

CBI Annual Report

The Charles Babbage Institute launched several new initiatives in the past year to prepare for the 50th Anniversary of ENIAC, enlarge its endowment, and better fit itself to serve its diverse clientele.

Strategic Planning

At the beginning of the academic year, the Institute, the Charles Babbage Foundation (CBF), representatives of the University of Minnesota's Institute of Technology (IT), the History of Science and Technology Program, and the University of Minnesota Library met to set a strategic intent for CBI: To lead and to encourage excellence in the field of the history of information processing.

This statement was reviewed and approved at the annual Trustee's meeting in October.

In pursuit of this strategic intent, the director formulated a new vision statement and a fund-raising plan that were approved by the Charles Babbage Foundation Executive Committee in December, and will be presented to the trustees and directors at their September 16 meeting.

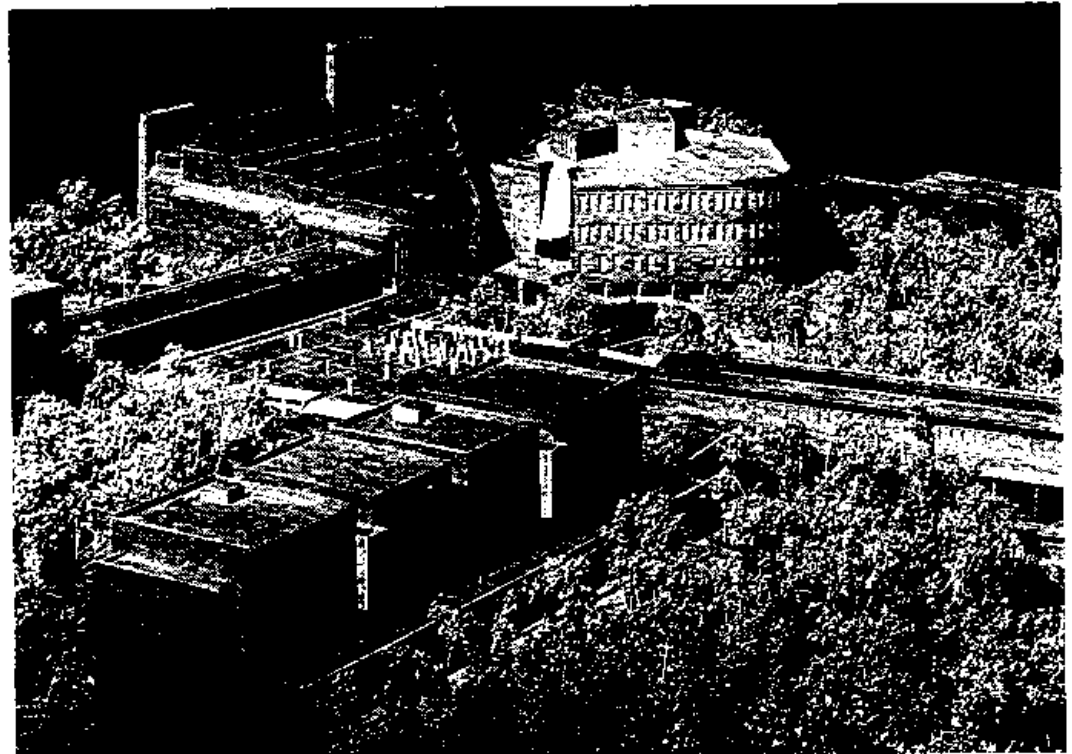
Publications

Johns Hopkins University Press accepted the CBI/DARPA project book, *Changing the Computer*, for publication. Arthur Norberg and Judy O'Neill spent much of the year revising and refining the text. The project also generated an oral history collection that is available for use by researchers.

Director Robert Seidel published *Los Alamos and the Making of the Atomic Bomb*, a popular book based upon his columns in the Los Alamos National

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New Archives Building to Face Legislature



Model of the exterior of the Archives Facility, which will be the new home of the Charles Babbage Institute.

Regents of the University of Minnesota gave the University's archives building the highest priority for new facility funding in July. This building will enable the Charles Babbage Institute to move from its location in Walter Library, which is slated for renovation. The University will seek funds for the construction of the archives building in next year's session of the Minnesota Legislature.

