Events and Sightings

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Exploring International Records at CBI

The Charles Babbage Institute (CBI) at the University of Minnesota, Minneapolis, has nearly 200 different collections. Three of CBI's largest collections are the Burroughs Corporation Records, Control Data Corporation Records, and the National Bureau of Standards Computer Literature Collection.

These US-based collections might suggest that CBI's archival records are heavily concentrated on the US. In fact, CBI records also contain an abundance of rich materials on international computing, as I will explain.

International Federation for Information Processing

The International Federation for Information Processing (IFIP), founded in 1960, has long been an important force for international cooperation in research and education in the computer and software fields. CBI holds a wealth of information on this important organization, particularly in the pivotal years from its founding through the mid-1970s.

IFIP was born in large part from the dedicated effort of Isaac Auerbach. Materials in CBI's Isaac Auerbach papers include materials on the organization's founding, the biennial congresses and the growth of IFIP, the relationship between IFIP and other associations, strategic planning documents, and other related materials.

CBI also has a collection titled International Federation for Information Processing Working Group 2.1, Algol Bulletin records. Algol (Algorithmic Language), a family of programming languages developed in the second half of the 1950s by a joint committee of European and American scientists and computer specialists, was used widely by computer scientists for decades. The *Algol Bulletin* grew out of a 1959 conference in Copenhagen, and served primarily European users. In 1962 IFIP created Working Group 2.1, and the Bulletin became an IFIP publication. CBI holds Bulletin numbers 1–8, 10–16, and 19–39 (1959–1976). [*Note: CBI would like to fill in the few missing issues. Contact CBI archivist R. Arvid Nelson*, nels0307@umn.edu, *if you can assist.*]

National Bureau of Standards Materials

The National Bureau of Standards (NBS) Computer Literature collection contains an immense number of reports and documents collected by NBS from the mid-1950s to the late 1970s. Regardless of their specific topic of study, researchers would do well to check the contents of the NBS collection. This definitely holds true with internationally focused research projects. The collection contains many reports concerning the major Western European countries and Japan. Regarding Japan, more than 100 reports from the 1960s and 1970s exist, including white papers from the Japan Computer Usage Development Institute, UNESCO reports on science policy and the organization of research in Japan, and documents of the Japan Electronic Industry Development Association.

Burroughs International Operations

The bulk of the Burroughs material is on US operations and issues. Nevertheless, there is a significant amount of material on international sales operations and foreign subsidiaries. This includes Burroughs correspondence with the British Board of Trade from the mid-1950s; financial analysis on most Western European countries between 1965 and 1969; international marketing studies from the late 1950s and early 1960s; subsidiary literature from Asia, Austria, Chile, Jamaica, Nicaragua, and Spain in the 1960s; and Burroughs International Group 10-Year Forecasts from 1965–1979.

International Computing Collection

The International Computing Collection contains a geographically diverse set of materials. Part of the collection is arranged by continent and region, with materials organized by individual countries; another part contains reports of international surveys on computing. For the major Western European nations and Japan, CBI has a substantial volume of reports, journals, and other literature. This is especially true with the UK, where there are records from Cambridge University on EDSAC and EDSAC 2 and from the National Physical Laboratory on the ACE computer and the Division of Computer Science. There is also documentation on many British computer firms, including Elliott Brothers Ltd., English Electric, Ferranti Ltd., LEO, Powers-Samas, ICT, ICL, and others. For other countries—such as Egypt, South Africa, Brazil, China, Israel, India, Czechoslovakia, Hungary, the Netherlands, Switzerland, Denmark, Norway, and Sweden—there are a small number of reports and literature.

The CBI collection also contains roughly three boxes of materials of international surveys, conference reports, and institutionally supported reports that concentrate on computing in Western Europe. Examples include those from NATO, the European Computer Manufacturers Association, IFIP, UNESCO, and the Council of Europe.

International Y2K Records

By the first hours and days of the year 2000, Y2K concerns and preparations appeared overblown. While the hype of many journalistic accounts may have been excessive, the massive expenditures and investments in Y2K compliance clearly helped to limit problems resulting from the fact that original software code often contained only two (rather than four) digits to specify the year. Substantial expenditures by many nations of the world during the 1990s mitigated problems stemming from Y2K, and this had an important impact on trends in future IT spending and the global economy. How did different countries perceive and respond to the Y2K crisis, and what was the international cooperative effort to deal with these problems? Such questions are just a few of those that researchers can explore in CBI's newly processed International Y2K Records collection.

