

# CHARLES BABBAGE INSTITUTE

CENTER FOR THE HISTORY OF INFORMATION TECHNOLOGY

NEWSLETTER

Vol. 33 No. 2

Fall 2011

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*CBI Newsletter* Editor: Jeffrey R. Yost

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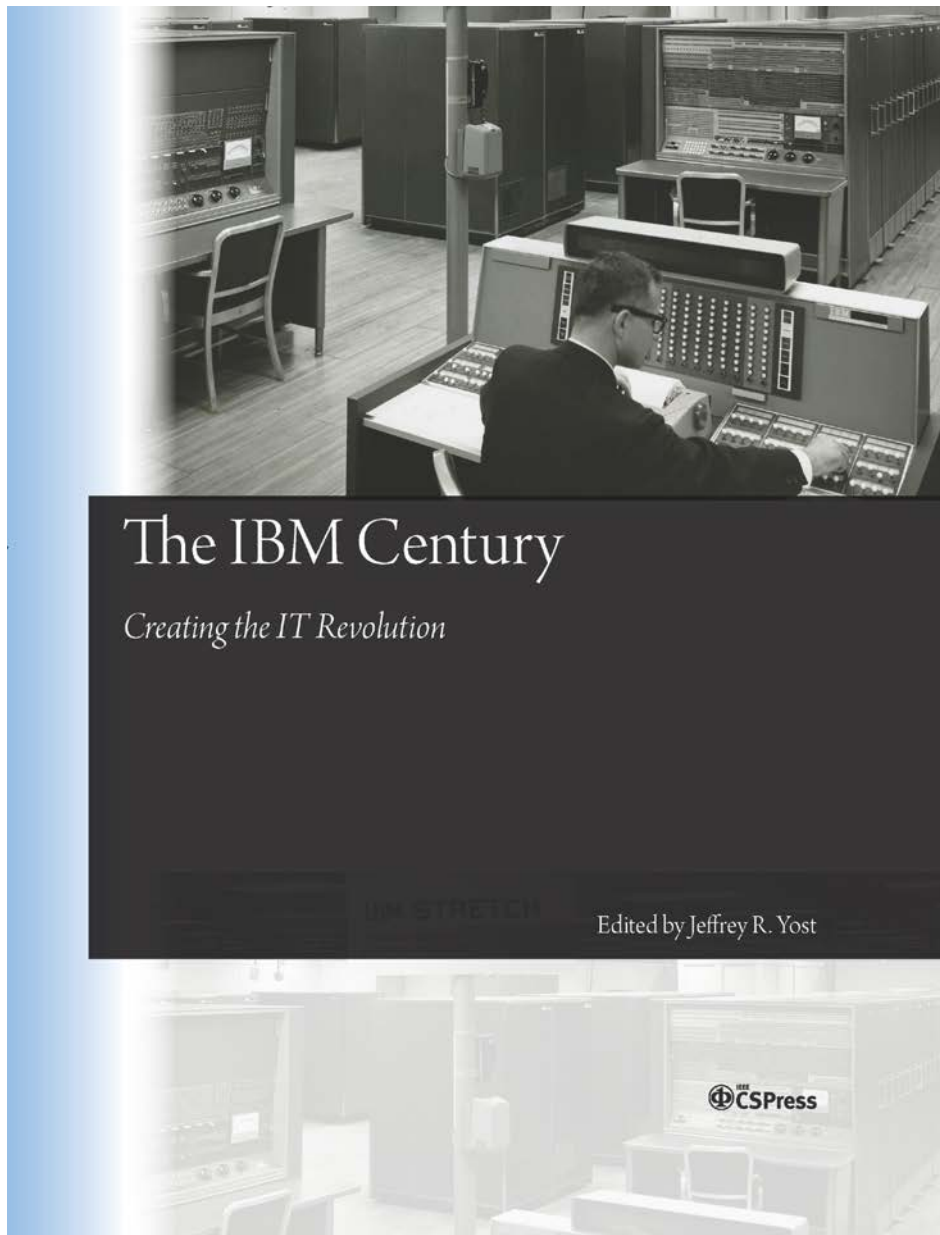
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# New CBI book on “The IBM Century”

We like celebrations in computing history as much as anyone, so the occasion this summer of IBM’s centennial (1911 to 2011) was a special pleasure. In June, near the centennial itself, CBI director Thomas Misa gave a talk in Rochester on “One Hundred Years of IBM: A View from IBM Rochester” that you can find at [www.cbi.umn.edu/resources/MHHC/index.html](http://www.cbi.umn.edu/resources/MHHC/index.html). His comments on IBM to an Agence France-Presse (AFP) wire service reporter got picked up and splashed on the pages of newspapers and blogs around the world [tinyurl.com/4xabccu](http://tinyurl.com/4xabccu). This summer he also drafted a chapter on IBM-Rochester for his book-length treatment of Minnesota’s computing industry, tentatively entitled *Digital State*.