Last year, the legislature awarded \$2.7 million for the planning stage of the facility. The University chose Stageberg Partners, Inc., of Minneapolis, as the building's architects.

The building will also serve as a book depository for libraries across Minnesota and will house seven other archival and special collections units at the University of Minnesota.

The plans incorporate underground mined space to store historically valuable records and rare books. Mined space has an ideal temperature for paper preservation, even during Minnesota's infamous winters and hot summers. Also, it makes efficient use of precious above-ground space within the University campus, without which the building would need to be located off campus.

Sited prominently on the west bank of the Mississippi River, which divides the Twin Cities' campus, the building will adjoin the Washington Avenue pedestrian bridge and the West Bank Student Commons. The planners have little doubt that the building's location and the collocation of eight important archival and special collections units will increase

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The copy machine keeps breaking down...

1994-5 was CBI Archives' Busiest Year!

An increasing number of academic and business researchers use the materials available at CBI as their source for unique information.

CBI's archivists answered 544 requests for research assistance this year, the greatest volume since records were kept and a 52% increase over 1993-4.

These requests came principally from business and academic researchers. CBI provided reference services ranging from answering simple questions on the history of computing to conducting extended searches in CBI's collections for relevant information on a variety of subjects.

Several intellectual property law firms and a number of academic and business researchers generated large orders of photocopies, oral history transcripts, and photographic prints.

CHARLES BABBAGE INSTITUTE NEWSLETTER

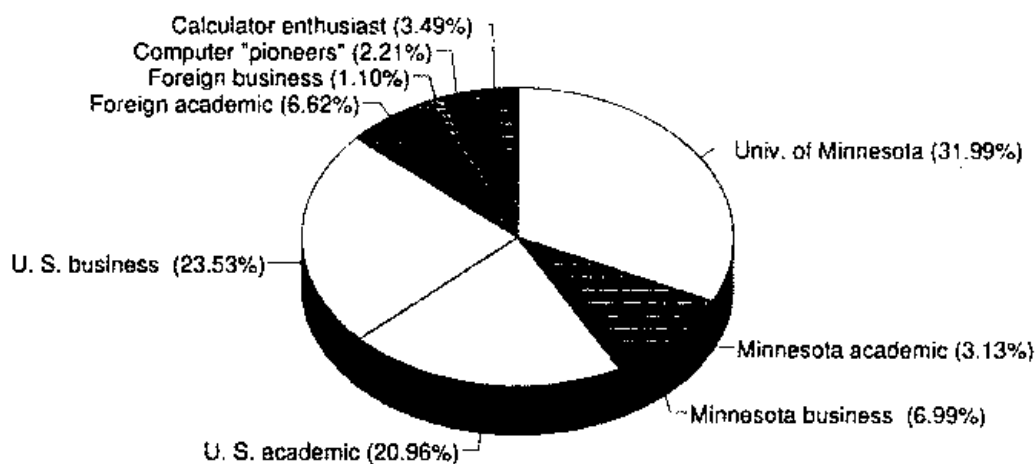
The Charles Babbage Institute, Center for the History of Information Processing, is sponsored by the University of Minnesota and the information processing community.

Charles Babbage Institute Newsletter is a publication of the Charles Babbage Institute, University of Minnesota, 103 Walter Library, 117 Pleasant Street S. E., Minneapolis, MN 55455 USA, telephone (612) 624-5050. The Newsletter reports on Institute activities and other developments in the history of information processing. Permission to copy without fee all or part of this material is granted provided that the source is cited and a copy of the publication containing the copied material is sent to the Institute.
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Constituencies of CBI Researchers



The graph shows who was asking the questions during FY 1995. Note that the greatest portion of requests originates out of CBI's home state. This non-local portion is even larger if Web use is considered

Substantive reference requests handled by the archives staff during the past year included:

1. Extracting information concerning Control Data Corporation's transfer of computer technology to the Middle East from the Jay Kershaw papers for a Egyptian college student who contacted CBI by e-mail.
2. Assisting intellectual property attorneys to locate materials in the computer manuals collection and Burroughs records.
3. Distributing oral histories conducted for the Information Processing

Web Site Moved!

CBI's World-Wide Web site has moved to a faster server with upgraded software. The change will improve the response time of the Web. The new address is:

<http://cbi.itdean.umn.edu/cbi/welcome.htm>

The old address will point to the new location, but it will be deactivated in the near term. □

Techniques Office History as paper transcripts, magnetic disks, or e-mail files for several researchers writing histories of the Internet.

