

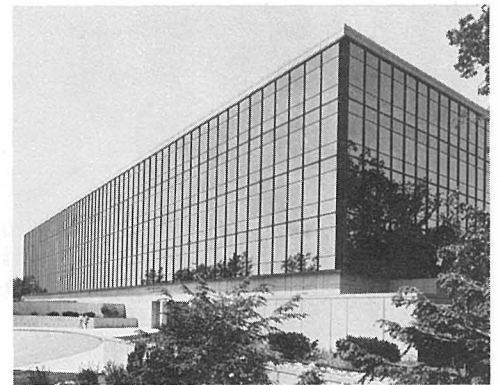
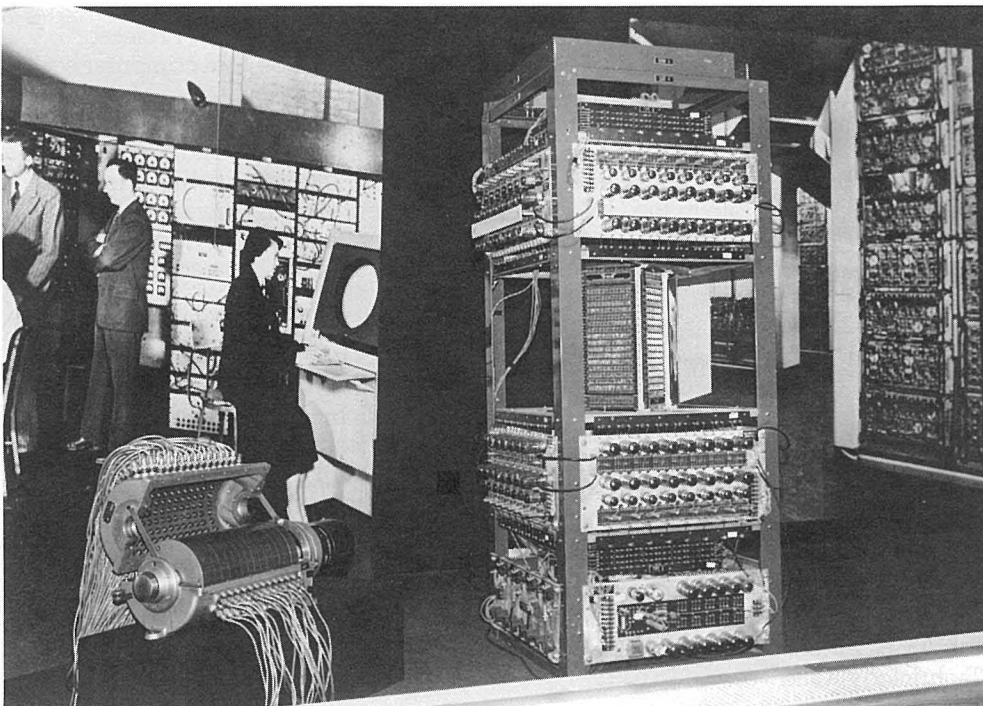
The museum's birth and parentage were responses to different needs that sprang from several sources. When Ken Olsen and Bob Everett saved Whirlwind from the scrap heap in 1973 and arranged to exhibit it at the Smithsonian, they also envisioned a place where all the treasures related to the evolution of computing could be preserved. Then Ken bought the TX-0, the first full-scale transistorized computer, when it came up for auction. Soon word went around that he was maintaining a warehouse for old computers and the industry responded with donations of a LINC, a PDP-8, and other classic machines that otherwise would have been junked.

At the same time, Gordon Bell was also thinking about a computer museum, an idea which emerged while writing *Computer Structures* with Allen Newell between 1967 and 1970. They studied all the computers to that date and developed PMS, a notation capable of characterizing all information processing systems. While writing about the machines, Gordon started visiting them and bringing back artifacts. Soon his office and home were filled with modules of the Atlas, the IBM 650, the ILLIAC II, memory devices that predated the core, and calculators that preceded computers.

