Demise of Software Company Marks End of Era

By Evelyn McDonald
Special to GCN

SAN FRANCISCO — Computer Usage Co. said it ceased operations because it didn't get sufficient funding to implement a previously announced bankruptcy-law reorganization plan. [The Wall Street Journal, *Sept. 30, 1986.*]

This short news item marked the end, after many months of struggle, of a company that began in 1956. Companies go under every day, but Computer Usage Co. was one of the first, if not the first, computer software companies in the United States, and it counted among its accomplishments some landmark programming.

The Washington office, in existence for about 20 years, numbers among its alumni some leaders in government computer circles, a couple of millionaires, an author of science fiction books and many others of note. This description might fit any of a dozen companies that flourished in the 1960s in Washington. Yet, in terms of personalities and accomplishments, CUC was different.

To understand the company, you need to remember that it was a child of its times. There were no computer science programs. Computer hardware was moving from vacuum tubes to transistors. There was no data base management and few compilers; the term user-friendly was years away from meaning anything. In this environment, CUC came to the forefront as a first-class software development company whose technical staff amassed a series of extraordinary credits.

The Impossible by Accident

Its early history was one of doing the seemingly impossible almost by accident. People achieved incredible things because they didn't know their limitations.

How many people today would say you could write an econometric modeling program in assembly language in two months? Bill Kingsley, now an account representative with Avant Garde, remembers doing just that. Kingsley came to CUC with no experience except that of ruining an entire card file by loading it in the wrong hopper and gangpunching it. Kingsley couldn't imagine he'd be hired. When he was, he found himself thrown into all sorts of situations. The common thing was to be given a manual on Friday and told, "Read this. Monday you have to be an expert."

Allen Taylor, now manager of systems programming at the American Red Cross, remembers getting into the branch manager's car in Bethesda, Md. The manager tossed a Honeywell 200 manual in the back seat and said, "Become an expert before we get to National Airport." Vicki Taylor, another alumnus, commented recently, "You learned that you had the ability to adapt. You had no choice; they handed you the manual and said, 'Be an expert.'"

Not all memories of this time were pleasant. One alumnus said: "I have never been thrown into so many sink-or-swim situations in my life. My only problem was not knowing which one I was doing."

Bob Gilbert, who today is director of administrative services at the Federal Home Loan Bank Board, said he never worked so hard or gave up so much of his personal life for a job. "But," he said, "I was given a chance I don't believe I would have gotten elsewhere."

Finding Programmers

There was no method for determining what type of person would make a good programmer. There were no university programs to assure applicants knew programming. In the absence of that type of validation, CUC and many of its contemporaries used aptitude tests to qualify applicants. These tests were designed to determine whether a person could think logically and work through problems. The company was looking for a habit of mind, not a level of education. This led to hiring some unusual and interesting people.

Helen McEwen, now a director of special projects at the General Services Administration, was one of those who took the aptitude test. She walked in, as she says, "straight from the kitchen." She told CUC she had been a housewife for 17 years, but she thought she could learn to program. She got a perfect score on the aptitude test and then had to interview with half the company's executives because they were anxious about her lack of background. She remembers being hired at $50 a week. She went to a cocktail party the week she was hired and was asked how much she was making. "Compared to yesterday," she asked, "or compared to you?"

Personalities

Among the staff there were majors in language, music, history, mathematics, physics and even horticulture. The company was looking for people who knew how to think, on the theory that these people could learn how to do anything. Naturally, this orientation resulted in employees who were not precisely an organizational dream. Personalities were, to say the least, diverse.

One senior analyst wore the same green wool vest every day one winter — every day, that is, until he showed up one Monday morning in a tuxedo. His explanation? The tux was rented until Monday night.

George Trimble, a frequent contributor of software programming techniques, wore a white or black homburg hat (depending on whether it was summer or winter) and a flower in his lapel. He carried a silver-tipped cane and drove to work either in a Cadillac or on a motorcycle.

