The Charles Babbage Institute
For the History of Information Processing
Sponsored by AFIPS and the information processing community.
Arthur L. Norberg, Director
University of Minnesota
104 Walter Library
117 Pleasant Street, S.E.
Minneapolis, Minnesota 55455
Telephone (612) 376-9336

The Charles Babbage Institute Newsletter

Volume 6, Number 3 Spring 1984

FROM THE DIRECTOR

COMPUTER INDUSTRY RECORDS STUDY

CBI's continuing concern to provide more and varied resources for the history of the field stimulated us to focus on corporate records as a rich resource. In several ways recently, through talks and publications, CBI staff has tried to engage the community of historians and archivists in wide ranging discussions of this area. Study of the microstructure of the industry as a complement to the macrostructure studied by economists requires access to materials on the company level. And it requires access to more than just the records of the large firms. This problem has several aspects, each of which is monumental in itself. I will call attention to only two aspects of the problem here.

First, the volume of records looms large. Consider that IBM alone has over two million linear feet of sorted records. A few members of the archival profession have focused on the problem of company records over the years. Progress to date seems to be confined to a few major corporate archives which have become show pieces, with little impact on the vast majority of companies. Some of this may be explained by the fact that the archival literature produced on the subject is at too high a level of generality to be useful for an individual firm in appraising its records. Efforts to justify preservation of records based on arguments of company self-interest need to be used to ensure preservation for historians' purposes.

Second, to surmount the barrier between general archival principal and specific firm needs, attention has to be paid to the interplay between industry issues and company strategies. Insightful studies of various issue areas in this domain would complement the self-interest argument in interesting and effective ways. The recent Joint Committee on Archives of Science and Technology (JCAST) report called for such studies of firms on a case by case basis. Some of the issue areas in addition to the JCAST emphasis on science and technology developments are company structure changes over time, decision making within the industry, relations of the industry to other sectors, factors in the computer innovation process, market forces from outside the industry, and the changing role of government. We have little of the full disaggregated information needed for proper study of these items. Several of us have begun to look at this matter and believe that while information for some of these areas is plentiful, other areas are less well represented.

CBI's archival program, we hope, will result in innovative ways to approach these problems. But we need the help of many to understand all aspects of the problem and advice as to the validity of our proposed solutions.

CBI ORAL HISTORY PROGRAM

Over the past few months CBI has actively continued conducting oral histories with managers and technical personnel in the industry. In our attempts to add to the wealth of oral history information already available, we continued our emphasis in the 1960s, focusing on the entry of larger firms into hardware production and on the founding of new software firms. Interviewees include: Walter F. Bauer (Informatics General), T. H. Maguire (General Electric), James McCormack (McCormack and Dodge), Robert Mumma, Carl Rench (both of NCR), Douglas Ross (SofTech), and James Thornton (Sperry and Control Data).

Another series of interviews conducted explored the contributions of Harvard's Computation Laboratory (Richard Bloch, Robert Campbell, Robert Hawkins) and activities at MIT (Frank Versuh). All these interviews are in various stages of processing and will be available soon.

PRODUCT LITERATURE COLLECTION

In the last *Newsletter* we listed ten different types of collections available at CBI for research. In the next few issues we will provide more information about the contents of these. We begin with the Product Literature section of the Near-Print Collection. This section is based primarily on materials donated to

continued on page 2. . .

continued from page 1. . .

CBI by Gordon D. Goldstein, a scientist at the Office of Naval Research and editor of the *Digital Computer Newsletter* from 1957 to 1968; by Charles W. Hastings, an employee successively of the data processing departments of Ramo-Wooldridge Company, Honeywell (Minneapolis), and Control Data Corporation in the 1950s and 1960s; and by E. F. Somers, also a Honeywell employee, but in Arizona. Goldstein received information about new products directly from companies for consideration as items for the *Newsletter*. Hastings surveyed the market to advise better the companies that employed him about what systems and suppliers were more likely to serve the companies' needs. Other materials in the collection were culled from smaller collections donated to CBI or items sought by CBI directly from companies. The almost 900 companies represented in the Product Literature Collection range from hardware and software producers to component suppliers to time-sharing services and consultants. There is some information from dealer representatives.

The collection is arranged alphabetically by company. Most folders contain product information used in promoting sales. While the section contains some systems descriptions to inform potential customers, detailed descriptions of systems are found in the Corporate Manuals section of the Near Print Collection. Besides project information, a few corporate files contain recent annual reports; a few have press releases with photographs; and a few have public relations materials on the nature of computing. A user should not assume that the information contained on a given company is necessarily representative of the major emphasis of the company, unless explicitly noted in those materials.

Product Literature is one of 6 sections that comprise a Near-Print Collection. The Near-Print Collection contains printed documents that were not widely published or distributed and generally are unavailable through standard bibliographic sources. Most of the material was produced by industry, government or universities, and includes manuals, reports, surveys, symposia proceedings, product descriptions, and miscellaneous technical materials. These materials are organized into 6 categories: Corporate Manuals, Corporate Technical Reports, Product Literature, University Computing, U. S. Government Computing, and International Computing.

PUBLICATIONS

- Stan Augarten, *State of the Art: A Photographic History of the Integrated Circuit*. (New Haven: Ticknor & Fields, 1983). ISBN0899191959.

  This series of full color photographs shows designs from the first transistor in 1947 to projected gallium arsenide and Josephson junction circuits. Each photograph is accompanied by an informative text.

