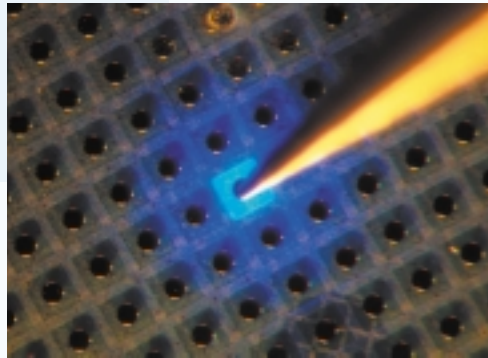


2001

> Annual / Report



Left: Microelectrode test of an experimental blue light emitting diode (LED). Tiny LEDs shine in all colors of the rainbow. Courtesy of Siemens.



Below: A concept communications device combines innovative digital intelligence with the power of wireless technology. The result: enhanced communication and entertainment through multi-media messaging and conversation. Courtesy of Motorola, Inc.



The IEEE (The Institute of Electrical and Electronics Engineers, Incorporated) is a global association of engineers, scientists and allied professionals whose technical interests are rooted in the electrical and computer sciences, and in engineering and related disciplines for the public benefit.

The IEEE's two predecessor societies were founded in 1884 and 1912, respectively. The American Institute of Electrical Engineers (AIEE) and the Institute of Radio Engineers united in 1963 to form the IEEE.

At year-end 2001, 36 IEEE Societies and four IEEE Technical Councils provided an unmatched ability to embrace the range and depth of existing technologies and to represent emerging and converging areas of interest. Also at year's end, the strong, cohesive geographic organization encompassed 298 Sections, 1,283 Chapters and 1,156 Student Branches, enabling local communication and activities among IEEE members in more than 150 countries.

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Who/We/Are

Financial Information 1997–2001

(US\$000)	1997	1998	1999	2000	2001
Total Assets	\$ 195,591	\$ 227,169	\$ 264,498	\$ 285,587	\$ 283,325
Revenue	182,996	189,561	221,912	190,791	199,331
Net Assets	98,150	108,749	131,630	121,676	92,350

Membership Status

Honorary Members	20
Fellows	5,582
Senior Members	26,772
Members	227,953
Associates	51,346
Students	65,669
Total Membership	377,342

Members in Global Workforce

Industry	60.3%	
Academia	15.8%	
Government	8.7%	
Self-Employed	6.7%	
Retired	2.9%	
Unemployed	1.9%	
Other	3.7%	

Ages of Members

Under 30	25.1%	
30-39	22.6%	
40-49	22.1%	
50-59	15.4%	
60-69	7.3%	
70 and over	7.5%	

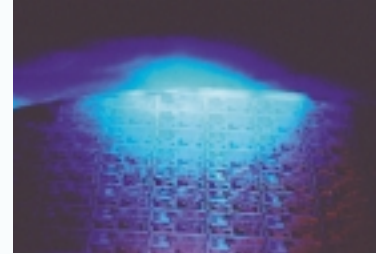
Gender

Female	8.0%	
Male	92.0%	

Geographic Distribution

United States	62.4%	
India/China/Pacific Rim	15.4%	
Europe/Middle East/Africa	14.0%	
Canada	4.3%	
Latin America	3.9%	

An innovative structure and new materials promise dramatic improvements in transistor speed, power efficiency and heat reduction. This will enable powerful new applications such as real-time voice and face recognition, and smaller computing devices with higher performance and improved battery life. Courtesy of Intel Corporation.