Then there was the programmer who came to work on a streetcar when the company had offices on Connecticut Avenue. Don dressed well, loved to program and never seemed to want to be promoted. He attracted little notice until his name appeared in the newspaper as the grandson of wealthy publisher Walter Annenberg. Don was making more in interest from trust funds than most of us would make in a lifetime. He worked simply because he enjoyed it. Rumor has it he retired to Florida and is writing programs for microcomputers.

No discussion about the Washington branch of the company would be complete without mentioning its branch manager during the early 1960s, Joe Vierra. Joe, now an account manager with one of CUC's more successful alumni, Paul Strohmeier, was "the quintessential salesman." It was through Joe that I learned the salesman's key asset: being able to read a memo upside down on someone's desk while carrying on a conversation with the person. Vierra usually managed with a light hand. However, sometimes he did get on crusades, with unpredictable results.

At one point, he decided that the staff was taking too long at lunch and decreed that everyone had to log out when he went to lunch and log in when he came back. About that time, the company was opening a Philadelphia office. One of the analysts Joe sent up there called him collect to tell him that she was going to lunch and that she would call him when she got back. That ended lunch log.

Vierra stressed one key philosophy that most of the alumni remember: Do a good job, stick to budget and keep the customer happy no matter what. When you could do that, you could do anything. Much of the work the Washington branch got came from Vierra's careful nurturing of clients. Joe was quick to praise and to blame, but you had the chance to innovate, to succeed or fail on your own terms, and you always knew where you stood.

Unwitting Pioneers

A good company is often a combination of the right people and the right opportunities. CUC had an extraordinary set of people, and when the opportunities came, they did good work. Rhoda Manchet, associate director of information resources management for the Department of the Navy, recently pulled out a copy of an old resumé to illustrate the variety of projects she worked on. They included mapping the earth's magnetic field, moving populations around for a sophisticated war games project, doing cargo allocation with linear programming techniques and transferring compilers from computer to computer. "We were pioneering in structured programming out of necessity," she said, "and we didn't know it."

In those days before virtual memory, storage requirements were always a problem. It was like "Name That Tune" — if you could do it in five lines of code, try it in four, and so on. Manchet also noted that much debugging was done at the console of the computer. You ran the program until it hung up, did a dump, found the problem and entered instructions into memory in binary form. She still remembers feeling alienated when she went into a computer shop where programmers were denied access to the computer.

Among CUC's projects were one of the first digital aircraft simulators, signature analysis of infrared emissions, lunar gravity on the Lunar Orbiter, subcontracting to Bellcomm on the Apollo project, a truly user-friendly library system and much of the early work for IBM Corp. on the System/360. CUC was involved in IBM Corp.'s TSS (an early 360 time-sharing system) and 360 AUTODIN support. CUC's New York office put in so much time on that machine that the employees wrote one of the first computer programming books, *Programming the IBM 360*. Typifying the company's attitude, the author appeared as the "technical staff of Computer Usage Company."

Deadlines

The company did an interesting conversion project to bring the IBM COBOL compiler up to Air Force Phase I specifications for a benchmark. CUC agreed to complete the work in 90 days or else IBM would pay no fee. The conversion went down to the wire. Finally, one persistent bug remained. An instruction was getting wiped out at some point during the execution. Being under pressure and out of answers, the staff put a patch in the compiler that tested for the error condition. As soon as the condition was found, the patch restored the instruction to its original state. The problem never came up twice, and the staff reasoned that, if IBM won the benchmark, they could fix the problem later.

CUC had the first commercial IBM 360 in the Washington area and sold time to other companies for testing software. The system had problems at first and users were unable to get things done. Joe Vierra called IBM in to fix the system. When that was done, Vierra worried about his customers' confidence, so he told the IBM salesman that he wanted a replacement 360. He explained that, based on its history, the customers would blame the system for anything that went wrong. After some deliberation, they came to an agreement. They changed the color panels on the computer, and it was business as usual.

