History Center Goes On-Line

Beginning in early 1996, the history of electrical technology will meet its future, when the IEEE History Center launches its own home page on the World Wide Web. The Center’s Web page will provide the world internet community with an opportunity to learn more about the Center and its programs; discover information about the history of electrical, electronics, and computer engineering; and connect to other organizations that investigate the role of all types of electrical technology in our society.

The Center’s home page, which is currently under construction, will be mounted on the IEEE’s file server around the beginning of the new year. Content that will be available on the Center’s home page will include:

- Transcripts and abstracts of oral histories conducted with some of the most distinguished electrical engineers of the past 60 years.
- Reference material for historical research, such as the Center’s Sources in Electrical History, Volume 1: Archives and Manuscript Collections in U.S. Repositories.
- Finding aids for collections in the Center’s archives, such as the IEEE Merger Collection, which contains documents and letters relating to the decision of the American Institute of Electrical Engineers and the Institute of Radio Engineers to join together in 1963.
- Past issues of the History Center’s newsletter, including a cumulative bibliography
- Information on current Center research programs and projects
- Information on the Center’s Milestones program
- Advice concerning matters such as preserving paper records and artifacts, requesting historical information from the Center, applying for the Center’s fellowship in electrical history, organizing historical sessions or finding historical speakers.
- Biographical information about Center staff
- The Center bookstore, offering sale of Center publications and other Center merchandise, including tee-shirts
- Links to other Web pages that have material that is related to the history of electrical technology

Plans for the future include adding a full catalog of the Center’s archives and more of the Center’s reference guides.

The best way, of course, to learn what the Center has to offer on-line is to visit our home page. For those not already familiar with the Web, we have put together a brief primer (see below) that should get you sufficiently oriented to some Web basics so that you can begin to assemble the pieces you will need. For those of you who are already experienced Web crawlers, our URL is http://www.ieee.org/history_center. See you soon.

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So what does the Web add?
The Web, as we said before, is just a better way for people to use the internet. First of all, it has sounds and pictures. When you visit a Web page, your computer screen usually fills with brightly colored pictures, all supplied over the internet by the computer which is the actual machine where the Web page you are visiting is stored. Before the Web, when you connected to another computer over the internet, you had to type commands (that you might or might not be familiar with) and received only text back as your response. The Web standardizes the interface across the many different computers the internet lets you connect to (by letting you point and click with your mouse rather than use text commands) and expands the range of possible formats for the data you can receive.

More importantly, however, the Web makes connecting to other machines on the internet easier. When someone puts a Web page together, they can build automatic links to related material on other computer directly into the content of their page. For example, one of the articles we have on the Center’s Web page makes mention of the Smithsonian Institution. Now, the Smithsonian itself has a Web page on their own computer that has a lot of material that might be of interest to the readers of our page. With the Web, we can put a button on our page, right at the spot where the Smithsonian is mentioned,
**Staff Speaks at SHOT**

Two of the Center's staff presented research papers at the annual meeting of the Society for History of Technology held in Charlottesville, Virginia in October. William Aspray gave a paper and presented a more detailed version of this paper several days earlier at the history department of the University of Delaware. Janet Abbate presented a paper on "Open Systems" as a Sociotechnical Model for the Internet," describing how the engineering concept of an "open system" has taken on political connotations in the context of the Internet. She also gave a talk on the history of computing technologies.

**NEW DONORS**

With this issue of the newsletter, the IEEE Center for the History of Electrical Engineering welcomes four new members to our Partnership Program. Joining the program at the "Mechanic level":

- **Earl Bakken**
  - The Central Research Laboratory of the Electric Power Industry

- **Tokyo Electric Power Company**
  - Toshiba

Our sincere thanks go out to these people and organizations. For a complete list of the Center's partners, please turn to the last page of this newsletter.