Never one to be outdone, CBI associate director Jeffrey Yost decided to pull out the stops and examine three decades worth of *IEEE Annals of the History of Computing* (*Annals* was an AFIPS journal prior to 1992) investigating whether there was enough high quality content on IBM to support a centennial-spanning book of memoirs and essays. He soon found a wealth of materials stretching back in its coverage to the origin of what became IBM 100 years ago. He carefully selected ten fascinating memoirs written by past IBM senior executives and project managers John Backus, James Birkenstock, Bob Evans, Frank Hamilton, Robert Head, Watts Humphrey, Cuthbert Hurd, Walter Jones, William McGee, John McPherson, Robert Seeber, and George Trimble. Jeff then wrote a 30-page historical essay to contextualize and introduce the memoirs (his essay is far and away the best article-length treatment of IBM's history, stretching from the Hollerith punch-card days, the saga of the Watsons, the IBM System/360, software unbundling, and antitrust, forward through to IBM's latter-day shift to computer services). The IEEE Computer Society Press is publishing the volume of IBM memoirs, *The IBM Century: Creating the IT Revolution*, complete with Jeff's essay, overarching timeline of IBM events, and extensive bibliography of books, articles, and archival collections (with more than 160 annotated sources on all aspects of IBM's storied history).

Where might you locate this essential and engaging resource on IBM's history? Of course you can always turn to the IEEE Computer Society. Available for order from the Computer Society at <[www.createspace.com/3708577](http://www.createspace.com/3708577)> or you may now purchase it through Amazon.

You might also do double duty in supporting computer history and make a donation online or by check to the CBI Friends <[www.cbi.umn.edu/about/friends.html](http://www.cbi.umn.edu/about/friends.html)>. If you do so—at the \$100 level or above by the end of calendar year 2011—we'll be pleased to send you a specially-dedicated copy of Yost's *The IBM Century*. You'll have the great satisfaction of assisting CBI in its mission of creating an infrastructure for computer history—as well as having a splendid volume at hand to savor and enjoy.

*Thomas J. Misa*

# CBI Awarded NSF Grant for Computer Security

We are pleased to announce that the National Science Foundation has awarded CBI a major three-year grant to examine the founding history of computer security. Entitled “Building an Infrastructure for Computer Security History,” the project will enable CBI to substantially expand its select holdings on computer security and create a preeminent set of research resources on this vital topic, including oral histories, a computer-security wiki site, and archival collections, in addition to research articles exploring this vast and hitherto unexplored historical topic.

The project had its genesis when Donn Parker stopped by and persuaded us that a project of this sort was timely and pertinent. Donn’s extensive collection of archival papers deposited at CBI (33 boxes donated in 2001-2), in addition to his 2003 oral history with CBI’s Jeffrey Yost, permit a unique behind-the-scenes look at the field of computer crime, which Donn did so much to investigate and publicize. His personal SRI Computer Crime Case Files are a treasure trove for researchers seeking to understand not merely the evolving types of computer-security breaches that were of concern but also the evolving approaches to combating these intrusions.

Donn helped us recruit an “A list” of computer security experts to an Advisory Committee that has helped define the project in the past year and will oversee its activities in the years to come. We have members with personal experience in each of the major sectors of computer security, including government, industry, research, and criminal justice. In a field such as this, where there is little historical literature and a lot of new names, concepts, and institutions to get up to speed on, we are especially indebted to our Advisory Committee’s good counsel and encouragement.

In terms of our other resources on computer security, CBI also has a collection of personal papers from David Cavanagh, who was the chief information security officer at Sun Life in Canada and an active member of the International Information Integrity Institute (or I-4). Additionally, CBI’s Willis H. Ware Papers contain a wealth of rich material on early computer networks, security analyses, and policy efforts to protect personal privacy. In addition to his interview with Donn, Jeffrey Yost also has done security-related oral histories with Martin Hellman, James Bidzos, and Willis Ware.

*Thomas J. Misa*

# Director's Desk

History of computing continues to grow—expanding into new topics and ideas, and enlarging the community of people who recognize its vital importance. We sometimes think of the audience for our work to be a couple hundred colleagues around the world, but then how do you account for the staggering number of downloads racked up by Phil Frana's interview of famed computer-science pioneer Edsger Dijkstra? When the *Communications of the ACM* published an edited version of the interview in August 2010, we were pleasantly surprised when it became the #1 downloaded article for that issue. More impressive, it was the fourth-ranked *CACM* article for the year, racking up an astonishing 25,530 downloads in the 12 months since publication. This figure was exceeded by only three other blockbuster articles. The world is paying attention to the high-quality work done by CBI researchers.

