plan asset allocation for the U.S. plans at the end of 2010 and 2009, and the target allocation for 2010 by asset category based on asset fair values are as follows:

Asset Category	2010 Target Asset Allocation	Pension Assets at December 31 2010	Pension Assets at December 31 2009	Postretirement Assets at December 31 2010	Postretirement Assets at December 31 2009
Equity securities	65%	68%	67%	N/A	N/A
Debt securities	35%	31%	31%	N/A	N/A
Cash and cash equivalents	—	1%	2%	N/A	N/A
Total	100%	100%	100%	N/A	N/A

Third-party investment managers manage IEEE's pension plan assets, rebalancing assets as the Institute deems appropriate. IEEE's investment strategy with respect to its pension assets is to maintain a diversified investment portfolio across several asset classes targeting an annual rate of return of 7.5% in 2010 and 2009, while ensuring that the accumulated benefit obligation is fully funded. To develop the expected long-term rate of return on assets assumption, the Institute considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio.

IEEE's pension and postretirement funds' investment strategies are to invest in a prudent manner for the exclusive purpose of providing benefits to participants. The investment strategies are targeted to produce a total return that, when combined with IEEE's contributions to the funds, will maintain the funds' ability to meet all required benefit obligations. Risk is controlled through diversification of asset types and investments in domestic and international equities, fixed income securities, and cash. The target asset allocation is 65% equities and 35% debt securities, while the guidelines allow the managers to keep up to 5% in cash and cash equivalents. Contributions made during the years ended December 31, 2010 and 2009 were approximately $9,917,700 and $4,517,700, respectively.

Fair value hierarchy of the pension and postretirement funds' investments at December 31, 2010 are displayed in the table below. See Note 12 for an explanation of the fair value hierarchy levels and determination of fair value.

	Level 1	Level 2	Level 3	Total
Financial assets				
Common stock				
Industrials	$ 2,080,300	$ —	$ —	$ 2,080,300
Telecommunications	1,809,300	—	—	1,809,300
Consumer	6,589,300	—	—	6,589,300
Other	25,331,200	—	—	25,331,200
Total common stocks	35,810,100	—	—	35,810,100
Mutual funds				
Growth funds	11,185,300	—	—	11,185,300
Fixed income funds	11,292,600	—	—	11,292,600
Total mutual funds	22,477,900	—	—	22,477,900
Corporate bonds	—	4,849,500	—	4,849,500
U.S. Government securities	624,900	4,967,600	—	5,592,500
Short-term investments	997,800	—	—	997,800
Total assets at fair value	59,910,700	9,817,100	—	69,727,800
Net receivables	115,500	—	—	115,500
Total assets	$ 60,026,200	$ 9,817,100	$ —	$ 69,843,300

Fair value hierarchy of the pension and postretirement funds' investments at December 31, 2009 are displayed in the table below. See Note 12 for an explanation of the fair value hierarchy levels and determination of fair value.

	Level 1	Level 2	Level 3	Total
Financial assets				
Common stock				
Industrials	$ 2,146,500	$ —	$ —	$ 2,146,500
Telecommunications	1,159,200	—	—	1,159,200
Consumer	6,378,200	—	—	6,378,200
Other	19,547,900	—	—	19,547,900
Total common stocks	29,231,800	—	—	29,231,800
Mutual funds				
Growth funds	8,870,000	—	—	8,870,000
Fixed income funds	9,705,600	—	—	9,705,600
Total mutual funds	18,575,600	—	—	18,575,600
Corporate bonds	—	3,317,900	—	3,317,900
U.S. Government securities	1,077,300	3,923,300	—	5,000,600
Short-term investments	1,090,000	—	—	1,090,000
Total assets at fair value	49,974,700	7,241,200	—	57,215,900
Net receivables	99,700	—	—	99,700
Total assets	$ 50,074,400	$ 7,241,200	$ —	$ 57,315,600

Contributions
There are no required contributions due to the qualified pension plans during 2011 under the Internal Revenue Service's (IRS) minimum funding regulations.

IEEE expects to contribute approximately $18,000 to its nonqualified pension plan and approximately $192,000 to its other postretirement benefit plans during 2011.