4. Searching major Control Data Corporation government contracts for Control Data Systems management to aid in securing additional government grants by establishing their track record.

The growing interest in CBI's collection is also reflected in the inquiries made of our World-Wide Web Page, which now exceed 8,000 contacts per month. Web use is not figured into CBI reference statistics because of the difficulty of distinguishing between a casual browsing and informational inquiries. However, CBI views the Web as an important way of making information available, and the staff continues to experiment with it as an important reference resource. □

**Production of this newsletter
is supported by Analysts
International Corporation**

CBI Preserves ICCP History

The Institute for Certification of Computer Professionals (ICCP) was founded in September 1973 by eight computer societies to promote certification and professionalism in the computer industry.

After over twenty years of managing its certification program, ICCP shipped nearly fifteen cubic feet of historically valuable records to the Charles Babbage Institute.

The donation was coordinated by ICCP's executive director, Perry Anthony.

The collection complements CBI's holdings about computer professional organizations and the development of the profession.

Certification in the data processing field began in 1960 with discussions that led to the development of the Certified Data Processor (CDP) examination by the Data Processing Management Association (DPMA). The first CDP exam was given in 1962 at New York University.

In 1970, DPMA introduced the Registered Business Programmer (RBP) examination. In 1972, it helped form a five-member Certification and Testing



The first officers of the Institute for Certification of Computer Professionals, 1974. Left to right, they are: William S. Eick, treasurer; Fred H. Harris, vice president; John K. Swearingen, president; and Paul M. Pair, secretary.

Advisory Committee consisting of distinguished EDP practitioners and representatives of other professional associations. This committee recommended the formation of a Computer Foundation whose main purpose would be implementation of long-range objectives for professional certification programs. The Computer Foundation

Organizing Committee was co-chaired by John K. Swearingen of DPMA and Fred H. Harris of ACM.

The name "Institute for Certification of Computer Professionals" was adopted and on 15 March 1974, DPMA and ICCP signed an agreement that transferred all rights and interest in the CDP and RBP examination programs from DPMA to ICCP.

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New Building

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use of the collections. Three shared reading rooms will enhance the comfort of researchers and the security of the collections, and the building will have an exhibition area and an ample supply of conference rooms.

CBI will occupy the second level overlooking the north part of the Mississippi River bluff, and the office will house all Institute staff in one location.

The mined space will double CBI's archival storage in a state-of-the-art archival environment.

The projected cost of the facility is \$43 million. CBI is already working with Charles Babbage Foundation board members, trustees, and friends to inform state legislators of the importance of this building to the university, state, and history of computing. □

ENIAC 50th

Plans Mature

CBF Trustee Thomas Parke Hughes, emeritus professor of the History of Technology at the University of Pennsylvania, has agreed to serve as chairman of the Historical Advisory Committee for the celebration of the 50th anniversary of the ENIAC.

CBI Director Robert Seidel has agreed to serve on the Committee, which will advise Steven Brown, associate dean of Engineering of the University of Pennsylvania, on the historical components of that celebration.

Tomash Fellow Atsushi Akera is organizing a historical symposium to commemorate the 50th anniversary of the Moore School Lectures on May 17-18, 1996 at the University of Pennsylvania. Scholars in the history of comput-

ing, information processing, communications, electronics, systems analysis, and related fields are invited to submit proposals for panels, sessions, or 20-30 minute talks. Each speaker will be asked to submit a paper for circulation by April 15, 1996. Planned sessions include scientific computing, computer science, the postwar computer industry, and the public image of computers, and further suggestions for sessions are welcome.

Proposals, suggestions, and requests for further information should be submitted to Atsushi Akera, Department of History and Sociology of Science, University of Pennsylvania, 3440 Market Street, Suite 500, Philadelphia, PA 19104.

E-Mail: aakera@sas.upenn.edu. □

Annual Report

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Laboratory *Newsbulletin*. in 1993.

Archivists Bruce Bruemmer, Susan Stepka, and Kevin Corbitt cataloged the Burroughs Collection, Calvin Mooers papers, National Bureau of Standards Literature Collection, the Cuthbert Hurd papers, and the Irving Wieselmann Papers. CBI also cataloged forty-nine oral histories from Control Data Corporation records.

