CENTENNIAL HISTORIES

Another aspect of the Center’s Centennial efforts is promoting and assisting the preparation of a number of historical books and articles. The preliminary organization of the IEEE Archives (described in the last Newsletter) and the development of the Center’s picture collections have been particularly important in this regard. The major projects under way include the writing of the Institute’s official Centennial history by Michal McMahon, an independent historian working out of Philadelphia; the preparation of a less scholarly view of the IEEE’s one hundred years by Donald Fink and John Ryder, both former presidents of the Institute of Radio Engineers (IRE); and a number of special issues of IEEE society transactions and magazines.

The IEEE History Committee, chaired by Dr. Harold Chestnut, has made the promotion of historical efforts by IEEE societies one of its major priorities for the Centennial. A number of societies have already appointed Centennial Committees or Centennial coordinators and have begun planning specific products and events for 1984. It is hoped that by May of 1983 all IEEE technical societies will have their Centennial planning under way.

The regional entities of the IEEE are also organizing historical programs for 1984, and many IEEE sections already have Centennial committees or coordinators at work preparing section histories, historical presentations for section meetings, special Centennial publications, and other appropriate Centennial products. While the IEEE Archives contain a few records related to section activities in the IEEE and its predecessor societies, the AIEE and the IRE, most documentation for such activities must be sought locally. The Centennial is trying to direct sections to local resources and to historians and others who are equipped to assist in explorations of the electrical engineering heritage of particular towns and regions. The IEEE Centennial offers a special opportunity for fruitful cooperation between engineers and local historians, cooperation that could yield products of lasting value.
The Institute of Electrical and Electronics Engineers

IEEE History Committee – 1983

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The CENTENNIAL OF ELECTRICAL ENGINEERING AT M.I.T.

by J.E. Bedl

The centennial of electrical engineering at M.I.T. was realized in the summer of 1982. Professor Charles R. Cross organized the first course in electrical engineering in the United States, within the physics Department at M.I.T. Registration in Course VI, as it was named in 1884, became substantial enough to warrant the establishment of a separate Department of Electrical Engineering in 1902. Since that foundation, M.I.T.'s electrical engineering department has benefited from and been involved in the work of many important scientists and engineers who have contributed to the advancement of electrical engineering.

The Electrical Engineering Department was housed in Buildings 4 and 32 until 1939. In 1939-40, the Electrical Engineering Department moved to the new 751 building, which was later renamed after M. I. T.'s first president. Today, the Electrical Engineering Department is located in the new 752 building, which was dedicated in 1972.

The Electrical Engineering Department is one of the largest in the world, with over 2000 students enrolled in undergraduate and graduate programs. The department offers a wide range of courses in electrical and computer engineering, including courses in circuits, signals and systems, control systems, and digital signal processing.

The Electrical Engineering Department is home to many world-renowned researchers and faculty members, including Nobel Prize winners Richard Feynman and John Bardeen. The department is also home to many distinguished alumni, including George E. P. Box, who received the Turing Award in 1999.

The Electrical Engineering Department is committed to providing students with a high-quality education in electrical and computer engineering. The department offers a wide range of courses in electrical and computer engineering, including courses in circuits, signals and systems, control systems, and digital signal processing.

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IEE Wiring Regulations

The centenary of the Wiring Regulations of the Institution of Electrical Engineers was observed on 21 June 1982. The program included addresses by Sir Francis Tombs, President, IEE, and by David Malker, Parliamentary Under Secretary of State for Energy. The IEE's "100 Years of IEE Wiring Regulations" by David Bowers, Deputy Keeper, Department of Electrical Engineering, was released in paperback and an exhibit chronicles 100 years of electrical installation practice.

History of Computers on Video

A $150,000 grant from the Sloan Foundation will enable the Massachusetts Institute of Technology's Research Program in Communications Policy to produce an archive of histories of pioneers in the field of digital computers. The evolution of stored-program computer technology, the development of interactive computing during the 1950s and 1960s, and the introduction of commercial data processing have been selected as the subjects for the first phase.