**1996-97 Fellowship in Electrical History**

Applications are currently being accepted for the 1996-97 Fellowship in Electrical History. The Fellowship is for either one or two full-time graduate students at a college or university of recognized standing, or for up to one year of independent research related to the history of electrical science and technology in the same field. The stipend is $14,000.

The Fellowship committee evaluates applicants on the basis of a complete description of the proposed research, college transcript, letters of recommendation, and additional information supplied on the application form. Stipends will be available to graduate students in electrical engineering or other fields where technical knowledge as well as those humanities are invited to apply. The deadline for receipt of applications is 1 February 1996, and three copies of the entire application package must accompany the original. Application forms are available from the Center. The Fellowship in Electrical History is made possible by a grant from the IEEE Life Members Funds.

**Sources In Electrical History 3**

An International Guide To Corporate Archives

The Center has just released Sources In Electrical History, Volume 3. An International Guide To Corporate Archives in the Electrical, Electronic, and Computer Industries, a guide to the archival holdings of some of the largest companies. The book provides summary information about 132 companies in the named industries, including such general information as a description of the company's records, location and accessibility, record-keeping issues, and personnel issues. Additional information is included about the corporate or industry archives and then the history of the company or its records, such as the location of a company museum, or information provided about future changes planned for company records. The volume also has an index which lists the companies included in its industry.

This volume marks the third installment of the Center's Sources in Electrical History series. The goal of the Sources series is to formulate a history by making scholars and students aware of the diverse collections of primary sources and to encourage the collection and provision of such materials by corporate archives and manuscript repositories. The first two volumes of the series covered U.S. companies and included over 500 entries. The third volume contains over 200 histories that relate to the history of electrical engineering. We would like to thank our reviewers for their help with this project, but we hope that past guides might have left an important gap in their coverage of the world beyond the U.S. As you can see, its cultural development of electrical technology has been a worldwide phenomenon. Our hope is that this guide will provide useful descriptions of major and archival materials documenting this story (although this is an impossible task). Their main focus is to provide interesting content on their own companies (which they can then determine the purpose of) in order to provide free access to the general public. They do this for a variety of reasons, including providing access to a larger audience, creating a more accessible and accessible resource, allowing them to attract new customers, and providing a valuable resource for their industry.

Once you have an account, you can simply log in and enjoy your computer. The easy way is to attach a modem to your home computer. Then you need some kind of brand of communications software to run on the modem, but it's better to use a modem software that is compatible with your computer. This software is typically included on your computer when you purchase it or can be downloaded from the manufacturer's website (if it is an open source program) or from the software manufacturer's website (if it is a proprietary program). The modem software is typically used to configure the modem settings, such as the baud rate and the type of data to be transmitted. Once you have configured the modem software, you can use it to connect to the internet through a modem. This is done by setting up a connection to the internet through a modem, usually by specifying the modem's IP address and modem's port number. Once you have established the connection, you can use the modem software to browse the internet, send email, use social media, download files, and so on. This is a simple and convenient way to connect to the internet through a modem at home. However, it is important to remember to use the modem software responsibly and securely. For example, you should always use a strong and unique password for your modem account and never share your modem account with others. This will help prevent unauthorized access to your modem and prevent others from using your modem to access the internet.
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In 1994, the Center introduced the giving category "Senior Friends." In future years, we will segregate these categories.
Business History Project

The Minnesota Historical Society and the Hagley Museum and Library hold the century’s corporate records, and are collaborating on a project to do just that with the documentation of American business and industry. Through the Hagley Records of American Business Project, the two organizations hope to promote the preservation and accessibility of corporate records, operations decision, making, and strategic planning which have often been neglected in records of concern that quantitatively output, efficiency, and economic impact. With a grant from the National Endowment for the Humanities, the MHS and the Hagley are sponsoring a symposium, a publication of major papers from the symposium, and a records appraisal document for corporate archival records.

The symposium is scheduled for 12 April, 1996, with publication of the appraisal guidelines and the book of essays to follow. The symposium will be open to all interested observers and participants. For more information, contact James T. Mogy, Hagley Museum and Library, 302 King Street, Wilmington, DE 19894.

