

Department: Anecdotes

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Preserving the History of the Software Industry

Luanne Johnson

The Software History Center

Editor's note:

The following three anecdotes describe the journey and methods of Burt Grad and Luanne Johnson in collecting software business history. Burt Grad and Luanne Johnson were from industry and were not academically trained historians, but they saw software companies coming and then disappearing with their histories being lost. Thus, they decided to do something about it. The story they tell is extraordinary—an example of how a couple of individuals on a mission can begin a project, get advice and involvement from other people and institutions, and over time build a sustainably entity that is still growing and collecting computing history 16 years later.

■ **FORTUNE MAGAZINE**, in its November 22, 1999, “Businessman of the Century” issue, wrote in its article about Bill Gates, the founder of Microsoft, “pure software companies didn’t exist prior to Microsoft.” I was outraged. I founded a “pure” software company in 1971, four years before Microsoft was founded, and Larry Welke of International Computer Programs in Indianapolis had been publishing a catalog of software products available for purchase since 1967 (see ICP sidebar). I wrote a Letter to the Editor which appeared

in the *Fortune* December 20, 1999 issue saying, “In 1971, when Bill Gates was still in high school, International Computer Programs, a publisher of software catalogs, held its first Million Dollar Awards ceremony to recognize software products that had generated more than \$1 million in revenues; 29 software products made the list.”

BEGINNING TO EXPLICITLY COLLECT SOFTWARE HISTORY

When the *Fortune* article appeared, I had been working to preserve the history of the software industry for 14 years. In 1985, Burton Grad, a business consultant to many software companies, asked me to collaborate with him on an article about his experience on the IBM team that

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Figure 1. Initial Software History Center website.

did strategic planning for IBM's change to its business model when it decided to "unbundle" the cost of software and related services (i.e., charge for them separately) from the cost of its hardware. Because that change had a profound effect on the market for software sold by "pure" software companies (those that sold software only, not as part of a "bundle" of software and hardware),¹ it quickly became obvious that understanding the effect of IBM's actions on those companies was a crucial part of the story.

As a member of ADAPSO, the computer software and services industry association (see ADAPSO sidebar), I knew a number of people who had started software companies in the 1950s and 1960s and I began to interview those people to get their perspective on IBM's unbundling. I quickly learned that, with one exception,² none of those software pioneers had been interviewed with the objective of preserving the history of the early software industry. Preserving that history became a goal for me and, with support and encouragement from Burt, I began interviewing the founders or principal executives of early software companies as often as I could, a list which eventually grew to 37 people.

From 1986 to 1996, I served in various executive positions at ADAPSO/ITAA.³ During those years, several ADAPSO members who were on the board of the Charles Babbage Foundation, introduced me to the Charles Babbage Institute,

and my interest expanded to include preserving corporate documents relevant to the history of the software industry. Over the next several years, with Burt's continuing support, this led to donations to the Charles Babbage Institute of: catalogs of software products published by International Computer Programs, Inc.; papers from the files of Milton Wessel, the General Counsel for ADAPSO for many years; and papers from the files of ADAPSO/ITAA. I also began making contacts with other organizations and historians who were active in the computer history field.

SOFTWARE HISTORY CENTER

In 1997, I decided to formalize the work I had been doing as the Software History Center. Burt agreed to fund creation of a website that would promote the need to preserve the records of what was by then a rapidly growing industry. I registered the domain name www.softwarehistory.org and created a web site for the Software History Center (see Figure 1) for promoting the need to preserve the history of the software industry and including anecdotes from software pioneers derived from the interviews that had been done.

The premise was that the vision and creativity required to identify, develop, and serve markets for technology is just as crucial as the ability to develop the technology itself so while other groups were focusing on the collection of the



Figure 2. Software History Center logo.

software, the Software History Center would approach software history from the perspective of how companies identified market opportunities and requirements, developed the technologies needed and then created business models that could succeed in those markets.

One of the historians with whom I had been corresponding, Martin Campbell-Kelly of the University of Warwick, recommended that I attend a History of Computing conference sponsored by IEEE in June 1997 in Williamsburg VA. Burt also expressed interest in the conference and we signed up. I presented a paper focused on the history of two early software companies: ADR, founded in 1959, and Informatics, founded in 1962. Michael Williams, the Editor-in-Chief of the *IEEE Annals of the History of Computing*, suggested that I submit an article to the *Annals* based on my presentation.⁴ This was the beginning of a long and productive relationship between the *Annals* and Burt and me resulting in nine special issues focused on various sectors of the software industry and multiple articles about industry history written by practitioners and historians. In 2002, I accepted an invitation to become a member of the Editorial Board of the *Annals* and served on that board for 12 years which was an invaluable experience in learning how the information that we were collecting would be of use to someone seeking information about the origins and growth of the software industry.