At CBI we are doing our part to enlarge the bounds of the history of computing, too. We are in the final year of a large-scale historical assessment of the National Science Foundation's FastLane system, which is the agency's key computer infrastructure used in all phases of its core mission of grant making. As reported elsewhere in this newsletter (see [previous article](#)), we are also beginning an exciting new NSF-funded project on the history of computer security, an oddly understudied topic (so far at least) in computer history.

We depend on many partnerships to achieve our ambition of being the world's preeminent research and archive center in the history of computing and information technology. On a day-by-day basis, we are especially fortunate to be embedded within the University of Minnesota's library system. Our office suite, as any visitor to CBI quickly discovers, is embedded in the University Libraries, as is our state-of-the-art climate control storage facility. We also rely on the professional archivists from the University Libraries to assist researchers as well as to develop the next generation of archival resources. Since arriving at CBI in 2006, I have had the great privilege and pleasure to work with Beth Kaplan, R. Arvid Nelsen, and Stephanie Crowe. Beth and Arvid each moved "upward" into positions of significant responsibility, Beth as University Archivist and Arvid as Head of Special Collections, Rare Books, and Manuscripts. Recently Stephanie Crowe moved "westward" to Arizona State University, where her husband Nathan Crowe, after successfully finishing his dissertation, has taken up a three-year post-doctoral position, and where Stephanie is Research Project Coordinator at the Center for Biology and Society. We wish them the very best in their new undertakings. Meantime, CBI has the good fortune to rely on Susan Hoffman, an experienced professional presently serving as interim archivist while the University Libraries conducts a national search for a permanent replacement. You may contact Susan at [<s-hoff@umn.edu>](mailto:s-hoff@umn.edu).

If you are thinking of joining another of our vital partnerships—that of the CBI Friends—it is the perfect time! In the midst of our fall fundraising, we are eager to get the word out about CBI. For the basic [CBI Friends membership](#) of \$100, we will be pleased to send you the four quarterly issues of *IEEE Annals of the History of Computing* as they

appear. For an added bonus, send us your donation by the end of 2011 and receive a copy of *The IBM Century: Creating the IT Revolution*, CBI associate director Jeffrey Yost's forthcoming volume from the IEEE Computer Society Press, described in an [article](#) in this newsletter. Either way, you'll have the great satisfaction of contributing to the growth and continued financial health of CBI. Our sincere thanks to our many partners!

*Thomas J. Misa*

## News from the Archives

Stephanie Crowe, CBI Archivist since June 2010, has a new position at Arizona State University in Tempe. As of September 2011, Stephanie is Research Project Coordinator at the Center for Biology and Society where she is creating a metadata manual for ASU's digital humanities programs. Stephanie has been at CBI since fall 2007, first as assistant archivist launching the CBI news blog, managing the Control Data Corporation photo collaborative, and providing reference, instruction and exhibit creation services with great skill and energy. As Archivist, Stephanie oversaw processing of several important collections, including the recent completion of the Carl Machover Papers ([CBI 206](#)), and acquisition of the [David Wise](#), Robert Jacobson, and Robert Ashenhurst papers and the Gideon Gartner papers. In April 2011, Stephanie co-created and presented "Creating Exhibits with Impact: Design and Curation in the Archives," a well-received half-day workshop at the 2011 Midwest Archives Conference in St Paul. Stephanie is already missed equally by CBI, University Libraries colleagues, and CBI researchers. We wish her and husband Nathan well.

As always, the archival collection grows and access to material changes. In the past six months, CBI has received a new accession of Dan McCracken's papers, including material on Computer Professionals against ABM; an additional accession from the Data Processing Management Association for Region 5; and oral histories from [Dan Bricklin](#), [Bob Frankston](#), and [David Mills](#). William Wolf and David Osborne presented CBI with a gift of three core-memory planes from MIT, which illustrate how computer memory storage capacity has changed over time and display their intricate and subtle design features. While CBI rarely acquires artifacts, these pieces offer an exceptional opportunity for students and CBI visitors to see and feel what computer storage looked like before becoming invisible to the naked eye.

In October the CBI Oral History collection was incorporated into and became searchable through the University's Digital Conservancy. Users will find that while the interface is different, the contents remain the same, with the addition of citation and linking information in the online records. Archives staff will continue to fine tune search features and re-establish links to Wikipedia entries connecting researchers around the world to the oral history transcripts.

Susan Hoffman will be the Interim Archivist while a search is conducted for a permanent CBI Archivist. Susan has recently worked as a Processing Archivist on the Norman Borlaug and Elvin Stakman Collections at University Archives, and in August 2011 completed a one-year project processing College of Agriculture collections through a Minnesota Legacy Grant.