Expected Benefit Payments	Pension Benefits	Other Benefits
2011	$ 3,308,500	$ 191,500
2012	4,375,200	198,700
2013	3,785,400	201,500
2014	4,020,900	212,300
2015	3,514,800	217,100
2016 to 2020	20,318,800	1,179,500

NOTE 10 401(K) SAVINGS AND INVESTMENT PLAN

The Institute has a defined contribution 401(k) Savings and Investment Plan (the Plan) for eligible employees, who are eligible to participate after the start of the next pay period following 30 days of employment. Under the Plan, employees may generally contribute from 2% to 16% of their salary; however, not in excess of IRS limitations. The Institute provides a 100% matching contribution up to 4% of each employee's salary. The Institute contributed $2,941,700 and $3,129,350 to the Plan in 2010 and 2009, respectively.

NOTE 11 TAX STATUS

The Institute is qualified under Section 501(c)(3) of the Internal Revenue Code as an organization exempt from federal income taxes.

NOTE 12 FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

Cash
The Institute maintains cash balances which, at times, are in excess of the Federal Deposit Insurance Corporation insured amounts. The Institute mitigates this risk by placing its cash in high-quality financial institutions.

Debt Obligations
The fair value of the Institute's debt obligations (including current installments) is estimated based on quoted market prices for similar debt of the same remaining maturities. At December 31, 2010 and 2009, the estimated fair value of the Institute's debt was $5,231,000 and $6,542,200, respectively. The Institute utilizes interest rate swap agreements to manage the risk on interest rates associated with its debt obligations.

Fair Value Measurements
The Institute values its investments in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 820, *Fair Value Measurements and Disclosures*. ASC 820 does not require any new fair value measurements, but rather eliminates inconsistencies in guidance found in prior accounting pronouncements. ASC 820 defines fair value, requires expanded disclosures about fair value measurements and establishes a hierarchy for the inputs used to measure fair value based on the source of the input at the measurement date, which generally range from quoted prices for identical instruments in a principal trading market (Level 1) to estimates determined using related market data (Level 3). Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Multiple inputs may be used to measure fair value; however, the level of fair value for each financial asset or liability is based on the lowest significant input level within this fair value hierarchy. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Details on the methods and assumptions used to determine the fair values of the financial assets and liabilities are as follows:

Fair value measurements based on Level 1 inputs: Measurements that are most observable are based on quoted prices of identical instruments obtained from the principal markets in which they are traded. Closing prices are both readily available and representative of fair value, and market transactions occur with sufficient frequency and volume to assure liquidity. Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets that the Institute has the ability to access. Financial assets utilizing Level 1 inputs include certain common stock, U.S. mutual funds, money market funds, and short-term investments.

Fair value measurements based on Level 2 inputs: Measurements derived indirectly from observable inputs or from quoted prices from markets that are less liquid and include over-the-counter derivative instruments that are priced on an exchange-traded curve, but have contractual terms that are not identical to exchange-traded contracts. Level 2 inputs utilize other than quoted prices included in Level 1 that are observable for the asset, either directly or indirectly, for substantially the full term of the asset.

The observable inputs are used in valuation models to calculate the fair value for the asset. Financial assets and liabilities utilizing Level 2 inputs include term deposits, short-term investments, commingled funds, and interest rate swaps.

Fair value measurements based on Level 3 inputs: Measurements that are least observable are estimated from related market data, determined from sources with little or no market activity for comparable contracts or are positions with longer durations. The Institute had no Level 3 assets or liabilities at December 31, 2010 or 2009.

The methods described above may produce a fair value calculation that may not indicate net realizable value or reflect future fair values. Furthermore, while the Institute believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

There were no changes in valuation techniques that resulted in a transfer in or out of an investment's assigned level within the hierarchy.

The Institute applies the methods described in ASC 820 to value its financial assets and liabilities. Fair value measurements are applied based on the unit of account from the reporting entity's perspective. Therefore, the unit of account determines what is being measured by reference to the level at which the asset or liability is aggregated (or disaggregated) for purposes of applying other accounting pronouncements.