- J. David Bolter, *Turing's Man: Western Culture in the Computer Age*. (Chapel Hill, NC: University of North Carolina Press, 1984). ISBN0807815640.

  Bolter attempts to evaluate the place of the computer in our age through a description of historical trends in different ages of civilization, an analysis of the nature of the computer and computing, and an examination of the impact of the computer especially from the point of view of artificial intelligence research.

- Franklin M. Fisher, James W. McKie, and Richard B. Mancke, *IBM and the U.S. Data Processing Industry: An Economic History*. (New York: Praeger, 1983). ISBN0030630592.

  The authors' narrative is based on the extensive trial record of U.S. vs. IBM. Many companies besides IBM receive ample attention. Much of the information will be valuable to historians and writers on the industry's growth.

- T. Legendi and T. Szentivanyi, *Leben und Werk von John von Neumann: ein susammenfassender Uberblick*. (Mannheim: Bibliographisches Institut AG, 1983.) ISBN3411016396.

  A memorial celebrating the 75th anniversary of the birth of von Neumann. The papers include a short biography and various aspects of his work on computing machines and operations research.

- René Moreau, *The Computer Comes of Age: The People, the Hardware, and the Software*. (Cambridge, MA: MIT Press, 1984). ISBN0262131943.

  This book is another attempt to describe the evolution of the computer from 1940 to the early 1960s for the nonspecialist. Reprint of a 1981 French publication.

- Emerson W. Pugh, *Memories That Shaped an Industry*. (Cambridge, MA: MIT Press, 1984). ISBN0262160943.

  Finally someone has written a book detailing the events in and technical considerations of the development of ferrite core memory. The discussion moves from Whirlwind to the IBM System 360.

- Recent articles of interest in the history of computing:

William F. Aspray, "Literature and Institutions in the History of Computing," *ISIS*, 75(March 1984):162-170.

Maston Beard and Trevor Pearcey, "The Genesis of an Early Stored-Program Computer: CSIRAC," *Annals of the History of Computing*, 6(April 1984):106-115.

continued on page 3. . .

continued from page 2. . .

Kathleen R. Mauchly, "John Mauchly's Early Years," *Annals of the History of Computing*, 6(April 1984):116-138.

F. L. Morris and C. B. Jones, "An Early Program Proof by Alan Turing," *Annals of the History of Computing*, 6(April 1984):139-143.

Joop Schopman, "Wetenschap in bedrijf: ontwikkeling en organisatie van het halfgeleiderondersoek binnen de N. V. Philips Gloeilampenfabrieken, 1930-1955" (Semiconductor research in the Netherlands between 1930 and 1955), *Tijdschrift voor de geschiedenis der geneeskunde, natuurwetenschappen, wiskunde en technik*, 5(1982):148-185.

RESEARCH VALUE OF PHOTOGRAPHS

Photographs have been long neglected by scholars as a source of information for historical research. This is particularly true in the study of the history of computing, where the use of photographs is confined largely to illustrations. As the discipline matures, however, the value and use of these photographs will expand.

The beauty of the photograph lies in the different levels of information that each photograph presents. A significant portion of CBI's photograph collection was created by Auerbach Publishers as a product file for over 600 manufacturers. While these photographs are obviously a good source of information on each piece of hardware, it also represents an interesting sample of hardware technology during the late 1960s, as well as a source of information about how computers were advertised and presented.

Time has a way of enhancing the research value of photographs. This statement may seem obvious, but it does not prevent today's photographs from being destroyed on the premise, "Who could possibly want these?" In its time, one could easily have thrown out CBI's photograph (see below) of a seemingly insignificant spokesman for General Electric products.

It will be increasingly important to preserve these photographs for their research value alone. You are urged to contact CBI if you have or know others who have photographs pertaining to the history of computing.

RECENT ACQUISITION

CBI has acquired a number of documents concerned with the development of a large-scale computing center at the University of Minnesota during the late 1950s and the decade of the 1960s from the personal files of Professor Marvin L. Stein of the Computer Science Department. Professor Stein joined the Institute of Technology (I.T.) mathematics faculty in 1955 with a mandate to introduce both the use and the study of modern computing machinery to the University. In 1956 he was appointed director of the I.T. Computer Center which became, in turn, the Numerical Analysis Center and the University Computer Center. The papers contain general information and detailed use reports on the University's early computers, including the UNIVAC 1103, the CDC 1604, and the CDC 6000. Also included are reports and correspondence pertaining to early user groups, state of Minnesota computer organizations, and university computer committees. The materials are currently available to researchers while processing of the collection continues.

FROM CBI'S PHOTOGRAPH COLLECTION

During the time President Reagan served as a spokesman for the General Electric Theatre on television, he toured the G.E. Evendale plant. He was photographed talking with Herbert R. J. Grosch, who at that time was a G.E. employee.

The Charles Babbage Institute
104 Walter Library
117 Pleasant Street, S.E.
University of Minnesota
Minneapolis, MN 55455

Return Postage Guaranteed

Address Correction Requested

The Charles Babbage Institute *Newsletter* is a publication of the Charles Babbage Institute for the History of Information Processing, University of Minnesota, 104 Walter Library, 117 Pleasant Street S.E., Minneapolis, Minnesota 55455, telephone (612) 376-9336. The *Newsletter* reports on Institute activities and on other developments in the history of information processing.