*Susan Hoffman*

## ***IEEE Annals* Launches Koomey's Law**

*IEEE Annals of the History of Computing* launched “Koomey’s Law” on historic trends on electrical efficiency in computing in the July-Sept. 2011 issue (Vol. 33, No. 3). The [Annals article](#) by Stanford University’s Jonathan Koomey and colleagues (Microsoft’s Stephen Berard, Intel’s Henry Wong, and Carnegie Mellon’s Marla Sanchez) has been written about in *The Economist*, *The Atlantic*, *Technology Review* and a host of other publications (see links below). The research team’s findings—that energy efficiency in computation has doubled roughly every 18 months—has been christened Koomey’s Law by the industry and popular presses.



*Jonathan Koomey*

*The Economist* article postulated that Koomey’s Law may be a “deeper” law than Moore’s Law. Given the remarkable history of Moore’s Law, an observation on the doubling of circuits on a chip that Gordon Moore first made in 1965, Koomey’s Law has a steep hill to climb to reach an equal stature. However, as the growth of mobile computing becomes ever more pervasive, the energy efficiency and battery life of small devices becomes all the more critical. Only time will tell the historic place of Koomey’s Law, but the *Annals* is thrilled to be the first to fully publish these deeply researched and insightful findings on historical trends in energy efficiency in computing.

- [“A deeper law than Moore's,” \*The Economist\*](#)
- [“If a MacBook Air Were as Inefficient as a 1991 Computer, the Battery Would Last 2.5 Seconds,” \*The Atlantic\*](#)
- [“The Green Corollary to Moore's Law,” \*The Atlantic\*](#)
- [“A New and Improved Moore's Law,” \*Technology Review\*](#)

CBI associate director Jeffrey Yost is completing his second and final two-year term as editor-in-chief of *IEEE Annals of the History of Computing* on December 31, 2011. As he stepped into this position in January 2008, Yost set a goal to substantially boost the amount and selectivity of peer-reviewed scholarship published by the journal, as well as target important, neglected areas including the social history of computing, the cultural history of computing, and the international history of computing. Through the dedicated work of the editorial board, these goals have been met. The *Annals* has also continued its



tradition of publishing engaging and important pioneer accounts. The *Annals* has boosted the amount of scholarship it publishes by more than 50 percent while increasing selectivity. It has published far more scholarship on social and cultural themes, and fully half the articles published during the past four years have been on topics outside the U.S. Yost wishes to thank his extremely distinguished editorial board, his equally distinguished and helpful colleagues at the Charles Babbage Institute (Tom Misa, Arvid Nelsen, Stephanie Crowe, Susan Hoffman, and Katie Charlet), and the many talented staff members of the IEEE Computer Society (particularly Robin Baldwin, Louise O'Donald, and Cheryl Baltes). He also wishes to thank his predecessor David Grier, who has always been gracious with his time and helpful advice, and his successor Lars Heide, who has been a great pleasure to work with during the transition in recent months. With Lars' knowledge of the history of computing and talent as an editor and scholar, the future of the *Annals* has never been brighter.

*Jeffrey R. Yost*

## **SHOT 2011**

The Society for the History of Technology (SHOT) held its annual meeting in Cleveland, Ohio at the Marriott Key Center from Thursday, November 3, through Sunday, November 6, 2011. The meeting was scheduled in conjunction with two other professional societies for science and technology, the History of Science Society (HSS) and Society for Social Studies of Science (4S), which were a few blocks away in other downtown Cleveland hotels. Registrants to any of the three meetings could attend sessions of the other two.

The first night featured a plenary session of the three societies entitled “Dealing with Disasters: Perspectives on Fukushima from the History and Social Studies of Science and Technology.” This was followed by a reception held at the Great Lakes Science Center—a large science museum on the south shore of Lake Erie.

On Friday, SHOT's Special Interest Group for Computers, Information, and Society (SIGCIS) had its annual lunch, as well as its book auction to help raise funds for graduate student travel to SHOT.

On Sunday, SIGCIS held its annual one-day workshop. This year's theme was “Cultures and Communities in the History of Computing” and was organized by program chair Marie Hicks (Illinois Institute of Technology) and SIGCIS chair Thomas Haigh (University of Wisconsin-Milwaukee).



*Photograph courtesy of Thomas Haigh*

CBI director Thomas Misa gave the opening plenary address, “Designing and Using Cyberinfrastructure: Challenges and Opportunities for History.” The focus of his talk was outlining the methodology, presenting early findings, and exploring broader meanings of CBI’s NSF-funded research project on the history of NSF FastLane.

