



The Charles Babbage Institute
For the History of Information Processing
Sponsored by AFIPS and the information
processing community.
University of Minnesota
104 Walter Library
117 Pleasant Street, S.E.
Minneapolis, Minnesota 55455
Telephone (612) 876-9386

The Charles Babbage Institute Newsletter

Volume 4, Number 2

1 August 1982

CBI TO REPRINT CLASSICS IN THE HISTORY OF COMPUTING

A *Reprint Series for the History of Computing* is being developed by CBI that will make available a substantial collection of early and difficult to obtain literature relating to the history of computing in a series of volumes to be published during the next five years. The complete series will represent a major resource for studies in the history of computing and will greatly increase the availability of important primary and secondary sources. The two main types of material included in the collection will be reprints of major works and collections of selected papers.

The reprints of major works will comprise many "classics" that are well known to computer historians. These will include books that have long been out-of-print, important conference proceedings, influential reports, and a number of translations of non-English works. Each volume will have an introduction written by either a computer historian or a participant of the original project. To ensure a balanced coverage of the field and to complement the major works, there will be several collections of selected papers. Each volume of selected papers will be devoted to a single theme and will be supported by an authoritative commentary and a bibliography.

The reprint series will be launched in the fall of 1982 with the simultaneous reprinting of four major works. The first of these will be the classic textbook on programming, *The Preparation of Programs for an Electronic Digital Computer*, by M. V. Wilkes, D. J. Wheeler and S. Gill, first published in 1951; the reprint has an introduction by Martin Campbell-Kelly.

The second volume will be *Babbage's Calculating Engines*, the collection of Charles Babbage's works assembled by his son Major H. P. Babbage and published in 1889; the reprint includes several plates missing from the original edition, and there is an introduction by A. G. Bromley.

The third volume will be *The Handbook of the*

Napier Tercentenary Exhibition, edited by E. M. Horsburgh in 1914. This is perhaps the best English language description of the machines and techniques used for calculating before the first world war; the introduction is by M. R. Williams, University of Calgary.

The final book to appear in the fall will be the influential textbook *High-Speed Computing Devices*, prepared by the staff of Engineering Research Associates and published in 1950. The reprint has an introduction by Arnold A. Cohen, a contributing author to the original book, and now with the Charles Babbage Institute.

Other volumes that will be appearing in 1983 will include: *Theory and Techniques for the Design of Electronic Digital Computers*, the text of the Moore School Lectures held in the summer of 1946; *A Manual of Operation for the Automatic Sequence Controlled Calculator (The Harvard Mark I)*, published in 1945; *A Survey of Domestic Electronic Computing Systems*, by D. R. Hartree, 1949; *Punched Card Methods in Scientific Computation*, by W. J. Eckert, 1940; and A. M. Turing's original report for the ACE written in 1945.

The reprint project is directed by a distinguished international editorial board led by Professor Brian Randell of the University of Newcastle, England. Other members of the board include I. Bernard Cohen, Harvard University; Arthur L. Norberg, Charles Babbage Institute; Henry S. Tropp, Humboldt State University; Heinz Zemanek, IBM Vienna; Allan G. Bromley, University of Sydney, Australia; and Martin Campbell-Kelly, University of Warwick, England.

Although the editorial board has laid down guidelines for the series, the participation of computer historians and other interested people is expressly invited. If you wish to make specific suggestions for future volumes in the series, or simply wish to know more about the project, please write to Martin Campbell-Kelly at the Computer Science Department, University of Warwick, Coventry CV4 7AL, England.

PUBLICATIONS

- Geoffrey D. Austrian, *Herman Hollerith: Forgotten Giant of Information Processing* (Columbia University Press, New York, 1982). ISBN 0231051468. \$19.95.

A new biography of the pioneer in the data-processing industry. The volume offers a lively account of the life of Hollerith, along with sketches of the intellectual, social and economic factors that provided a context for many of Hollerith's inventions and business activities.

- John Haugeland, editor, *Mind Design: Philosophy, Psychology, Artificial Intelligence* (MIT Press, Cambridge, 1981). ISBN 0262580527. \$10.00.

This book is conceived as a sequel to Alan Ross Anderson's *Minds and Machines* (1964). All of the essays in this work were written since 1964, and the work includes pieces such as Newell and Simon's "Computer Science as Empirical Inquiry: Symbols and Search" and John R. Searle's "Minds, Brains, and Programs." There is a very useful bibliography included.

- Herbert F. Schantz, *The History of OCR [Optical Character Recognition]* (Recognition Technologies Users Association, Manchester Center, VT, 1982). ISBN 0943072018. \$15.95.

In this work, the author discusses the initial high hopes of this technology, the frustration of early unrealized potential, and the ultimate success of OCR in today's marketplace. There is some discussion of the people and events that have been a part of this aspect of the industry.