Also through the connection with the *Annals*, we were able to enlist the support of a number of leading computer historians. In addition to Martin Campbell-Kelly and Michael Williams, Bill Aspray, David Grier, Jeffrey Yost, Michael Mahoney, Paul Ceruzzi, David Allison, Tim Bergin, Tom Haigh, and many others were extremely helpful. They were available to provide advice and guidance on what information would be most valuable to historians in telling the software history story, and they suggested ways that it could be collected in a professional manner. And they

volunteered to assist in a variety of ways in the collection process.

The *Fortune* magazine article in 1999 provided the opportunity Burt and I needed to take our efforts to a new level. We were able to use the inaccurate information in the article to persuade a number of software executives to fund our efforts to preserve information about the industry so that recognition would be given to the pioneers who actually created the first “pure” software companies. Those companies formed the basis of the industry that Bill Gates and many, many others were able to build on and adapt as technology and customer needs changed. We defined the scope of the industry that we would cover as the industry sectors represented by ADAPSO in 1990.

The support from our donors allowed us to incorporate as a 501(c)(3) nonprofit, to have a logo and promotional materials created (see Figure 2), to continue to pursue our oral history and materials collection efforts, and to begin to organize meetings of industry pioneers for the purpose of recording their recollections.

In September 2000, the Charles Babbage Institute held a conference on computer industry history in Palo Alto and asked the Software History Center to help them identify software pioneers who could be invited to participate. Using that opportunity to bring together the people that Burt and I had identified as playing significant roles in the early software industry, we organized a meeting to be held the day after the CBI conference bringing together 27 software pioneers and historians to record the memories of the pioneers and encourage them to donate their papers to an appropriate archive.

The success of this meeting encouraged us to organize a meeting in Washington DC in 2002 for former ADAPSO members. Both of these meetings were recorded and the transcripts published. They became a template for a series of meetings held over the next 16 years where pioneers from various sectors of the industry were brought together to share their memories of the founding and growth of their companies. All of these future meetings were recorded and the discussions transcribed and published. Oral histories of many of the attendees at these meetings were also taken and archived.⁵

SIDEBAR: ICP

Lawrence (Larry) Welke of Indianapolis IN played a major role in defining the software companies that were forming in the 1950s and 1960s as an emerging industry. In 1967, he founded International Computer Programs, Inc. (ICP) to publish catalogs of software products that were available for purchase. The idea came from a bankers' convention he attended where a "swap room" where banks could list banking applications program they were willing to swap drew more participants than many of the educational sessions. The initial publication from ICP was a quarterly catalog, the *ICP Directory*, which was sold via subscription to data processing managers. Companies that had software products to sell (frequently referred to as "packaged software") could provide a listing describing their products at no cost.

It took several years for the concept to catch on with data processing managers and software companies but by the early 70s, the *ICP Directory* was an invaluable resource for small companies like mine that were trying to understand how to reach potential customers throughout the US and even internationally. In the early years of Argonaut Information Systems, the company I founded, over 80% of our sales came from customers who had learned about our products (accounting applications like payroll, accounts payable and general ledger) as a result of the *ICP Directory*. Because we could provide detailed descriptions of the products, the potential customers who contacted us had already determined that our product would probably meet their needs. Closing the sale required little more than pursuing the customer's requirements in more detail to be sure that we could satisfy those requirements and having a price that would be acceptable to the customer. In the majority of cases, the sale could be closed over the phone especially once we had a base of satisfied customers to refer the potential customer to.

Welke understood that the more products that could be included in his catalogs, the more valuable they would be, so he traveled all over the US seeking out companies that were selling software products, either exclusively or as part of their overall mix of products and services, to persuade them to list their products in his catalogs. A few of the people running those companies had formed a trade association, the Association of Independent Software Companies, but were having trouble getting it functioning at a meaningful level. Welke persuaded them to join with ADAPSO, which by that time had an active advocacy and education program in place, and the merger was completed in 1972 with AISC becoming the Software Industry Section within ADAPSO.

Welke was also instrumental in raising awareness of the importance of the growing software industry by establishing the annual ICP Million Dollar Awards ceremony that acknowledged any software product which had achieved more than a million dollars in sales. At the first ceremony held in 1971, more than 29 products qualified.

Welke expanded the business model of ICP over time to also include publications based on ad sales rather than subscription fees and produced versions of his catalogs targeted toward users in a number of specific industries so that the potential customers could review listings of software products more directly targeted toward their needs. ICP played a significant role in promoting the industry through the 1970s and 1980s until the expanding industry led to competitive publications and larger software firms could afford to advertise in general business publications. But Welke's influence in defining the industry and bringing it together to advocate for the industry within ADAPSO had an immeasurable impact on the growth and influence of the industry.^{6,7}

CHARLES BABBAGE FOUNDATION

In 2002, I accepted the position of President of the Charles Babbage Foundation, which provided governance and financial support to Charles Babbage Institute. Burt became President of the Software History Center and continued its preservation efforts with funding from CBF. The funding from CBF covered:

Collection of corporate records, managed by Doug Jerger, a former software company founder and ADAPSO member;

Oral histories conducted by leading computer historians;

Research by the historian Thomas Haigh on the role that ADAPSO played in the development of the industry; and

Ongoing update and enhancement of the Software History Center website.