Associate Director Appointed at Babbage Institute

The Babbage Institute, Senior Lecturer in Mathematics at Hatfield Polytechnic, United Kingdom, has been appointed Associate Director at The Charles Babbage Institute for the History of Information Processing at the University of Minnesota. Dr. John Do, a graduate of the University of Chicago and the London School of Economics, will be particularly concerned with archival and data base analysis programs.

New Director at Bakken Library

The Bakken Museum of Electricity in Life, in Minneapolis, which collects, conserves, organizes and utilizes printed, recorded and architectural material "documenting the history of electricity as a cultural force and as a tool for the study of life in health and disease," has appointed John Edward Senior as its new Director. Mr. Senior has an academic background in medical technology and the history of science as well as museum experience as Senior Curator of the Royal Ontario Museum of Medicine and as Curator of the History of Medicine, both in Toronto.

The Newsletter's "Publications" section has been prepared by Ronald R. Kline, Department of the History of Science, University of Wisconsin—Madison, and Robert Cawey of the Center staff.

John Lise Bromberg. Fusion: Science, Politics, and the Invention of a New Energy Source. Cambridge, Mass.: MIT Press, 1982. 344 pages, illustrated. A history of fusion energy research from 1953 to 1979, based on government and laboratory archives, files of participants in fusion research, and interviews with scientists, engineers, and administrators. The book focuses on the programs that have received the greatest amounts of federal funds spent on fusion: Lawrence Livermore National Laboratory, Los Alamos Scientific Laboratory, Oak Ridge National Laboratory, and the Princeton Plasma Physics Laboratory. Bromberg discusses the political forces upon scientific endeavors, noting that "the major decisions in fusion research have sometimes slanted from a roadway of technical, institutional, and political priorities." (pp. 20, 21) Joan Brumberg wrote Fission for the U.S. Department of Energy in 1982 and is now a director of the Linde Project.

George Brown. And Part of Which I Was: Recollections of a Research Engineer. Princeton Junction, N.J.: Angus Caper, 1962. A memoir of the development of television by a leading participant. George Brown developed the Turner antenna for CBS and television, and was a director of the RCA engineers who successfully struggled for compatible color television standards. George Brown (S'44/E'47) retired from RCA in 1972 as the Director of Personnel, President, Patents and Licensing, and a Member of the RCA Board of Directors.

Leila Lesham. The First Fifty Years of Nationalised Industry in Britain. London: Basingstoke: Macmillan Press, 1983. 336 pages. Covering the years 1840-1983, this is a critical history of the development of Britain's power industry. Covering the years from 1947 to 1967, Hartland argues that the influence of politics upon the industries. Decisions regarding expenditures, ownership, and large scale investment are more important to the industry's growth than the technical methods used. Hartland argues that the influence of politics upon the industries. Decisions regarding expenditures, ownership, and large scale investment are more important to the industry's growth than the technical methods used. This is a critical history of the development of Britain's power industry. Covering the years from 1947 to 1967, Hartland argues that the influence of politics upon the industries. Decisions regarding expenditures, ownership, and large scale investment are more important to the industry's growth than the technical methods used. Hartland argues that the influence of politics upon the industries. Decisions regarding expenditures, ownership, and large scale investment are more important to the industry's growth than the technical methods used.

Articles


Carthen, B. Warren, "Innovation in Medical Education," Ethel Thompson, General Electric, and X-Rays in Medicine, Medical Instrumentation, (July-August 1982), 218 ff.