A new exhibit opened "This is Life! The Science and Myth of Frankenstein" opened at the American Museum in New York on September 9 and will be on display throughout the fall. The exhibit features the first and later editions of Mary Shelley's book, the book exhibition. The two-day literary conference, relevant scientific books of that era, a replica of Victor Frankenstein's laboratory, and a selection of scientific instruments and medical devices related to the story. For further information about the exhibit or the conference, contact David Rems, Director, The Bakken, 5357 Zenith Ave. So., Minneapolis, MN (612) 677-4688, dh@@kelsease.com.

Center for the History of Defense Electronics

The Centre for the History of Defence Electronics is a new interdisciplinary research centre that is due to come into being at Bournemouth University in Great Britain. This exciting new initiative, initiated under the umbrella of the University’s School of Conservation will focus on the development of advanced electronics and information technology to promote the public understanding of military electronics.

The broad aim of the Centre is to contribute to the study and public awareness of the history of defence electronics. The Centre will concentrate on radio, sound, communications, and electronic counter-measures to warfare. Work has already started on radiobeam, and we hope to be able to publish a book of the major research. We plan to publish a series of books on the subject, including books, documents, photographs, film and oral recordings, which will be shown on television and radio. The Virtual Museum will be created on the internet and will allow people to access the Centre's resources more easily. Together, these books and the Centre will eventually contain a bibliography and index relevant to sources at other locations, allowing the Centre to become a natural focus for researchers. In the Centre will also promote awareness of the subject through more conventional media such as displays, publications, conferences and day schools.

Center for the History of Electrical Engineering

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Partnership Program

We are grateful to the organizations and individuals listed below who provide generous support to the center in the form of operating, endowment, and project funding. If you or your organization are interested in joining our Partnership Program, please contact the Director, Dr. Aspray.

Founding Partners:
- IEEE
- Rutgers University
- IBM Corporation
- IEEE Foundation - General Fund
- IEEE Foundation - Life Member Fund
- Andrew W. Mellon Foundation
- Alfred P. Sloan Foundation

Senior Partners:
- National Science Foundation

Partners:
- AT&T Foundation
- Electron Devices Society
- Power Engineering Society
- Signal Processing Society

Colleagues:
- Control Systems Society
- Microwave Theory and Techniques Society

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- Electric Power Development Corporation, Tokyo
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- Environmental Research Institute of Michigan
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- Joseph F. Keithley
- Magnetics Society
- Eiichi Ohno
- Sematech
- Takashi Sugiyama
- Tokyo Electric Power Company
- Toshiba
- Yokogawa Electric Company

We are also grateful to the thousands of individuals and institutions who make annual contributions to our Friends Fund.

Lipartito Wins 1995 Electrical History Prize

Each year the Society for the History of Technology (SHOT) presents an award for the best paper on the history of electrical technology published during the preceding year. The award is sponsored by the IEEE Life Member Fund and administered by the Center. At the recent SHOT meeting in Charlottesville, Virginia the award for 1995 was presented to Kenneth Lipartito for his article "When women were switches: technology, work, and gender in the telephone industry, 1890-1920," published in The American Historical Review, vol. 99 (1994), pp. 1074-1111.

In comparison with many European countries, the United States was slow to adopt automatic telephone switching. It was not until just after World War I that Bell System managers decided to develop and implement automatic switching. A great many factors played a part in this decision: the problems of maintaining good service as telephone use increased, the technical possibilities and difficulties of automatic equipment, the political vulnerability of AT&T at a time when many people thought that the Bell near-monopoly ought to be broken up or that telecommunications ought to be nationalized, and labor issues of high turnover, unionization, and wage costs. Lipartito ably explicates these and other factors, drawing upon work in technical history, labor history, women's history, business history, and government history, and thus illuminates the process of change in a large technological system. He demonstrates the social embeddedness of decisions about technologies, making clear their multicausality and their widespread consequences.