In 2003, the Charles Babbage Foundation formed a consortium with the Software History Center and the Computer History Museum to apply for a grant from the Alfred P. Sloan Foundation to take the Software History Center collection efforts online. The Sloan Foundation provided a substantial grant that supported the development of the Information Technology

SIDE BAR: ADAPSO

The Association of Data Processing Service Organizations (ADAPSO) was founded in 1961 as a trade association of data processing service centers. Its initial focus was on supporting this young, entrepreneurial industry by developing accounting systems reflecting the reporting needs of its members, and on developing information about the industry such as a salary survey and a directory of data processing service centers. Its first venture into industry advocacy was to lobby against the practice of banks to provide to their customers, at no cost, services similar to those provided by ADAPSO members to lock in their customers to their banking services. In 1969, ADAPSO formed a second section representing timesharing services as distinguished from data service centers.

In 1972, ADAPSO merged with the Association of Independent Software Companies under the leadership of Larry Welke of International Computer Programs, Inc. Its advocacy program expanded to include pressing for favorable tax regulations for software and services companies and modifications to accounting standards to reflect the nature of the products and services. It continued to provide educational services to its members on best

practices in management, contracting with customers, and selling into international markets. It also mounted a major awareness campaign promoting the economic value of the industry and the financial viability of the companies in the industry as investment opportunities.

As the industry expanded with companies offering computer software and services in a variety of different delivery mechanisms, ADAPSO expanded its membership, and created new sections, to include professional software services, value-added retailers, systems integrators, and microcomputer software vendors. Its advocacy issues expanded along with the needs of its members to include protection against software piracy and fair competition in government procurement.⁸

In 1991, ADAPSO changed its name to the Information Technology Association of America (ITAA) and continued to operate under that name until the mid-2000s when it began a process of merging with a number of other associations representing different sectors of the computer and electronics industry. In 2009, it merged with the former American Electronics Association to become TechAmerica which continues to represent a broad cross-section of technology companies today.⁹

Corporate Histories Project, an online system which allowed people who had founded or worked for companies in the industry to share and discuss their experiences online and also to upload materials from their files that helped to trace the history of the industry. I resigned as a President of CBF to become Principal Investigator for the Information Technology Corporate Histories Project.

INFORMATION TECHNOLOGY CORPORATE HISTORIES PROJECT AND THE COMPUTER HISTORY MUSEUM

The information technology staff at the Computer History Museum built an interactive database that allowed people to enter stories about their experiences, comment on stories told by others, and upload copies of documents from their files. We selected several industry sectors to focus on including timesharing services, database management software, desktop publishing

software, PC software, and professional software services. We also expanded the focus to include semi-conductor and data storage companies since the Computer History Museum had substantial collection efforts underway for those industries.

We hired facilitators for each of the sectors, selecting retired people who had worked in that sector and were familiar with the major players. The facilitators were responsible for identifying the companies to be included, finding former or current employees of those companies who would participate by sharing their recollections of their experiences, and encouraging people to contribute relevant records from their files either in digital format to be added to the IT Corporate Histories database or donated to the Museum's archive in physical form. Since so many companies had been acquired and their records lost in the process, the personal files of people who had worked for these companies became a valuable source of information about

how these industry sectors developed. The facilitators also wrote a description of each company and created a timeline for the company adding events described in the stories and documents that were contributed by the participants.

The Information Technology Corporate Histories Project collected materials from 56 companies. These include personal anecdotes, company documents, and company timelines. The collection includes an overview description of each company, 1955 timeline events, 2021 documents, 307 personal stories of people active in these companies, and 165 references to related materials available from other sources. I continued as Principal Investigator until the project wrapped up in 2011.

Burt Grad continued as President of the Software History Center and then as Chair of the Software Industry Special Interest Group (SISIG) at the Computer History Museum after The Software History Center merged with the Computer History Museum in 2004. The SISIG continued to sponsor meetings of software pioneers where their recollections were recorded and to do oral histories. Doug Jerger continued to work with Burt on managing and facilitating the donations of physical records and artifacts to the museum.

The Software History Center and then the SISIG collected 142 oral histories, conducted 13 meetings of software industry pioneers, produced nine special issues of the *IEEE Annals of the History of Computing* plus inspired numerous articles for the *Annals* by individuals from the industry and historians, and facilitated the collections of physical materials from 35 companies.

A list of all the materials collected by the Software History Center and the SI SIG can

be found at: annals-extras.org/pubs/2020-06-22-lj-sisig-website.pdf.

■ REFERENCES

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Luanne Johnson founded a software company, Argonaut Information Systems, in 1971. She served as a President of the Information Technology Association of America (formerly ADAPSO), a national trade association representing companies in the IT industry, and as President of the Charles Babbage Foundation. She cofounded, with Burton Grad, the Software History Center, the predecessor organization to the Software Industry Special Interest Group at the Computer History Museum. In 2014, she was the recipient of a Computer Society Meritorious Service Certificate for her service to this journal. Contact her at luanne.i.johnson@gmail.com.