Despite the quality of the company's work, it never became a major force in the industry. CUC executives were reluctant to

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. into large system contracts and the low-rgin business that made so many of their mpetitors successful. Few things illus-te this attitude better than the compa-'s response to Honeywell on the FACT mpiler. CUC was doing work for oneywell on its FORTRAN compiler and en was asked to do the implementation of ACT. The company refused on the rounds that it did not have enough compe-nt people.

At that point, the spotlight shifted to two mployees in marketing and building compa-ies — Fletcher Jones and Roy Nutt, ounders of Computer Sciences Corp. They ld Honeywell that CSC could do FACT, hough they actually had the same people roblem as CUC. Honeywell gave Jones nd Nutt the job, and CSC hired the people. Jones was said to observe that CUC really ot Computer Sciences in business.

Even though CUC was the first major orce in the software field, the power to sus-ain that drive was missing. Many reasons have been given, but the onus was certainly on management. Several ex-IBM execu-tives took over the company. These men were good in the IBM environment but had little experience in the service business. They were used to an environment where IBM's name alone opened doors. In CUC's business, personal contact kept customer loyalty.

There was a curious lack of foresight about where the industry was going and a lack of strong direction. Like a lot of the early companies, CUC promoted good tech-nical people into management jobs and never trained them. One staff member said he felt the company knew more about tech-nical details than running a business. An-other said CUC was the proving ground for the Peter Principle.

Most of the alumni agree that they never found another environment like CUC. They speak with pride of the challenge, the feeling of achieving something great and of the independence. "It was the breeding ground for programmers and analysts — though none of us realized it at the time," Mancher said. "I did more work on a greater variety of projects there than I did anywhere."

Good Experience

Pat Gardes, director of GSA's Auto-mated Internal Information Division, said he learned that the most important thing in hiring people was whether they could get the job done. He would tolerate oddities in people if they were good at programming. McEwen summed up her experience by say-ing, "It put me in good stead for the rest of my life." To Bob Gilbert, the success he had at CUC was something he took with him. "the little things you do in a service envi-ronment count — resolving problems with that extra five minutes keeps customers."

For my part, I was a member of the tech-nical staff of CUC for seven years. I pro-grammed everything from inventory con-trol systems to operating system software, including tearing apart integration routines from orbit determination programs when my only definition for integration was so-cial and not mathematical. During my term there, I went from programmer analyst to technical director.

Computer Usage taught me how to be a professional and never put limits on me. The real problem was the things the com-pany did not teach me — that professional-ism is not always rewarding or rewarded and that the world will put limits on you even if you don't put them on yourself.

Most of the Washington alumni are still in the computer field and have done well. While there is some sadness for the com-pany and its fate, most are pleased to have taken part in something pretty good. If you were there and survived, it says something about your abilities. As one alumni said, "CUC may not go down in the textbooks next to Eckert and Mauchley standing by ENIAC, but it represented an era in com-puting that was a lot of fun to be in."

The next annual reunion luncheon, tradi-tionally held near Christmas at an Italian restaurant across the street from CUC's former offices in Bethesda, will also be a wake.

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programs or developing data bases, tasks that should have been done in coordination with the ADP unit or other users, avoiding duplication and unreasonable limitations. Some were just plain inefficient or incom-petent on the devices, and some were play-ing around. By the same token, I know of micro users who may use their devices less than one hour per week and have paid for them 10 times over through increased pro-ductivity or increased capabilities.

Surveys that are limited to compiling in-formation about the amount of use of equipment not only do not provide the in-formation that is really needed for decision-making, but they also give the false impres-sion that this is the only kind of data needed to determine the value of the equip-ment.

I hope we will see work on developing measures of productivity and performance improvement to determine the real value of microcomputer applications to organiza-tion and to provide some generic criteria that could be used to predict the benefits to be derived through installation of micro-computers. This would be a great benefit to the people responsible for making decisions about the acquisition and allocation of microcomputers.

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