The International Y2K Cooperation Center (IY2KCC) was established in December 1988 by representatives from more than 120 countries at the First Global Meeting of National Y2K Coordinators at the United Nations. The organization's mission was to "promote increased strategic cooperation and action among governments, peoples, and the private sector to minimize adverse Y2K effects on the global society and economy." Materials include country reports, popular press clippings, country questionnaires, country telephone directories, background materials on Y2K and IY2KCC, audiovisual materials, conference reports and presentations, sector reports, and the relevant papers of Bruce W. McConnell, director of IY2KCC.

Soviet Union, Russia, and Eastern Bloc computing

CBI's Russian, Soviet, and Eastern Bloc Computing Collection primarily comes from Mosaic Group, an interdisciplinary organization founded by Seymour Goodman in 1977 at Princeton University to regularly collect documentation and study the development and application of computing in the Soviet Union, Eastern Europe, and China. The collection is nearly 50 cubic feet and was housed at the University of Arizona prior to Goodman's donation of the material to CBI in 2000. Additions have subsequently been made from material donated by Willis Ware (gray—or nonconventional—literature) and the American Institute of Physics (books).

Overall, the collection contains technical reports, trip reports, foreign language books and serials, product literature, dictionaries and glossaries, meeting/conference materials, dissertations, technical manuals, and gray literature. The bulk of the material is on computing in the former Soviet Union between 1960 and the 1980s.

Catalogued reference collection material

CBI also has international computing resources in the noncirculating reference collection of books and reports. Some are relatively rare such as Computer Consultants Limited, *The European Computer Users Handbook* (1967). This contains information on the number of installations of various computers (US and non-US) throughout Western Europe. It also provides lists and short descriptive notes on European-manufactured digital and analog computers. Other sources in CBI's reference collection are extremely rare, such as James Connolly's *History of Computing in Europe* (IBM World Trade Corporation, 1967). CBI holds the only copy of this informative volume listed on WorldCat (OCLC).

CBI aims to further expand upon its rich set of research materials on international computing and software in the coming years and decades.

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Computer History Museum Meeting Reports

This past spring, the Software Industry Special Interest Group (SI SIG) of the Computer History Museum conducted the fifth and sixth in its series of meetings aimed at capturing the recollections of the pioneers who formed significant segments of the computer software and services industry. The first of these meetings, held in May 2002, covered ADAPSO trade association members who primarily represented mainframe software and services companies. The second and third meetings, held in May and November 2004, focused on PC software products companies; the fourth meeting was held in February 2006 and covered commercial professional services companies. The first 2007 meeting covered professional services companies that primarily use independent contractors rather than full-time employees to perform client projects; the second 2007 meeting dealt with five of the companies which produced relational database management systems software products. These last two meetings are reported on here.

National Association of Computer Consultant Businesses (NACCB) Meeting

On 29–30 March 2007, the SI SIG conducted a meeting of pioneers from companies that had banded together into a successful trade association in 1986 to oppose the new IRS rule 1706. Rule 1706 removed the previous "safe harbor" provision that had permitted the use of independent third parties without having to test for complex criteria as to whether the contractors were truly "independent." This organization was called the National Association of Computer Consultant Businesses (NACCB).

Sixteen of NACCB's founding and early members came to the Computer History Museum in Mountain View, California, to participate in the March program of plenary sessions and workshops covering a wide range of topics: independent contractor organizations prior to NACCB; tax issues and 1706; the formation of NACCB; customer relations; independent contractor relations; business operations; business specialization; and NACCB's continuing activities and operations.

In addition to the NACCB pioneers, historians Jeff Yost of the Charles Babbage Institute and Glenn Bugos of Moment LLC participated. Grace Gentry, one of the NACCB founders, and Burt Grad chaired the meeting. The sessions were moderated by Burt Grad and Luanne Johnson, the co-chairs of the SI SIG, and Ed LaHay, a SI SIG member. Besides the plenary sessions and workshops, three oral histories were conducted: Yost interviewed Harvey Shulman; Bugos interviewed Mark Roberts; and Grad interviewed Fred Shulman.

All sessions and interviews have been transcribed and will be edited for posting at http://www.computerhistory.org.

Relational Database Management Systems (RDBMS) Meeting

The relational database model was first introduced by Ted Codd of IBM in a paper he formally published in 1969, which was widely recognized as a major mathematically precise view of database systems and attracted much attention. Of particular note was the work done at IBM to follow up and commercialize this work, and the parallel efforts to explore this concept at the University of California, Berkeley, by Michael Stonebraker and a number of his colleagues and students.

