The year 1979 was a momentous time for the computing field. Among other developments, IBM was putting the finishing touches on its System/38. Digital Equipment Corporation was setting the stage to soar to new heights behind its 32-bit supermini VAX 11/780. TCP had recently been split into TCP/IP and within a few years would become the standard protocol for the Internet. And the Apple II, TRS-80, and other recently released machines were extending the personal computer beyond its origins in the electronic hobbyist market—accelerated in large part by independently produced word processing and spreadsheet software.

*Infrastructure for computer history’s future*

This was also a time of pioneering efforts in establishing an institutional infrastructure to preserve, interpret, and disseminate the history of computing. In 1979 the recently formed Charles Babbage Institute (CBI) relocated from California to its permanent home at the University of Minnesota. In the years since, CBI has done seminal research in numerous areas of the history of computing; supported more than two dozen future leaders in the field through the Tomash Fellowship program; and collected, processed, and provided free public access to the most extensive and diverse collection of archival materials on computing in the world.

In 1979 the Computer Museum of Boston was organized. In the coming years, it introduced many visitors to the richness of computer history. Relocating to Mountain View, California, in 1996, and moving to its current location in a former Silicon Graphics facility in 2001 (renamed as the Computer History Museum), the museum has continued and extended this tradition with a rich program of events and the development of exhibits showcasing its unparalleled collection of artifacts.

Last, but definitely not least, the *Annals of the History of Computing* published its first issue in July 1979. This issue contained articles on the history of BINAC, Fortran, computer development at Bletchley Park, and *JOHNNIAC*. These were written by both practitioners and academicians, continuing a practice that exists to this day—though the predominance of practitioner accounts in early volumes has given way to a more even balance as more and more scholars have focused on the history of computing. The *Annals* continues to be the leading journal in the history of computing and has published countless influential works of scholarship and important accounts of developments in the field.

It was probably not a coincidence that, 30 years ago, three key institutions formed almost simultaneously to create an infrastructure for the future of computer history. The accelerating pace of computer technology and its pervasiveness in society, coupled with the perspective provided by the passage of three decades from the development of the first electronic digital computers, lent a sense of importance and potential for this area as a subject of historical examination. These particular institutions, however, were far from inevitable. They were the product of the vision, generosity, and dedication of a small number of individuals including, but not limited to, Erwin and Adelle Tomash (founders of the Charles Babbage Institute and the Charles Babbage Foundation), Gordon and Gwen Bell (founders of the Computer Museum), Bernard Galler (founding editor in chief of the *Annals*), and Jean Sammet (first chair of the AFIPS History of Computing Committee, and General and Program Chair of the History of Programming Languages Conference—HOPL).

From the beginning, there was collaboration among the three institutions, both formal and informal. AFIPS (American Federation of Information Processing Societies) was not only the publisher of the *Annals* for more than a decade (since 1991 it has been published by the IEEE Computer Society), but also provided financial support to the Charles Babbage Institute (a role taken on for a number of years by the Charles Babbage Foundation after the dissolution of AFIPS in 1990). Meanwhile, CBI and CBF founder Erwin Tomash co-wrote an article on the history of Engineering Research Associates in the first volume of the *Annals*. CBI founding director Arthur Norberg long served on the *Annals* board and for a number of years was the journal’s assistant editor in chief. The Computer History Museum has collaborated with both the *Annals* and CBI on a
number of projects and events. This close collaboration among the three organizations has continued to this day, and I am pleased to be extending it in serving in my position as associate director of CBI and as the new editor in chief of the Annals.

Bernard Galler’s pioneering roles

This issue begins the 30th year for the Annals, and we are taking the opportunity to honor and pay tribute to the founding editor in chief Bernard (Bernie) A. Galler, who died 4 September 2006. As Atsushi Akera richly details in this issue, Bernie was an early leader in the programming field. He was also a pioneer in computer history with the AFIPS History Committee, in his longtime role on the board of the Charles Babbage Foundation and advisor to CBI, and most significantly, his near-decade-long tenure as editor in chief in the formative years of the Annals.

I feel privileged that I got to know Bernie through his years of service as an advisor to CBI. Bernie always had great insight and unyielding energy. Akera’s article does an excellent job of capturing not only his many accomplishments, but also his tremendous generosity. All of us in the computer history enterprise owe a great debt to Bernie, and there is no better way to celebrate the start of Annals’ 30th year than reflecting upon and honoring the career of this talented, kind-hearted man.

Also in this issue

Martin Campbell-Kelly has been publishing path-breaking history of computing and software scholarship in the Annals and elsewhere for nearly three decades. He has done so again, teaming up with coauthor Daniel D. Garcia-Swartz, in an intriguing article on the economic history of the time-sharing industry. They convincingly demonstrate that the time-sharing industry continued to be influential for nearly two decades, situating this trade within the classic multistage boom-to-bust cycle of the broader literature on innovation.

Leo Corry analyzes the use of early digital computers in pure mathematical disciplines. He indicates that these machines were not widely embraced by theoretical mathematicians, who generally favored conceptual tools for large-scale calculations. Corry details the pioneering work of Harry Schultz Vandiver, Derrick Henry Lehmer, and Emma Lehmer in defying this trend.

The history of computer graphics is an important topic that has been understudied, particularly for certain regions. Thomas Larsson and Ulf Stenlund survey early developments in Sweden—from the first devices on the Binary Electronic Sequence Calculator in the 1950s to the invention and legacy of Håkan Lans’ modern color picture memory system in the 1970s and 1980s.

Denis Roegel provides an engaging contextual account of the first known key-driven adding machine, a device patented by Jean-Baptiste Schwilgué in 1844. Of particular interest is Roegel’s discussion of the use of the machine.

Finally, Bernard Geoghegan outlines how the scientific concept of information has been historicized and re-historicized since Claude Shannon’s reports and articles on the topic in the second half of the 1940s. Geoghegan’s analysis gives perspective on how the writing of computer histories has helped shape computing institutions and professions.

Looking forward

I am honored to be taking on the responsibility of the editor in chief role in the footsteps of my distinguished colleague David Alan Grier, and his equally accomplished predecessors Tim Bergin, Michael Williams, J.A.N. Lee, and Bernie Galler. My colleagues on the editorial board are also an extremely talented group of scholars and professionals and have critical roles with the journal. In my column for next issue, I plan to announce new board members and editorial assignments that were not finalized when we went to press.

This is a very exciting time in the history of computing and for the Annals, as more and more scholars from a range of disciplines and perspectives become engaged in the field. Likewise, many practitioners who led or participated in important enterprises and activities from the 1960s through the 1980s have important stories to record. I am especially interested in publishing more articles and special issues on the international history of computing, the business history of computing, computing as infrastructure (in government, business, education, science, and leisure), gender and computing, software applications, computer networking, cultural and intellectual history of computing, and political history of computing. We welcome submissions in all areas of the history of computing.

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