The SIGCIS workshop concluded with a closing plenary moderated by Misa, with Alex Bochanek (Computer History Museum), Eden Medina (Indiana University), Nathan Ensmenger (University of Texas), Andrew Russell (Stevens Institute of Technology), and Jeffrey Yost (Charles Babbage Institute) as panelists.

Papers presented at the SIGCIS meeting included:

Elizabeth Ellcessor, “Disability Online: Policies, Practices, and Representations of the Embodied Use of New Media.” Irina Nikiforova, “Careers and Achievements of the First Women Computer Scientists, 1960-1980.” Katie Hindmarch-Watson, “Dispatches from the Underground: Gendered Labour and Communications Technology in the Remaking of London, 1870-1916.” Peggy Kidwell, “Preserving the Material Culture of Computing Communities.” Joseph November, “Macromodules, Miniaturization, and the CPU’s Brief Removal from the Black Box.” Zbigniew Stachniak, “Before the Web, There Was the NABU Network.” Ramesh Subramanian, “Murray Turoff and the Birth of Computer Mediated Communications.” Janet Toland and Pak Yoong, “The Learning Region Restructured.” Pierre Mounier-Kuhn, “From Universal Project to Sunken Culture: ALGOL in France.” Andrew Meade McGee, “Big Red, White, and Blue: Communities of Policy and Computing in Mainframe-era Washington, DC.” Peter Sachs Collopy, “Computing, Video, and Radical Software.” Allan Olley, “Punched Card Table Libraries as a Communal Resource.”

Computer history-related papers from SHOT’s general program included:

David Brock, “The Superconducting Cryotron, Materiality, and Microcircuitry, 1954-64.” Cyrus Mody, “The Josephson Junction at IBM, 1968-83.” Ann Johnson, “Superconductivity in the Field: Ford and the SQUID.” Paul Edwards, “Translating Science into Politics? Computer Models From *Limits to Growth* to Nuclear Winter.” Irina Nikiforova, “ACM and Turing Prize Scientists: Defining the Art and Science of Computing, 1947-2008.” Hansen Hsu, “NeXT History and Cocoa Community Memory.” Joline Zepceviski, “Complexity, Verification and the Rise of Object Oriented Programming.” Andrew Russell, “An Interdisciplinary History of Open Systems.” Honghong Tinn, “Mainframe Computers and Economic-Planning Projects in Taiwan, 1962-68: Electronic Computing, Econometric Models, and Development Discourse.” Kevin Walsh, “The Sons of Manhattan and the Winning of Supercomputer Access—The Tipping Point of National Security Decision Directive 189.” Lars Heide, “Association for Computing Machinery as an Institutional Intermediary Between the Innovators, Producers, and Users in Shaping Mainframe Computers.”

On Thursday afternoon, just prior to the start of SHOT, outgoing editor-in-chief Jeffrey Yost and incoming editor-in-chief Lars Heide held the annual Editorial Board Meeting of *IEEE Annals of the History of Computing*.

*Jeffrey R. Yost*

## Exploring the Archives: Resources on Computer Networking

*The following article is the eighth in a series highlighting materials in the CBI collections. The topics in this series have been chosen both for their historical significance as well as to call attention to materials/collections that may not be known to the research community.*

Networking in different stages and different forms has transformed computing—from the networked Semi-Automatic Ground Environment (SAGE) systems in the 1950s that pioneered the convergence of data processing and communications, through the ARPANET, regional networks, and internet of the 1970s and 1980s, to the ubiquitous World Wide Web of today. While Moore’s Law is frequently cited as shorthand for computer miniaturization and the economic advances behind the ever-extending reach of computers, early time-sharing systems (specialized operating systems and networked computer equipment), such as MIT’s Compatible Time-Sharing System (CTSS) and the Dartmouth Time-Sharing System (DTSS), demonstrated another method for extending the reach of computing several years prior to Moore’s famous observation in 1965. Time-sharing, which grew rapidly in the second half the 1960s, often enabled the reduction of expensive, idle computer time, and expanded the user base of mainframes. By decade’s end, the first four nodes of the Department of Defense’s Advanced Research Projects

Agency-funded ARPANET were operable for the defense and scientific communities. Meanwhile, in the private sector, computer networking and associated software systems of the 1960s and beyond forever changed banking, airline reservations, credit verifications, logistics, and a host of other activities and exchanges.

Despite the fact that only one of the Charles Babbage Institute's 200-plus collections identifies computer networking in its title, CBI arguably has the most diverse and important body of archival resources on computer networking worldwide. In addition to the abundance of high quality material in CBI manuscript collections, CBI possesses the preeminent set of research-grade oral histories on or related to various aspects of computer networking.