Still, Gordon was complacent with the thought of a potential museum until he travelled to Japan where Fujitsu proudly turned on its first relay computer for him to admire. He was convinced. If the Japanese could pull this off, then he, Ken Olsen, and Bob Everett should be able to display the TX-0 and other early machines. But there was no budget or space for the Museum.

This time, RCA saved the day. The Marlboro "tower building" constructed by RCA in 1970 and later purchased by Digital had a grand lobby and open balcony waiting to be used for exhibits. Gordon thought that it might somehow provide a setting for the TX-0, and he formed a volunteer committee to evaluate the space.

I was one of the volunteers. Having used the TX-0 in graduate school, I knew how the room felt at MIT, and the balcony area seemed reminiscent of that. The building's residents agreed to accommodate the museum collections. Two college students were hired for the summer to catalogue the artifacts in Gordon's office, photograph the computers that Ken had accumulated in the warehouse, and assemble exhibits with the aid of Digital's industrial designers. Gordon applied the PMS taxonomy from *Computer Structures* and wrote the text panels for the exhibits.



On September 23rd, 1979, the Digital Computer Museum opened with a lecture on the EDSAC by Maurice Wilkes. And while Ken and Gordon were very proud that the collections had been assembled, no one was available to attend to the business of maintaining the collection, providing tours, or accepting new donations.

In November 1979, Jamie Parker, a recent Vassar College graduate, was hired as the first employee and the Museum became operable on a daily basis. A year later, the Operations Committee of Digital Equipment Corporation decided to develop a truly representative, industry-wide museum for the preservation of computing history and I was hired as the Director.

Digital Equipment Corporation not only provided start up funding, but encouraged employees in the legal, financial, marketing, public relations, administration, sales and service, and engineering departments to donate their time and talents to this cause. The birth of the Museum is coincident with the twenty-fifth anniversary of the founding of Digital Equipment Corporation; and the Museum is the corporation's twenty-fifth birthday present to the public as a way to insure the preservation of the history of computing for future generations.

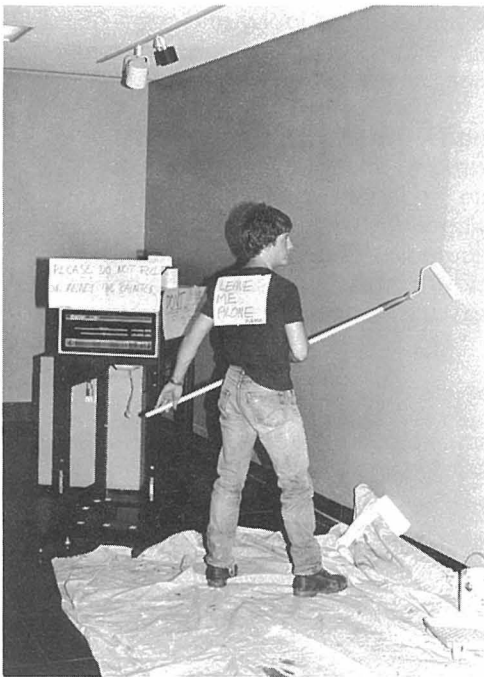
Establishing the Full-Fledged Public Museum

My first task was to transform a private collection into a public foundation with full charitable status. A distinguished board of directors, representative of the diverse nature of the information processing industry, was assembled. The Members Association encourages participation by anyone interested in the Museum's focus and activities. These two groups provide the interface between the Museum's public and its staff, keeping the direction on course and responsive.

The staff has grown and taken on specialized roles. Jamie Parker, exhibit coordinator, planned the Pioneer Computer Timeline, and finds a place for each significant new acquisition. Chris Rudomin, program coordinator, organizes the lectures and seminars, the store, and educational programs. Sue Hunt is the Museum's coordinator of everything else and with a bank of word processors provides our day-to-day support. Jay McLeman, a full time staff member, cares for the operating machines. John McKenzie, who is TX-0's lifetime technician, is working on the long and arduous re-entry of the TX-0 into the world of operating computers.