Society Memberships

IEEE Aerospace and Electronic Systems Society	5,826
IEEE Antennas and Propagation Society	9,792
IEEE Broadcast Technology Society	2,543
IEEE Circuits and Systems Society	21,401
IEEE Communications Society	57,901
IEEE Components, Packaging, and Manufacturing Technology Society	4,111
IEEE Computer Society	97,242
IEEE Consumer Electronics Society	3,960
IEEE Control Systems Society	10,426
IEEE Dielectrics and Electrical Insulation Society	2,437
IEEE Education Society	3,549
IEEE Electromagnetic Compatibility Society	5,112
IEEE Electron Devices Society	13,489
IEEE Engineering in Medicine and Biology Society	8,190
IEEE Engineering Management Society	7,644
IEEE Geoscience and Remote Sensing Society	2,463
IEEE Industrial Electronics Society	4,636
IEEE Industry Applications Society	11,382
IEEE Information Theory Society	5,644
IEEE Instrumentation and Measurement Society	5,278
IEEE Lasers and Electro-Optics Society	9,552
IEEE Magnetics Society	3,058
IEEE Microwave Theory and Techniques Society	13,394
IEEE Nuclear and Plasma Sciences Society	3,127
IEEE Oceanic Engineering Society	1,684
IEEE Power Electronics Society	6,615
IEEE Power Engineering Society	23,567
IEEE Professional Communication Society	1,891
IEEE Reliability Society	2,728
IEEE Robotics and Automation Society	6,376
IEEE Signal Processing Society	18,592
IEEE Society on Social Implications of Technology	1,781
IEEE Solid-State Circuits Society	14,690
IEEE Systems, Man, and Cybernetics Society	4,438
IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society	2,421
IEEE Vehicular Technology Society	5,403

Note: About 61 percent of IEEE members belong to at least one Society, while over 22 percent belong to two or more.

Sources: Members in Global Workforce data from 2001 Member Satisfaction Survey. Age and gender data are from IEEE Membership. All other membership data are from the Annual Statistics of the IEEE - 2001.



Daniel J. Senese and Joel B. Snyder

Message/from the President/and the Executive Director

Our world
changed
dramatically
in 2001...

2001 was a year like no other. For the first eight months, the IEEE — like most other organizations — continued to deal with financial challenges rooted in the recent worldwide economic difficulties. Then came September 11th. The terrorist attacks on the United States, and their aftermath, profoundly affected the IEEE and global society.

The victims, from more than 60 nations, are still mourned throughout our organization. The IEEE extends its deepest condolences to the families of our members who perished, and to the families of the thousands of other victims.

We salute our members and their employers who, in a remarkable effort by the U.S. telecommunications industry, attempted to locate survivors in New York. We also applaud our members who helped to repair and are now rebuilding the power and telecommunications infrastructures near the attack sites in New York and Washington, D.C. These exemplary efforts demonstrate a core value of the IEEE: the use of technology to benefit the public good.

Despite the unprecedented events of 9/11 and the resulting new pressures, the IEEE had a year of great accomplishment in meeting our educational and scientific goals. We are pleased to report significant achievements and new service levels that would have been impossible without the ongoing support of our Board of Directors and our volunteer-staff partnership.

In 2001, we made important advances toward our primary goal: providing members and other users with easy access to useful IEEE information. These successes included major enhancements to IEEE Xplore™, our online-delivery platform for IEEE content; another dramatic increase in the numbers of

members and others with Web accounts; and the launch of the IEEE Job Site, which enjoyed a 900 percent increase in users after its first eight months.

We continued to celebrate the quality of IEEE publications, and the ongoing, external recognition for their excellence. Our efforts to rejuvenate both *IEEE Spectrum* and *The Institute* received very positive, and gratifying, responses. Moreover, a leading report on scientific publishing again rated IEEE journals among the most respected in electrical engineering and related fields.

At the 2001 IEEE Honors Ceremony, we presented Herwig Kogelnik of Bell Labs/Lucent Technologies with the IEEE Medal of Honor for his extraordinary scientific contributions. Throughout the year, we also took great pride when eight IEEE members received other renowned global honors for technological achievements.

Finally, IEEE membership attained yet another record high, with 377,342 members. This was the fifth consecutive year of membership growth, and the fourth year we set a new high.