(Continued on next page)
MEETINGS
The Institution of Electrical Engineers, U. K.
The Science, Education and Technology
Division of the IEE has an active program of
meetings and lectures on the history of
electrical engineering. The following lectures
are to be held at the IEE, Savoy Place, London:
24 March 1983
"Dr David L. Salomon Br. (1881-1952) —
No Ordinary Intellect," J. C. M. Wheeler
(Chairman of the Sir David Salomon
Society), 5:30 pm, tea at 5:00 pm.
20 April 1983
"Combining Choices in the Early Days of
Electric Tractior, A. W. Bond (London
Chamber of Commerce), 6:00 pm, tea
at 5:30 pm. Joint meeting with the
Committee of Electric Railways.
A "History of Electrical Engineering
Weekend" will be held at the University of
Birmingham from 15-17 July 1983. The
provisional program is as follows:
Friday, 15 July
Evening: 7:45 PM
"British Sea Mining During World War II,
br. R. C. R. Brooke
"The Electrical Units in the 1880's," A. C. Lynch
"The Rheotrons," V. Phillips
Saturday, 16 July
Morning: 9:30 AM
"History of Electroplating in Birmingham,"
C. A. Smith
"The Edmonton Refuse-Fired Electric Generating Plant," N. Barnes
"Electrical Conductors from Faraday to
Farnell," R. M. Black
Afternoon: Visit—details to be confirmed;
probably one electrical, one non-electrical.
Evening: 7:45 PM
"Joseph Chamberlain and the First Electric
Lighting Act," B. Bowers
"Accumulator Tramways of the Birmingham
Central Tramways," J. S. Webb
"Demonstration of Early Batm TV
Receivers," C. E. Ransbottom
Sunday, 17 July
Morning: 9:30 AM
"The invention from Retriving Engines
to Turbines in Electricity Generation,"
J. L. Wood
"Two early-Phase Electricity Distribution
in the West Midlands," A. E. Price
"Early History of the Derby & Notts Electric
Power Company," P. Strange
"Early History of Ferro-magnetic Materials,"
G. R. Beesecman.
Further information on these meetings may be obtained by writing:
Groups Officer LNSGI
SET Division
IEE
Savoy Place
London, England WC2R OBL

Museum of Science and Industry, Chicago
As part of its Fifth Anniversary celebration the
Museum of Science and Industry is sponsoring a conference entitled "Where
Are We Going? Critical Issues in Science and Technology."
The Conference runs from 4-5 April 1983. Historians of technology,
participating include Daniel Kevles, Everett Mendelsohn, David Jonesky,
Leo Marx, Melvin Kranzberg, and Dorothy Nelkin. The program includes two panel discussions:
"Information Systems, focusing on microelectronics, computers, and robotics." For further
information, contact:
Museum of Science and Industry
57th Street and Lake Shore Drive
Chicago, Illinois 60657

The Computer Museum
The Computer Museum will hold a symposium on archives for the history of
information processing on 5-6 May, 1983. The symposium will serve as an exchange of ideas on archival activities at the museum and in libraries, government agencies, universities, and by individuals. Anyone desiring information should contact:
Chris Budzinski
The Computer Museum
One Way
Marboro, Mass. 01752
(617) 467-7570

IEEE Region 3
SOUTHEAST'83, a conference sponsored by IEEE Region 3, will include a
session entitled "Electrical Engineering History: Toward the IEEE Centennial." Three papers will be presented:
"The Importance of Engineering Landmark Programs," J. Paul Hartman, University of
entral Florida
SOUTHEAST'83 will be held from 16-14 April, 1983, in Orlando, Florida.

ENGINES AND HISTORIANS: A RESEARCH
RELATIONSHIP
by Bayala Singer
Bayala Singer, of the Department of History and Sociology at the University of Pennsylvania, Philadelphia, is completing her PhD dissertation on the history of the PJM Interconnection this spring. At our institution, she has submitted the following observations on the interaction between historians and engineers in interpreting the development of modern technological development.

Engineers and professional historians share an interest in the history of technology, both for the enlightenment of the general public and the enlightenment of the profession. While several engineers have successfully written of events and activities in which they were active participants, other working engineers may not have the time or inclination to write such accounts, not the perspective to relate their experiences to the overall development of their fields. Above all, they may be unsure of the interest that "outsiders" may have in their work. These working engineers can, however, provide essential and invaluable resources to the professional historians working on twentieth-century technological history. Research for a recent dissertation on the history of the Pennsylvania-New Jersey-Maryland Inter-Connection (PJM), a pioneer high-voltage transmission network, illustrates this point.