With regard to manuscript collection holdings on computer networking, CBI's highlights include the [Alex McKenzie Collection](#), the [John Day Papers](#), the [Brian Kahin Papers](#), and the [Mark McCahill Papers](#). The Alex McKenzie Collection of Computer Networking Development Records contains material on the research and communications of the International Packet Network Working Group (INWG). The INWG, formed in 1972 and composed of networking experts from around the world, was first chaired by Vinton Cerf. In early 1974 the group officially became Working Group 6.1 (WG6.1) and International Federation for Information Processing (IFIP) Technical Committee 6.1 (TC6), but many continued to refer to it as the INWG. The underlying concepts of Transmission Control Protocol/Internet Protocol (TCP/IP) were first discussed by this group. The collection includes all but 11 of General Notes (research reports, studies, or proposals) 1-210, Protocol Notes 1-92, as well as some documents on ad-hoc committees, letters, correspondence, and INWG newsletters from 1976 to 1990. Alex McKenzie served as an active member of the INWG and chaired the group from 1979 to 1982. Overall the McKenzie collection represents an unparalleled set of materials documenting the development of standards for the internet.

Complementing the McKenzie collection is CBI's John Day Papers. These papers document the Open System Interconnection (OSI) standards effort—the competing standard to TCP/IP. Day chaired American National Standards Institute (ANSI) X3T51, OSI Architecture and the OSI Formal Descriptions Techniques Group. Specifically the collection contains reports and other documentation on International Organization for Standardization (ISO) SC16 and SC21, and other national and international computer standard setting work.

The Brian Kahin Papers contain a large collection (35 feet) of reports, white papers, publications, and other documentation on the history of intellectual property, information policy, and the internet. Kahin served as founding director of the John F. Kennedy School of Government's (Harvard University) Information Infrastructure Project, and later as the first resident fellow at the Internet Policy Institute in Washington, D.C. The collection contains a vast array of documentation on technical, economic, and social issues with the internet.

Before the advent of the Mosaic browser at the National Center for Supercomputing Applications (NCSA) in 1993, and its commercialization by some of its original developers (with different code) as Netscape Navigator in 1994, Internet Gopher was the

most prominent tool to search for information/content on the internet. Internet Gopher, a project designed and led by Mark McCahill at the University of Minnesota, was hierarchical in structure and text-oriented rather than the flatter, graphical user interface-oriented Mosaic/Navigator. Though the graphical browser model became dominant by the mid-to-late 1990s and usage of Internet Gopher did not explode, Internet Gopher's early success remains a prominent and understudied piece of internet history. The correspondence, articles, reports, presentations, manuals, and photographs in CBI's Mark McCahill Papers richly document the technical, policy, and cultural history of Gopher.

In addition to CBI's collections wholly or largely focused on networking history, there are numerous other collections with significant though scattered materials on computer networking. The U.S. [National Bureau of Standards Computer Literature Collection](#) contains a wealth of published reports and gray literature on time-sharing, the Arpanet, and the internet. The collection has an especially strong set of reports on the pivotal time-sharing systems of the early to mid-1960s, including reports on the Dartmouth Time-Sharing System and early time-sharing technology of the System Development Corporation. There are reports on time-sharing systems of many different sizes, periods, and geographies, including time-sharing systems in the Soviet Union.

Historically valuable reports on time-sharing and other networking systems can be found in CBI's [Auerbach and Associates Market and Products Reports](#), [U.S. Government Computing, Computer Product Literature](#), and [Product Manuals](#) collections. The [James W. Cortada Papers](#) include an important 1967 report written by Informatics, Inc. leader Walter Bauer on the economics of time-sharing.

Regarding the more recent history of computer networking, CBI's [Churchill Club Interviews and Lectures collection](#) contains a fascinating set of talks by business leaders and entrepreneurs on e-commerce opportunities, the dot.com bubble, and larger economic impacts of the internet.