CBI received thirty-five new collections, including those of the Institute for Certification of Computer Professionals, the Cuthbert Hurd Papers, the SofTech Technical Library, Unisys Market Research publications, and product literature from Michael Weisbard.

Visitors

During the past year, scholars from France, Italy, Sweden, and throughout the United States have worked at the Institute. The Tomash Fellowship was awarded to Atsushi Akera, who spent two summer months at the Institute researching CBI's collections about the early scientific uses of computers.

CBI staff made presentations at the History of Science Society, the Society for History of Technology, the Society for Social Studies of Science, the Business

History Conference, the University of Minnesota History of Science Seminar, the Midwest Junto for the History of Science, the University's Chemical Engineering and Materials Science Seminars, and the Boston Colloquium for the Philosophy of Science.

Professional Activities

Archives staff presented papers at the Society of American Archivists, the Midwest Archives Conference, and the Oral History Association.

CBI Archivist Bruce Bruemmer served on a national working group to develop oral history cataloging guidelines resulting in the *Oral History Cataloging Manual*, published by the Society of American Archivists. He was also elected to the Council of the Society.

CBI formed partnerships with the Minnesota Software Association, the Data Processing Management Association, and the Association for Computing Machinery to celebrate the 50th anniversary of computing in Minnesota in 1996.

Proposal Development

CBI Director Bob Seidel attended two proposal development meetings of the National Science Foundation. The first, held in Santa Fe in September, dealt with

the cold war and American science and technology; the second, in October, dealt with digital libraries.

Funding

The gift target for FY 1995 was \$63,000. In all \$88,000 has been raised from the Charles Babbage Foundation, Analysts International, the Unisys Corporation, and other sources. The Institute of Technology contributed \$108,000 in addition to start-up funds for the director.

Plans

CBI is working with the Association for Computing Machinery and other groups towards a national celebration of the "Year of the Computer" in 1996.

In collaboration with the Hagley Library and the University of Pennsylvania Archives, CBI has proposed to microfilm records of the 1968-1973 litigation between Honeywell and Sperry that invalidated the ENIAC patent and placed digital computer technology into the public domain.

The new Archives Center is the focus of our long-term space planning. The design has been endorsed by the Regents of the University. (See article on page one). □

ICCP

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As the industry expanded and more specialized areas emerged, ICCP introduced new examinations to reflect the new areas. In 1977, ICCP first offered the Certified Computer Programmer (CCP) examination. The CCP was developed by DPMA as the Registered Business Programmer (RBP) examination.

The Certified Systems Professional (CSP) program, developed by the Association of Systems Management (ASM), was transferred to ICCP in 1985.

In 1993, the ICCP included 11 constituent societies and 6 affiliate societies.

The records are organized along the three basic activities of the ICCP:

- 1) evaluation of and applicant response to the certification process including the examination structure and content,
- 2) promotion of certification, and
- 3) administration of the organization.

The collection, which dates from 1960, includes correspondence, exam information, board minutes, and promotional materials. Use of records in the collection that are less than ten-years old require written permission from ICCP. For further information contact the CBI archives or refer to the ICCP inventory available through CBI's Web site. □



O'Neill Leaves CBI

Judy O'Neill, associate director of CBI since 1991 and acting director from November 1993 to June 1994, has left CBI after completing a study of the Information Processing Techniques Office (IPTO) of the Advanced Research Projects Agency with former Director Arthur Norberg.

O'Neill began her career in the history of technology as a research associate and became associate director following the departure of William Aspray. In addition to the IPTO Study, she is pursuing research on the history of timesharing and the history of women in computing. □

Dibner Fellowships

The Dibner Institute for the History of Science and Technology invites applications to its Resident and Visiting Fellows Programs for 1996-1997. Candidates should have advanced degrees in appropriate fields and offer evidence of substantial scholarly accomplishment and professional experience, and are expected to reside in the Boston area during the term of their grants, to participate in the activities of the Dibner Institute community and to present their current work at appropriate occasions during their fellowship appointments.

The Dibner Institute provides office space, support facilities and full privileges at the Burndy Library and at the libraries of consortium universities. Fellows will have access to the entire spectrum of activities that take place at the Dibner Institute where they will be able to collaborate in an atmosphere of collegiality and find the resources and appropriate settings to carry on their work.