On 12–13 June 2007, the SI SIG conducted a meeting at the Computer History Museum with 22 pioneers from five of the companies that produced commercially successful RDBMS products: IBM, Informix, Ingres, Oracle, and Sybase. They were joined by historians Michael Mahoney of Princeton and Thomas Haigh of the University of Wisconsin at Milwaukee. The sessions were chaired by Burt Grad and were moderated by him, Luanne Johnson, and Doug Jerger.

Two plenary sessions focused on an overview of how RDBMS technology and business evolved. Workshops were held on the details of how the technology and query languages matured, and on how the businesses were formed, financed, and eventually became substantial enterprises or were sold. In addition, special workshops were conducted for each company represented to explore in more detail how each one started, the problems they faced and how they were resolved, and the eventual impact of RDBMS on each of these enterprises.

Finally, three oral histories were conducted: Thomas Haigh interviewed Chris Date, and Burt Grad interviewed Mark Hoffman and Ken Jacobs. The plenary sessions, workshops, and oral histories were videotaped and will be transcribed, edited, and posted at http://www.computerhistory.org.

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History of Programming Languages Conference (HOPL III)

The third History of Programming Languages Conference (HOPL III) was held in San Diego, California, 9–10 June 2007. HOPL III was part of the ACM's Federated Computer Research Conference (FCRC) and was sponsored by two ACM Special Interest Groups: SIGPLAN (Programming Languages) and SIGSOFT (Software Engineering). Instead of the usual preprints, registrants received a memory stick containing the conference papers, the HOPL I and HOPL II books, and a recently completed *History of HOPL*.[1] All this material can be found at the HOPL Web site, http://research.ihost.com/hopl/.

History of Programming Languages III

In 2004, Barbara Ryder (Rutgers University) and Brent Hailpern (IBM Research), both former SIGPLAN chairs, created a program committee for HOPL-III. Unlike HOPL I and II, this conference would be by open call. Each HOPL-III paper would detail the early history or evolution of a specific programming language; preliminary ideas should have been documented by 1996 and the language in use by 1998.

Hailpern opened the conference. After administrative announcements, Ryder introduced and talked about the contributions to programming language research and history made by Jean E. Sammet who provided the leadership for the first and second HOPL conferences (1978 and 1993).[2] The Program Committee is working with the Computer Museum to create an appropriate gift for Jean.

The keynote address was by Guy Steele (Sun Microsystems) and Richard Gabriel (IBM Research). In their 75-minute multimedia lecture, Steele and Gabriel examined the history of programming languages from multiple perspectives and, frankly, brought down the house. They gave a brilliant, exciting, and very moving keynote. It had everything: colorful graphics, interesting music (with lyrics most of us had never heard before), interesting insights into language history and lots of humorous asides. Gabriel and Steele finished with a moving tribute to the many members of the language community who are no longer with us, including John Backus, the "father of Fortran," who passed away on 17 March 2007. Backus was the first speaker at HOPL I.

HOPL III closed with a panel, "Programming Language Paradigms: Past, Present, and Future," chaired by Kathleen Fisher (AT&T Labs—Research). The panel members were Bertrand Meyer (ETH Zurich), Olin Shivers (Georgia Institute of Technology), Perl language developer Larry Wall (O'Reilly & Associates), and Kathy Yelich (University of Southern California).

More than 8,500 programming languages have been created and used since Grace Hopper's A-0 compiler.[3] As we excitedly look to the future to see what new technology will bring, we need to remember that we stand on many sets of shoulders to see that future.

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References and notes

1. R.L. Wexelblat, *History of Programming Languages (HOPL I)*, Academic Press, 1981; T.J. Bergin and R.G. Gibson, eds., *History of Programming Languages*, ACM Press/Addison-Wesley, 1996; the papers for HOPL III as "HOPL Proceedings"; and T.J. Bergin, *Comm. ACM*, vol. 50, no. 5, 2007, pp. 69-74. In addition, the HOPL Web site contains "What Makes History" by M.S. Mahoney (from HOPL II) and a 4-part oral history of Jean E. Sammet by T. Bergin. These materials are also available in the ACM Digital Library.