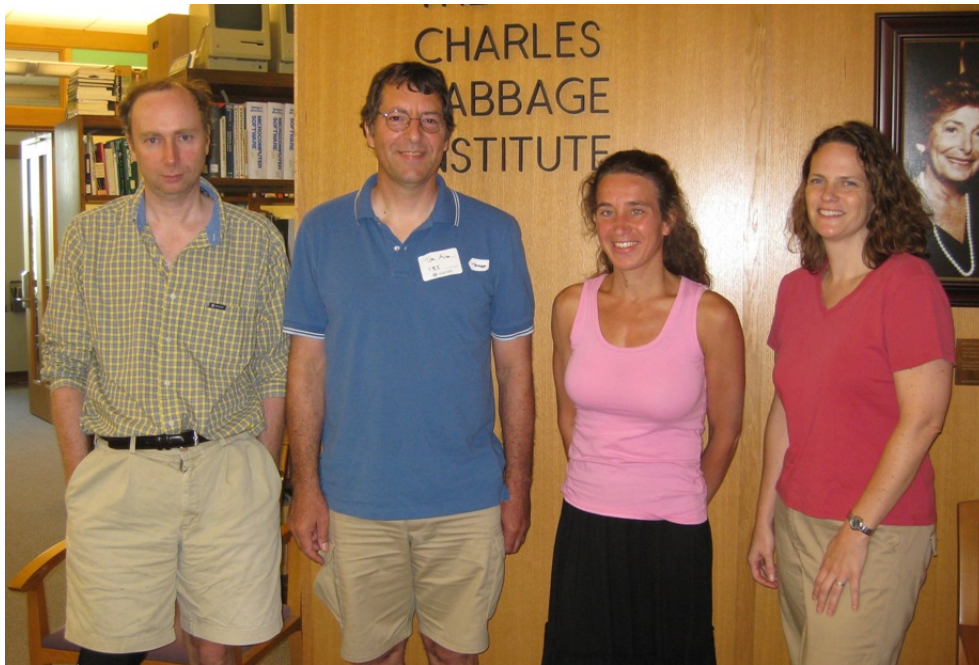
CBI's numerous, large-scale, federally-sponsored research projects have not only led to many scholarly books and articles, but also rich archival collection development opportunities. CBI's Defense Advanced Research Projects Agency-funded study (1989-1993) of the history of ARPA's Information Processing Techniques Office (IPTO) yielded a small, but extremely rich set of materials on the history of ARPANET, as well as the office's funding of pioneering research in time-sharing, graphics, and artificial intelligence. This collection includes correspondence, government reports, and reports by lead ARPANET contractor Bolt Beranek and Newman (BBN). A more recent research project, CBI's National Science Foundation-funded "Building a Future for Software History," led to the collection of the [Carl Machover Papers](#), one of the premier collections on the history of computer graphics worldwide. This collection contains documentation on internet seminars, e-commerce, and copies of the publication *Internet World News*.

A primary component of most sponsored research projects at CBI has been conducting and providing free public access to oral histories. The DARPA IPTO project resulted in an unparalleled collection of research-grade oral histories with the pioneers of the ARPANET and the early internet. Complementing the dozens of oral histories from this

project are others CBI historians have conducted on computer networking history. Among the many important oral histories significantly addressing computer networking history in CBI's collection are interviews with [W. Richards Adrion](#), [Paul Baran](#), [Bruce Barnes](#), [James Bidzos](#), [Vinton Cerf](#), [Fernando Corbató](#), [William Crowther](#), [Donald Davies](#), [Michael Dertouzos](#), [Robert Fano](#), [Howard Frank](#), [Bernard Galler](#), [Frank Heart](#), [Martin Hellman](#), [Charles Herzfeld](#), [E.F. Infante](#), [Robert Kahn](#), [Leonard Kleinrock](#), [Fred Laccabue](#), [J.C.R. Licklider](#), [Stephen Lukasik](#), [Peter Lykos](#), [Mark McCahill](#), [Alexander McKenzie](#), [David Mills](#), [Severo Ornstein](#), [Donn Parker](#), [Lawrence Roberts](#), [Douglas Ross](#), [Ivan Sutherland](#), [Robert Taylor](#), [Keith Uncapher](#), [David Walden](#), [Willis Ware](#), and [Frederick Weingarten](#). An interview with John Day is being processed, as are approximately 300 oral histories with users and designers of NSF's FastLane system.

*Jeffrey R. Yost*

## Reflections of a Resident Scholar at CBI



*Helena Durnova (center right) with CBI staff Jeff Yost, Tom Misa, and Katie Charlet*

“Athens, Georgia, or Minneapolis, Minnesota?” my husband asked when choosing the place to conduct his research in soil biology. He was more than surprised by my preference of cold Minnesota to warmer Georgia until I explained that the University of Minnesota in Minneapolis has long been home to the Charles Babbage Institute. To be sure, he knew what CBI was, but had no idea that it physically is in Minneapolis. Neither had most inhabitants of Minneapolis we talked to, and many were surprised that their city is a home to such a special place.

Thanks to the understanding and hospitality of CBI director Tom Misa, I had the pleasure of being a visiting member of CBI from February to August 2011—where I had office space in the CBI suite. Even without the ambition to become an expert on computing in the U.S., there was more than enough to explore. The CBI reference library holds most standard reference books in the early history of computing and much more, ranging from books like Kircher and Steele’s *The Crisis We Face*, connecting the political crisis and the crisis in automation, to recent dissertations on special topics in history of computing, ranging from the most technical ones to the most general ones. Books and journals not in the reference library are most probably in Walter Library (the University of Minnesota’s science and engineering library), open almost every day, which is something of a miracle from somebody coming from the Czech Republic, where libraries usually close for holidays. One of the best things about CBI’s extensive archival collections is that the vast majority of them have been fully processed and are currently available to researchers. This also holds for one of the more recent acquisitions of CBI, the Michael S. Mahoney Papers, which is, among other things, a source of deep thoughts.