A phalanx of students tackle special projects. Since the fall of 1980, Professor Mary Hardell of Worcester Polytechnic Institute has arranged that computer science students can complete their Interactive Qualifying Project at the Museum. These range from research papers on benchmark programs, such as Space War on the PDP-1, to preparing explanations of exhibits, such as the Atanasoff-Berry Computer breadboard. Beth Parkhurst has a part time position while she is a fulltime PhD candidate in the History of Technology at Brown University. She wrote the text for the Pioneer Computer Timeline and is editing a videotape of the ENIAC made from old newsreel films. Five additional college students will be hired for this summer.

As Director, I have focussed on acquiring artifacts, conceptualizing projects, and acting as the Museum's spokesperson. On a trip to England in February we acquired the micro-processor from the EDSAC II from the Science Museum, the console of the IBM 360/195 from Rutherford Labs, a full-scale Williams tube, and a logic door from the Ferranti Mark I* from the University of Manchester. Documentation services and a photo and film archive will be realized in the next year. In October I chaired a session on Computers in Museums at the Association of Science and Technology Centers meeting at the Exploratorium in San Francisco and have consulted with other Museums including the Capitol Children's Museum, Washington; The Science Museum, London; the Ampex Museum, Redwood City; and The National Museum of Science and Technology, Ottawa.



Guidelines for the Future

Our main thrust is to develop the collection and continue the tradition of saving classic machines from the junk pile. We rescued the last operational STRETCH, saved the major components of the very first CDC 6600, and collected the Philco-Ford 212 before it was to be scrapped. The first priority is saving history, the second is to display it, and then the third is to interpret its historic role. The exhibits, therefore, are dynamic and evolutionary.

Five tested policies have crystallized.

1. The major purpose of the Museum is the historical preservation of the evolution of computers. To that end, the PMS notation forms the basis of the taxonomy determining the extent of the kingdom of computing and providing guidelines for exhibits. Jan Adkins of the National Geographic Society captured the essence of the venture when he said to me, "You must feel like the Director of the Museum of Natural History when he started to collect bones."

2. The lecture series that started with talks on pioneer computers by people who had personally worked with them will be expanded to a series of seminars in a similar vein. Andy Knowles, a member of the Museum's Board, is fond of reminding me that, "There is no history, only biography." Thus, we are giving the podium to people who can give first-hand biographies of machines, programs, and languages they have known.

3. The focal point of the Museum is the machines themselves. Frank Oppenheimer, the Director and Founder of San Francisco's Exploratorium counsels, "Well-engineered machines speak eloquently of their own elegance. Museum designers can't equal them." Revealing the intrinsic beauty and functionality of the exhibited machines is our challenge and goal.

4. The main audience for the historic and archival collections are computer scientists, programmers, history buffs, and those with a curiosity about computer evolution. The Museum will provide a sense of the feel of machines and programs from various eras. Spacewar, the first computer game, feels totally different running on the 1961 PDP-1 than it feels on a small arcade machine. This is hardly apparent to a youngster whose only Spacewar experience is in an arcade, but it is the feel of the PDP-1 that almost brings tears to the eyes of those who were computing during its era. As board member George Michael says, "Hey, this is a Museum for us big kids."

5. The Museum encourages broad-based involvement by maintaining a good working relationship between the enthusiastic volunteers, donors of artifacts, patrons, students, scholars and a staff that can keep stirring the soup. Harold Cohen, creator of our computer-designed murals, observed that the Museum doesn't . . . "have to convince the computer community to support the museum because its artists are worth supporting; they *are* the artists. It is completely different from any other museum that I know."

Because the Digital Computer Museum is unique, its rules need to be invented. This inaugural report provides a baseline from which the Museum can flourish in a multitude of directions. I hope that you will join me in this process.

Gwen Bell
Director