The following table provides the fair value hierarchy of the Institute's financial assets and liabilities as of December 31, 2010:

	Level 1	Level 2	Level 3	Total
Financial assets				
Common stock				
Industrials	$ 7,519,700	$ –	$ –	$ 7,519,700
Telecommunications	5,586,100	–	–	5,586,100
Consumer	21,629,200	–	–	21,629,200
Other	85,354,700	–	–	85,354,700
Total common stocks	120,089,700	–	–	120,089,700
Mutual funds				
Growth funds	24,853,700	–	–	24,853,700
Fixed income funds	82,487,100	–	–	82,487,100
Money market funds	62,479,800	–	–	62,479,800
Other funds	24,978,200	–	–	24,978,200
Total mutual funds	194,798,800	–	–	194,798,800
U.S. Government securities	13,573,300	–	–	13,573,300
Commingled funds	–	10,322,500	–	10,322,500
Term deposits	–	3,347,400	–	3,347,400
Short-term investments	4,177,000	12,600	–	4,189,600
Total assets at fair value	332,638,800	13,682,500	–	346,321,300
Net receivables	401,400	–	–	401,400
Total assets	$ 333,040,200	$ 13,682,500	$ –	$ 346,722,700
Financial liabilities				
Swap Agreement – Series A Bonds	$ –	$ 214,300	$ –	$ 214,300
Swap Agreement – Series B Bonds	–	95,500	–	95,500
	$ –	$ 309,800	$ –	$ 309,800

The following table provides the fair value hierarchy of the Institute's financial assets and liabilities as of December 31, 2009:

	Level 1	Level 2	Level 3	Total
Financial assets				
Common stock				
Industrials	$ 4,734,900	$ –	$ –	$ 4,734,900
Telecommunications	5,380,700	–	–	5,380,700
Consumer	17,253,600	–	–	17,253,600
Other	67,500,600	–	–	67,500,600
Total common stocks	94,869,800	–	–	94,869,800
Mutual funds				
Growth funds	23,442,400	–	–	23,442,400
Fixed income funds	69,864,300	–	–	69,864,300
Money market funds	59,628,000	–	–	59,628,000
Other funds	24,188,000	–	–	24,188,000
Total mutual funds	177,122,700	–	–	177,122,700
Term deposits	–	2,271,100	–	2,271,100
Commingled funds	–	16,534,600	–	16,534,600
Short-term investments	1,675,900	723,000	–	2,398,900
Total assets at fair value	273,668,400	19,528,700	–	293,197,100
Net receivables	127,100	–	–	127,100
Total assets	$ 273,795,500	$ 19,528,700	$ –	$ 293,324,200
Financial liabilities				
Swap Agreement – Series A Bonds	$ –	$ 269,200	$ –	$ 269,200
Swap Agreement – Series B Bonds	–	117,600	–	117,600
	$ –	$ 386,800	$ –	$ 386,800

NOTE 13 NET ASSETS

Temporarily and permanently restricted net assets consist of the following:

	December 31	
	2010	2009
Temporarily restricted	$	$
Grant funds held for specific purposes	2,383,900	2,028,800
Funds held for awards, medals and other specific purposes	613,900	557,200
	$ 2,997,800	$ 2,586,000
Permanently restricted		
Endowment principal for awards	$ 191,400	$ 191,400

Net assets that were released from donor restrictions by incurring expenses satisfying the restricted purposes during fiscal 2010 and 2009 were as follows:

	2010	2009
Grant funds held for specific purposes	$ 571,500	$ 615,700
Funds held for awards, medals and other specific purposes	32,000	7,700
	$ 603,500	$ 623,400

NOTE 14 RELATED PARTIES

Eta Kappa Nu (HKN)

On September 1, 2010, the Institute acquired Eta Kappa Nu Association (HKN) for no consideration. The Institute received $483,400 in cash and cash equivalents and assumed $404,000 in liabilities for lifetime memberships in the acquisition. Upon completion of the acquisition, the cash and cash equivalent assets were transferred to the IEEE Foundation, and an additional $1,200,000 contribution was made by the Institute to the IEEE Foundation for the purposes of the IEEE-Eta Kappa Nu Restricted Fund.

IEEE Foundation, Incorporated

The Institute has transactions with IEEE Foundation, Incorporated (the Foundation), a related organization, which performs activities in support of the scientific and educational functions and programs of the Institute. During 2010, the Directors of the Institute and the Foundation deemed that certain costs, previously allocated to the Foundation, were no longer considered to be those of the Foundation. The Institute made cash contributions of $524,000 and $636,000 in 2010 and 2009, respectively, to the Foundation. The Institute also contributed an additional $1,000,000 as seed money for the Power and Energy Scholarship Fund. The Institute provides certain accounting and administrative services to the Foundation, and the Foundation paid $479,000 in 2010 and $463,000 in 2009 for these support services. The Institute provided fundraising administrative services (contributed services) valued at $709,000 and $652,000 during 2010 and 2009, respectively. The Institute also solicited contributions on behalf of the Foundation through its annual membership renewal process. Total contributions received were $687,200 and $659,900 in 2010 and 2009, respectively.