- Gordon Welchman, *The Hut Six Story: Breaking the Enigma Codes* (McGraw-Hill, New York, 1982). ISBN 0070691800. \$12.95.

Recruited in 1939 by the British Secret Service, Welchman, a mathematician, conceived and organized a comprehensive code-breaking system at Bletchley in the first months of the war. Hut 6 was only one of the many decoding huts used by the British, but its central role makes it an intriguing story, well-told by Welchman.

- [Office of Technology Assessment] *Selected Electronic Funds Transfer Issues—Privacy, Security, and Equity: Background Paper* (Government Printing Office, Washington, D.C., 1982). \$4.75, GPO#052-033008688.

A useful summary of attention to these issues over the past 15 years, with an indication of the present status of any action on past recommendations.

- Recent articles of interest in the history of computing:

Arthur W. Burks and Alice R. Burks, "The ENIAC: First General-Purpose Electronic Computer," *Annals of the History of Computing*, 3 (October 1981):310-389.

Dolores M. Burton, "Automated Concordances and Word Indexes: The Fifties," *Computers and the Humanities*, 15 (1981):1-14.

Dolores M. Burton, "Automated Concordances and Word Indexes: The Early Sixties and the Early Centers," *Computers and the Humanities*, 15 (1981):83-100.

Dolores M. Burton, "Automated Concordances and Word Indexes: The Process, The Programs, and The Products," *Computers and the Humanities*, 15 (1981):139-154.

Ole Immanuel Franksen, "Mr. Babbage, The Difference Engine, and the Problem of Notation: An Account of the Origin of Recursiveness and Conditionals in Computer Programming," *International Journal of Engineering Science*, 19 (1981):1657-1694.

M. Lindgren and S. Lindqvist, "Scheutz's First Difference Engine Rediscovered," *Technology and Culture*, 23 (1982):207-213.

Shirley L. Marks, "JOSS—Conversational Computing for the Nonprogrammer," *Annals of the History of Computing*, 4 (1982):35-52.

Jose Garcia Santesmases, "Early Computer Developments in Madrid," *Annals of the History of Computing*, 4 (1982):31-34.

D. L. Slotnik, "The Conception and Development of Parallel Processors," *Annals of the History of Computing*, 4 (1982):20-30.

Mike Williams, "History of Computation: Leibnitz takes the calculating machine one step closer to perfection," *CIPS REVIEW*, 6 (May/June 1982):10-13.

Jane Wolff, "Faculty Papers and Special-Subject Repositories," *The American Archivist*, 44 (1981):346-351.

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. 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.

© The Charles Babbage Institute for the History of Information Processing



D. W. Davies T. H. Flowers G. M. Hopper J. H. Wilkinson T. Kilburn T. R. Thompson M. V. Wilkes C. Marks A. Coombes
Mrs. Hartree F. C. Williams M. H. A Newman D. Wheeler K. Zuse

The above photograph was taken at the Science Museum of London at the opening of their computer gallery. It is one of a number of photographs donated to the CBI archives since an announcement appeared in a recent *Newsletter* describing the Institute's plans to begin a special photograph collection to document the history of information processing. The Institute is also interested in receiving information from other institutions and individuals who have photographic collections, so that CBI may prepare an inventory.

1983-84 FELLOWSHIP ANNOUNCED

CBI is accepting applications for a Graduate Fellowship to be awarded for the 1983-1984 academic year to a graduate student whose dissertation will be on some aspect of the history of computers and information processing. Appropriate thesis topics might be concerned with aspects of the history of the information processing industry and its infrastructure. These topics can address specific technological developments in the information sciences, including both hardware and software, especially if they also deal with the economic and organizational milieu of the developments, or with the economic, legal or social history of computing.

Residence can be at the home academic institute, other research facility where there are archival materials, the Babbage Institute, or some combination of these. There are no restrictions on the location of the academic institution which will be the venue for the Fellowship. The stipend will be \$5,000 plus an amount up to \$2,500 for tuition, fees, travel, and other research expenses. Priority will be given to students who have completed all course work and have completed all requirements for the doctoral degree except the research and writing of the dissertation. However, even incoming graduate students will be considered. The Fellowship may be extended for a period of one to three years if the Selection Committee concludes such support is appropriate.

Applications should be sent to the Charles Babbage Institute, University of Minnesota, 104 Walter Library, 117 Pleasant Street S.E., Minneapolis, Minnesota 55455, U.S.A. by January 15, 1983. Applications should include biographical data and a research plan or design. Applicants should arrange for three letters of reference, certified transcripts of college credits and GRE scores (or their equivalents abroad) to be sent directly to the Institute.