*Helena Durnova*

## Recent Publications

Alac, Morana. *Handling Digital Brains: A Laboratory Study of Multimodal Semiotic Interactions in the Age of Computers*. (MIT Press, 2011).

Aspray, William. “The History of Information Science and Other Traditional Information Domains: Models for Future Research.” *Libraries & the Cultural Record* 46:2 (2011): 230-248.

Band, Jonathan and Masanobu Katoh. *Interfaces on Trial 2.0*. (MIT Press, 2011).

Bátiz-Lazo, Bernardo and Robert J. K. Reid. “The Development of Cash-Dispensing Technology in the UK.” *IEEE Annals of the History of Computing* 33:3 (July-September 2011): 32-45.

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Bradley, David. “A Personal History of the IBM PC.” *Computer* 44:8 (August 2011): 19-25.

Coopmans, Catelijne. “‘Face Value’: New Medical Imaging Software in Commercial View.” *Social Studies of Science* 41:2 (April 2011): 155-176.

Deibert, Ronald, et al. eds. *Access Contested: Security, Identity, and Resistance in Asian Cyberspace*. (MIT Press, 2011).

- DeNardis, Laura. *Opening Standards: The Global Politics of Interoperability*. (MIT Press, 2011).
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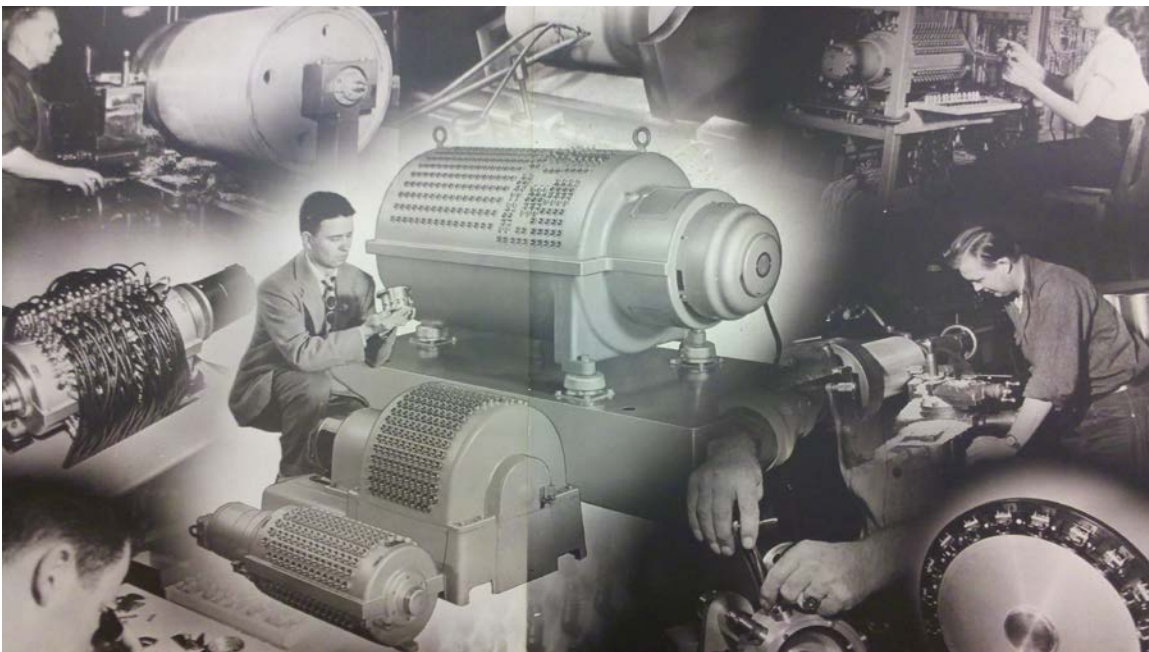
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*Compiled by Jeffrey R. Yost*

## Featured Photograph



CBI received a 4' x 6' photo collage concerned with magnetic drum memory in early October 2011. The collage was presented to CBI by Don Weidenbach, an ERA engineer involved with the production of the drum, and Lowell Benson, president of the Unisys/Lockheed-Martin VIP Club retirees group. Weidenbach is featured holding an experimental drum, surrounded by other machinists and plant workers involved with drum production and implementation.

*Susan Hoffman*