One essential service engineers can provide is assistance in identifying and locating primary material. The PJM in its original form was established in the late 1950s, a time for which little manuscript material survives in the archives of companies or government regulatory agencies. Engineer-managers of the PJM (now mostly retired) granted interviews and provided printed material which indicated (a) connections between the Interconnection's formation and certain national and local political developments, (b) some possible reasons for the creation of the Interconnection in contrast to some other plans which had not come to fruition, and (c) some factors important in the reorganization and expansion of the Interconnection in 1956. This material led to leads in the cultivation of the Herbert Hoover Presidential library, a trip to that library in West Branch, Iowa, and further research at the Franklin D. Roosevelt Presidential Library in Hyde Park, NY., and at the National Archives and Library of Congress in Washington, DC.
EXHIBITIONS AND MUSEUMS

Engineerium
A new Museum is in the planning stages in Canada on the banks of the Niagara River within a quarter mile of the Horseshoe Falls. Scheduled to open c. 1985, the Engineerium plans to utilize features of both traditional museums and of science centers in order to investigate the social and technical effects of the expansion of electric power. To this end, historical collections of machinery and appliances will be combined with dynamic, interactive and static displays and with multi-media presentations. The Engineerium will be located in the 1905 Electrical Development Company Generating Station. Additional information may be obtained from J. Carr, Director, Engineerium, P.O. Box 895, Niagara Falls, Ontario, L2E 6V6, Canada.

The Science Museum,
London
March 1983 is the scheduled opening date for the Science Museum's permanent telecommunications gallery. The inaugural exhibit, sponsored by Standard Telephones and Cables PLC, will trace the history of telecommunications from the telegraph to present-day information technology. A film on the future of telecommunications is also being produced as an adjunct to the exhibit. For further information, contact John Stevenson, Education Officer, The Science Museum, Exhibition Road, London, SW7 2DD, England.

Georgia's Electrical Age
An exhibit chronicling the electrical development of the State of Georgia was on view at the Schatten Gallery, Emory University, Atlanta, from 29 April to 20 June 1982. Focusing on the effects of technological change from 1852, when Alexander Means demonstrated an electric light to Oxford College students, to the present and beyond, with a section on Atlanta 2002, the exhibit drew together photographs, artifacts and documents from corporate and academic sources. Panel discussions, lectures, slide shows and an original play were presented in connection with the exhibit.

Atomic Clocks
The Smithsonian Institution's National Museum of American History opened an exhibit entitled "Atomic Clocks" in December 1982. The exhibit documents the historical development of atomic frequency and time standards, introducing the topic with such instruments as a 19th century transit to illustrate the standard of time represented by the earth's rotation. The evolution of atomic clocks is then traced through microwaves, atomic beam clocks, optically pumped vapor cell clocks and masers, with the emphasis on the transformation of the scientist's idea into a commercial product. A final section on the uses of atomic clocks concludes the presentation. The exhibit, organized by Paul Forman, Curator of Modern Physics, is intended to remain on view for several years.

Norvin Green
First President, AIEEE

The rapidly growing art of producing and utilizing electricity has no assistance from any American national scientific society. There is no legitimate excuse for this implied absence of scientific interest, except that it be the short-sighted plea that everyone is too busy to give time to scientific, practical and social intercourse, which, in other professions, have been found so conducive to advancement.

From Nathaniel S. Keith's call for the foundation of an American electrical engineering society, April 1884.

The founding of the American Institute of Electrical Engineers in 1884 is featured in an exhibit at IEEE headquarters. Designed by the Center for the History of Electrical Engineering, the exhibit incorporates documents, books, and photographs from the collections of the IEEE and of the Engineering Societies Library.