S.H.O.T. ANNUAL MEETING

The Society for the History of Technology will be holding its annual meeting in Philadelphia, October 28-31, 1982. Two past recipients of the CBI Fellowship Award will be participating in a session titled "Marketing and Employing the Computer." Paul Ceruzzi, Clemson College, will present a paper on "What Did They Think They Invented: Perceptions of the Digital Computer in its Early Years, 1945-1951." William Aspray, Harvard University, (with Donald de B. Beaver from Williams College) will speak on "Marketing the Monster: Advertising Computer Technology." The other paper to be presented in the session is "NASA's Impact on Computer Development" by James F. Tomayko, Wichita State University. Arthur Norberg, CBI Director, will serve as commentator. The session will be chaired by Nancy Stern, Hofstra University.

CALL FOR PAPERS ON THE HISTORY OF COMPUTING

The *Journal of Computers in Mathematics and Science Teaching* is interested in receiving articles for its new department, "Historical and Social Perspectives." Specifically, they are interested in receiving papers in the following areas:

- History of computing;
- Biography of a key figure in the history of computing, mathematics or science;
- Social effects and implication of using computers; and
- History of educational technology.

Author's guidelines are available upon request from Gary H. Marks, Editor, *The Journal of Computers in Mathematics and Science Teaching*, P.O. Box 4455, Austin, Texas 78765.

CIPS CONFERENCE INCLUDES HISTORY OF COMPUTING SESSION

The History of Computing program session that was included in the 1982 national conference of the Canadian Information Processing Society marks the first year that an entire session was devoted to this topic. About 100 individuals attended the session and heard Arnold A. Cohen, CBI Senior Fellow, describe the ac-

tivities and goals of the Institute. Other participants at the session were Andrew Booth, Autonetics Research Associated, Inc., who spoke on "Digital Computers 1800-2000"; and Keith Smillie, University of Alberta, who presented a paper on "Logic Machines: From Ancient Greece to Silicon Valley." Mike Williams from the University of Calgary chaired this session that was held on May 19 in Saskatoon, Saskatchewan.

Readers are reminded that the Charles Babbage Foundation is supported solely through private financing. If you would like to contribute to the promotion of the history of computing, join our Associates program. Associates receive at no charge a subscription to the *AFIPS Annals of the History of Computing*. The schedule for contributions is as follows:

Associate Member Category	Minimum Annual Tax-Deductible Contribution
Regular	\$ 40
Participating	\$ 100
Sustaining	\$ 500
Patron	\$1,000

Please make your check payable to the Charles Babbage Foundation and mail to: CBI, University of Minnesota, 104 Walter Library, 117 Pleasant Street, S.E., Minneapolis, MN 55455.

The Charles Babbage Foundation
for the History of Information
Processing



OFFICERS

Erwin Tomash, Chairman of the Board
James W. Birkenstock, President
Arthur L. Norberg, Vice President
Thomas R. Lindquist, Vice President
Adelle Tomash, Secretary
Paul Torgerson, Assistant Secretary
Philip W. Rootes, Treasurer
William T. Price, Assistant Treasurer

BOARD OF DIRECTORS

Isaac L. Auerbach, President, Auerbach Publishers, Inc.
William O. Baker, President, Bell Telephone Laboratories (Retired)
Walter F. Bauer, President and Chairman, Informatics General Corp.
James W. Birkenstock, Vice President, IBM (Retired)
Arnold A. Cohen, Charles Babbage Institute, University of Minnesota
I. Bernard Cohen, Professor, Harvard University
Willis K. Drake, Chairman, Data Card Corporation

Aaron Finerman, Professor, University of Michigan

Harvey L. Garner, Professor, University of Pennsylvania

Carl Hammer, Consultant

Arthur L. C. Humphreys, Director, International Computers Limited

Robert E. McDonald, President, Sperry Rand Corporation (Retired)

Robert P. Multhaus, Senior Historian, Smithsonian Institution

Clarence W. Spangle, Chairman, Memorex Corporation

Erwin Tomash, Chairman, Dataproducts Corporation (Retired)

FOUNDERS

Gene M. Amdahl
Isaac L. Auerbach
Walter F. Bauer
Frank G. Chambers
Willis K. Drake
Richard Gilder, Jr.
Chester I. Lappen
Donald Lucas
Dan McGurk
William N. Mozema
Frank C. Mullaney
Kenneth H. Olsen
Max Palevsky
Ryal Poppa
Clarence W. Spangle
Erwin Tomash

CORPORATE SPONSORS

AFIPS
American Telephone and Telegraph Co.
Bell Telephone Laboratories
Burroughs Corporation
CPT
Data Card Corporation
Dataproducts Corporation
Honeywell Corporation
IBM Corporation
International Computers, Ltd.
Informatics, Inc.
NCR Corporation
Perkin-Ehmer Corporation
Arthur Young and Co.