Scholars may apply to the Resident Fellows Program for the Fall (Term 1), the Spring (Term 2), or both; or to the Visiting Fellows Program for at least two consecutive months. Funds are available for housing accommodations, living expenses and return travel costs. Estimates of costs, as well as the average stipend awarded in 1995-1996, are provided with the application forms.

The deadline for receipt of applications for 1996-1997 is January 1, 1996. Fellowship recipients will be announced in March 1996. Please send requests for further information and for application forms directly to:

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Computing featured at IEEE History Conference

A small but enthusiastic group of historians of electrical engineering gathered at Williams College in Williamstown, MA during the first week in August to discuss the history of computing, the transformation of knowledge in electrical engineering, oral history and biography, historical theory, reading artifacts, industry and the state, new technology and economic growth, and history of electrical technology worldwide.

The Graphical User Interface

In a special session on history of computing that launched the three-day meeting, Sue Barnes of New York University discussed the development of the graphical user interfaces (GUI) between 1970 and 1993.

Barnes described the work of Douglas Engelbart, inspired by Vannevar Bush's ideal of an information system to enable people to make informed decisions, that led to window display screens, the mouse, Hypertext, and multimedia applications; Alan Kay's development of object-oriented program languages and graphical interfaces; its commercial application by Steve Jobs; and the extension of the interface to the PC by Bill Gates. While GUI's have become more user friendly, a great deal of functionality was lost when their programming became inaccessible. Barnes concluded, defeating the early ideals of GUI developers and creating a "knowledge monopoly" among those with programming skills and access to developer information.

Software Development

Working in the software division of a multinational computer firm, Stuart Shapiro (Tomash Fellow 1985), used the methods of the ethnologist as well as that of the historian to identify the tension between standards and innovation in the development of software. Standards, which seek to restrict "entropic" behavior by software designers, ignore the self-organizing force that software developers

exhibited in their behavior. A mechanistic rules/procedures approach, which internal company literature referred to as "the shackles and chains of the current process," was therefore amplified by company procedures and restrained innovation.

Computing and Control

David Mindell of MIT presented a preview of his dissertation on the history of control systems and pursued the implications of that history for the development of computers.

His study of battleship fire-control systems in World War I and World War II showed a gradual evolution of analog and digital computer techniques that included programming.

This became the subject of Perry Crawford's MIT dissertation and helped lead Jay Forrester to digital computing and Whirlwind. It also influenced IBM's computer designs, Mindell claimed.

The development of control systems by Vladimir Zworykin and Jan Rajchman at RCA and of anti-aircraft fire-control systems before and during World War II showed a similar evolution of techniques that influenced modern computers.

While the remainder of the sessions dealt primarily with the historiographical problems of electrical engineering, long discussion periods after each paper allowed for extensive discussions of issues influencing the history of computing as well.

Participants

Attendees included Janet Abbate, Bill Aspray, Frederick Nebeker, and Andrew Goldstein, Atsushi Akera, Oskar Blumtritt, Bernard Carlson, Paul Ceruzzi, Bernard Finn, Mats Fridlund, Roger Launius, John Merrill, and James Brittain of the Georgia Institute of Technology, who was honored with a celebration on the final day of the conference, in recognition of his many contributions to the IEEE History Center.

(Please Post)

Associate Director— Charles Babbage Institute

The Charles Babbage Institute is seeking an Associate Director.

The job requires an M.A. in the History of Science or Technology or related fields such as computer science, science and technology studies, or electronics. A Ph.D. or equivalent experience in research is desirable.

The associate director will share a major responsibility for carrying out the programmatic activities of the institute, including historical research, dissemination of information

pertaining to the field of information processing, participating in related professional societies, and the administration of the Charles Babbage Institute, including budget preparation, research direction, and editing the *CBI Newsletter*.

Electronic publication and administrative experience is desirable. Familiarity with DOS/OS2 based word-processing, database, and spreadsheet programs is desirable. A demonstrated ability to respond to

subordinates and a varied clientele efficiently, effectively, and cooperatively is required. The position is an annual, renewable academic administrative post.

Applications should be submitted by August 30, 1995 to:

**Charles Babbage Institute
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Minneapolis, MN 55455**

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