The Institute held on deposit $27,371,900 and $1,603,600 from the Foundation at December 31, 2010 and 2009, respectively. The Institute invested these amounts on behalf of the Foundation. The interest and dividends earned on these amounts were $248,000 and $39,400 in December 2010 and 2009, respectively. The Foundation had net realized and unrealized gains of $787,000 and $194,800 on the investments for 2010 and 2009, respectively. During 2010, the Foundation moved the majority of its investments to the IEEE Investment Pool.

Receivables due from the Foundation included grants receivable of $223,500 and $166,200 at December 31, 2010 and 2009, respectively, and other receivables of $124,600 and $75,800 at December 31, 2010 and 2009, respectively. Amounts due to the Foundation were $110,400 and $156,200 at December 31, 2010 and 2009, respectively.

Summarized financial data of the Foundation for 2010 and 2009 are as follows:

	December 31	
	2010	2009
Total assets	$ 32,698,500	$ 28,450,800
Total liabilities	1,310,500	1,170,400
Net assets	$ 31,388,000	$ 29,621,200

	Year Ended December 31	
	2010	2009
Contributions	$ 6,018,900	$ 3,251,300
Change in beneficial interest in trust	339,600	571,200
Investment income	1,449,500	3,688,400
Expenses	(3,700,500)	(3,184,500)
Change in net assets	$ 4,107,500	$ 4,326,400

IEEE-Industry Standards and Technology Organization

The Institute entered into transactions with the IEEE-Industry Standards and Technology Organization (IEEE-ISTO), a related organization. The IEEE-ISTO is an organization that operates for the development of industry standards. The Institute provides certain professional services and facilities that are reimbursed by the IEEE-ISTO. Total combined revenues from these transactions were $189,900 and $217,700 for 2010 and 2009, respectively.

Summarized financial data of the IEEE-ISTO for 2010 and 2009 are as follows:

	December 31	
	2010 (Unaudited)	2009 (Audited)
Total assets	$ 22,463,900	$ 21,370,200
Total liabilities	21,756,200	20,914,400
Net assets	$ 707,700	$ 455,800

	Year Ended December 31	
	2010 (Unaudited)	2009 (Audited)
Revenues	$ 9,970,200	$ 14,569,700
Expenses	9,718,300	13,841,000
Change in net assets before other income and provision for federal income taxes	$ 251,900	$ 728,700

NOTE 15 SUBSEQUENT EVENTS

The Institute evaluated events and transactions that occurred between January 1 and June 15, 2011, which is the date that the Institute's financial statements were available to be issued for disclosure and recognition in the financial statements.

On April 1, 2011, the Institute fully redeemed the Series A and Series B bonds described in Note 6. The irrevocable line of credit that collateralized this debt expired on May 1, 2011. The related Series A and Series B interest rate swap agreements were also terminated.

IEEE WEB PAGES

The following IEEE Web sites contain additional information about the IEEE products, services and activities discussed in this annual report.

IEEE Home Page
www.ieee.org

IEEE Smart Grid
smartgrid.ieee.org

IEEE Standards Association
www.standards.ieee.org

Engineering for Change
www.engineeringforchange.org

Engineering Projects in Community Service
www.ieee.org/education_careers/education/preuniversity/epics_high.html

Presidents' Change the World Competition
www.ieeechangetheworld.org

IEEE Presidents' Scholarship
www.ieee.org/education_careers/education/preuniversity/scholarship.html

IEEE Technical English Programs
www.ieee.org/education_careers/education/university_programs/technical_english

TryEngineering
www.tryengineering.org

IEEE Milestones in Electrical Engineering and Computing
www.ieeeghn.org

IEEE.tv
www.IEEE.tv

IEEEXtreme Programming Competition
www.ieee.org/membership_services/membership/students/competitions/xtreme

IEEE-USA
www.ieeeusa.org

IEEE Women in Engineering
www.ieee.org/membership_services/membership/women

IEEE Publishing
www.ieee.org/publications_standards

IEEE Xplore®
ieeexplore.ieee.org/Xplore/guesthome.jsp

IEEE eLearning Library
www.ieee-elearning.org

IEEE-Wiley eBooks Library
www.ieee.org/publications_standards/publications/subscriptions/prod/ieee_wiley_ebook.html

IEEE Spectrum Online
www.spectrum.ieee.org

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