2. Jean E. Sammet served as the general chair and program chair for the first ACM SIGPLAN History of Programming Languages Conference in 1978, and J.A.N. Lee (a former *Annals* editor in chief) served as administrative chair. For HOPL II in 1993, Lee served as conference chair and Sammet chaired the Program Committee. (Jean Sammet also chaired the AFIPS History of Computing Committee [HOCC], which recommended creation of the *Annals of the History of Computing*. Indeed, the creation of *Annals* was announced at HOPL I; Bernie Galler, *Annals'* first editor, was a member of the Program Committee and actively served in the HOPL conferences. For reviews of the first HOPL conference, see *Annals of the History of Computing*, vol. 1, no. 1, 1979, pp. 68-71.

3. Diarmuid Pigott has created "HOPL: An Interactive Roster of Programming Languages," containing information on 8,512 languages and 17,837 bibliographic records. See http://hopl.murdoch.edu.au/home.prx.

In Memoriam: Ken Kennedy

Ken Kennedy. (Courtesy Tommy LaVergne/ Rice University.)

Tributes—for computer pioneers who had recently passed away—were dedicated to those individuals at the recent HOPL III conference in San Diego, California. Among them, Charles Koelbel of Rice University spoke in remembrance of Ken Kennedy, founder of Rice University's nationally ranked computer science program and one of the world's foremost experts on high-performance computing. Kennedy died in Houston, Texas, on 7 February 2007 at the age of 61 after a long battle with cancer.

In his memoriam, Koelbel referred to Kennedy's impressive list of technical publications, which, at the time of his death, amounted to more than 200 conference and journal papers, including at least four "best paper" awards and five other papers listed as among the most influential papers in the first 20 years of the Programming Language and Design Implementation forum. The most affecting part of Koelbel's memoriam, however, was his moving tribute to Ken's beloved personality. For more information on Ken Kennedy, see http://www.media.rice.edu/media/NewsBot.asp?MODE=VIEW&ID=9268&SnID=1990419143.

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Obituary: George R. Trimble

George R. Trimble

George R. Trimble, whose original contributions encompassed both the design and application of data processing equipment, died on 17 March 2007 at the age of 77. He was active until the very end, contributing to the field of software design and development in a career that began in 1949.

George earned a BA from St. Johns College in Annapolis, Maryland, and an MA from the University of Delaware, both in mathematics. In 1949, he joined the US Ballistic Research Lab at Aberdeen Proving Ground working on ENIAC. In 1952, he joined IBM to work on computer design and software, including work on the IBM 650, 608, and "Stretch," a "supercomputer" of the time, the production version of which was the IBM 7030.

In 1956, George joined Computer Usage Company, one of the first professional services software development firms, which had been founded by Elmer Kubie and John Sheldon a year earlier. There his title was "corporate technical director," although he humorously referred to it as the "director of odd-ball applications," that is, those applications that didn't fit into either the commercial or the scientific categories, including system software, such as operating systems, compilers, and communications software. Some application examples included air traffic control, submarine monitoring and control, simulation of one computer on another, store-and-forward message switching, and calculations in support of the TWA terminal design at Idlewild (now Kennedy) Airport in New York.

George left CUC to join Penta Computer Associates in 1968 as vice president of research and development. He and Tony Penta had been peers at CUC, where Tony was director of commercial applications. After Penta was acquired, George left to found his own consulting company, T-Logic, which he operated until 2000.

While at T-Logic he led analysis and/or design, or participated as a consultant, for the development of police command and dispatch systems; a general aviation flight planning system; a magnetically levitated system for High Performance Personal Rapid Transit; and the automation of newspaper prepress systems for the *New York Daily News*, the *Melbourne* (Australia) *Herald*, and several other newspapers in the US and abroad.

George also taught a series of seminars in the US and abroad: System Analysis and Design; Digital PABX (private automated branch exchange); and Minicomputers, Microcomputers, and Distributed Processing. Some of the seminars were for the University of Chicago School for Continuing Education.

Among other achievements, George developed a management control mechanism that proved highly effective—The Development Workbook, which is a process for documenting software design and programming specifications for large, complex systems. He was a contributor to several publications including *Data Processing Magazine*, *IEEE Annals of the History of Computing*, *IBM Technical Newsletter*, and others.

George is survived by his wife Helen, his children, and grandchildren. He lived in Princeton, New Jersey, for more than 45 years, where he was active in community activities. He was a gentleman and an exemplary mentor and role model to a couple of generations of computer professionals, including me. George will be sorely missed.

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Web Extra

In marking the 60th anniversary of the IEEE Computer Society's founding, the Computer Society has prepared a list of "Top 60 Events." See http://www.computer.org/portal/cms_docs_annals/annals/images/top60.pdf.