This Annual Report is a record of our progress. The non-financial portion is organized around the six major areas of IEEE activity: Products and Services, Serving Members, Serving Society, Membership Development, Operations, and Awards and Honors.

Our world changed dramatically in 2001, and enormous challenges now confront the IEEE and our members. But we are confident our organization, which is rooted in education and science for the public benefit, is prepared to meet the difficult tasks ahead.

Joel B. Snyder,
2001 IEEE PRESIDENT

Daniel J. Senese,
IEEE EXECUTIVE DIRECTOR

Products/and/Services

Today, more than ever, IEEE members and other users are seeking fast, easy-to-use solutions to their technical information needs. In 2001, the IEEE continued to enhance the usefulness of its online delivery platform for IEEE content as well as other systems integral to the distribution of its intellectual property.

IEEE Xplore™: Usage Doubles, Features Added

During 2001, the online delivery platform known as IEEE Xplore continued to grow in popularity. By year's end, an average 1.4 million documents a month were being downloaded — compared with 675,000 documents in March, just nine months earlier.

Introduced in May 2000, IEEE Xplore offers greatly enhanced levels of Web access to IEEE intellectual property, depending on each subscriber's selections. The collection includes all IEEE journals, magazines, conference proceedings and standards published since 1988, as well as publications of the Institution of Electrical Engineers (IEE). At year-end 2001, more than 748,000 articles were in the database.

Several important improvements to

IEEE Xplore were made during the fourth quarter. Email alerts, available to anyone who subscribes to this free service, now notify users when new research in their fields becomes available. Each alert contains a direct link to the issue's table of contents in IEEE Xplore. Another enhancement is the online availability of selected forthcoming articles after they have been reviewed and edited, but before they appear in print. An extended objects feature also enables both online and print subscribers to access multimedia enhancements to articles.

IEEE Xplore is the interface that powers the IEEE/IEE Electronic Library and the online editions of the All-Society Periodicals Package and the Proceedings Order Plan.



Virtual angiography permits physicians to move through major blood vessels on a computer and visualize them. Here, the aorta is shown with a stent. Courtesy of Siemens.

Reinvigorated IEEE Spectrum Wins Publishing Recognition

IEEE Spectrum underwent design and content rejuvenations in 2001, and by year's end the success of the effort was clear. The organization's flagship publication was honored with the prestigious silver "Ozzie" Award for best magazine redesign in the association/nonprofit category.

The Ozzies are sponsored by Folio, a leading U.S. magazine-industry publication.



IEEE Journals Continue to Score Highly

In 2001, the IEEE maintained its record of publishing the most respected journals in electrical engineering, computing and related technologies. According to the Institute of Scientific Information's 2000 Journal Citation Report, released in late 2001, IEEE publications continued to rate very highly among the 202 journals in their category. The annual report ranks the impact of journals by the number of times they are quoted or cited in other scientific publications in the first year after publication.

The IEEE had nine of the top 10, 16 of the top 20, and 40 of the top 60 most influential journals in electrical and electronics engineering. *The Proceedings of the IEEE* continued to be the most frequently cited IEEE journal, ranking second over all.



Below: A conceptual “hearing hand” embodies digital technology for contextual shopping and impulse buying. Gestures provide the interface to access digital information. Courtesy of Motorola, Inc.



Above: So small that just one will fit on the head of a common pin, millimeter-sized silicon germanium (SiGe) chips operate with great efficiency. SiGe is the driving force behind the explosion in low-cost, lightweight personal communications devices. Courtesy of International Business Machines Corporation. Unauthorized use not permitted.

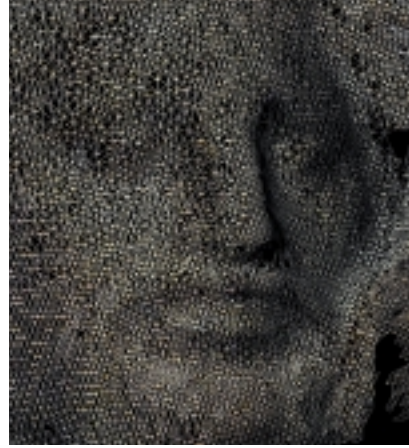
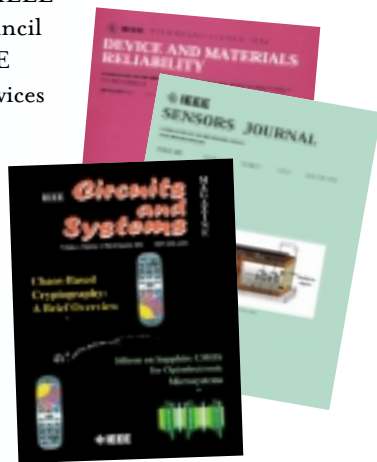
IEL Records Another Banner Year

The IEEE/IEE Electronic Library (IEL), the world’s largest database of current electrical engineering and computer science literature, continued to set new records in 2001 with sales some 58 percent higher than the previous record set in 2000. Hundreds of major corporations, universities and government agencies worldwide subscribe to this online product.

During the year, IEL received a notable endorsement from *Library Journal*, a U.S. publication read by more than 100,000 library directors, administrators and other influentials with public, academic and corporate libraries. A review “enthusiastically recommended” IEL for academic and corporate libraries that support engineering programs. The product also was described as easy to search, since users can examine as many as three fields at one time using basic Boolean operators.

IEEE Introduces New Publications

As new technologies continue to emerge and grow, so does the need for timely, quality publications. The IEEE responded during 2001 by introducing three new publications: *IEEE Circuits and Systems Magazine*; *IEEE Sensors Journal*; and *IEEE Transactions on Device and Materials Reliability*. The respective sponsors are the IEEE Circuits and Systems Society, the IEEE Sensors Council and the IEEE Electron Devices Society.



Michaelangelo’s “Pieta” was the model for creating a three-dimensional scanning technology. Besides providing art historians with precisely controlled views that previously were impossible, the technology offers other users a practical scanning system. Courtesy of International Business Machines Corporation. Unauthorized use not permitted.

Also last year, six new publications were developed for publishing beginning in 2002. They are: *IEEE Antennas and Wireless Propagation Letters*; *IEEE Transactions on Mobile Computing*; *IEEE Transactions on Molecular, Cellular and Tissue Engineering*; *IEEE Transactions on Nanotechnology*; *IEEE Pervasive Computing Strategies*; and *IEEE Transactions on Wireless Communications*.

Usage Grows for Online Peer-review System

The efficiencies offered by the new IEEE Web-based, peer-review and manuscript-processing system continued to attract more IEEE Society publications in 2001. At year’s end, 27 journals were being produced using the online tool, and work was underway to bring another 16 journals into the system during 2002. In comparison, only six publications were being produced with the system at the end of 2000. The number of manuscripts submitted with the tool more than quadrupled — from 1,700 in 2000 to more than 7,700 last year.

The IEEE’s online system utilizes Manuscript Central™ software, which is tailored to IEEE needs to enable fast, efficient electronic handling of virtually the entire process. The new system shortens the time-to-publication, without compromising the IEEE’s high standards for publishing quality.

IEEE Press Partners with John Wiley

A distinctive agreement launched during 2001 combines the intellectual resources of the IEEE with the marketing expertise and reach of U.S.-based publisher John Wiley & Sons, Inc. By year’s end, the partnership already was enabling the IEEE to offer almost 200 titles in electrical and computer engineering and science. The IEEE Online Catalog & Store permits members and others to link directly to the Wiley Web site. There, IEEE members can purchase any of these titles and receive a 15 percent discount. Wiley was founded almost 200 years ago and has been a leading technical and scientific publisher for over a century.

