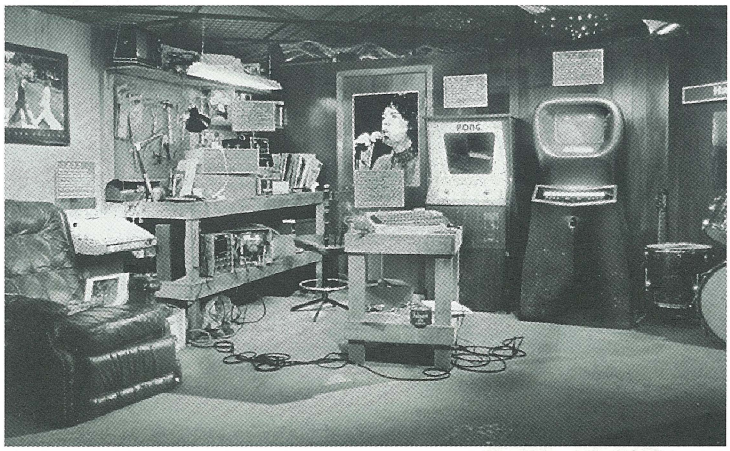
The Computer Museum NEWS

Summer 1997

Snapshots of a Revolution

New Exhibit Captures Pivotal Moments in PC History

It was March 1996, and Intel was searching for an appropriate way to commemorate the 25th anniversary of the microprocessor at the upcoming Fall COMDEX. Intel Museum Curator Jodelle French remembered a retrospective exhibit The Computer Museum had curated for Data General at the 1995 Fall COMDEX. French sought out Gwen Bell at The Computer Museum to brainstorm ideas for creating the milestones of the microprocessor. That began a rare, cooperative relationship in the museum world: a corporate museum pairing with The Computer Museum. The partnership ultimately resulted in a historic personal computing exhibit, parts of which were recently installed in the Museum in Boston.



Photograph: Copyright The Production Network Inc., Seattle, Wash.; courtesy SOFTBANK COMDEX

The Garage not only features vintage PC artifacts, but also has nearly everything a 1970s' hacker might want—from an oscilloscope (to test the boards) to a Barcalounger to take a snooze. Can you find the Apple I?

"I knew we couldn't curate this exhibit by ourselves," recalls French. "We could do an exhibit about microprocessors but what we were really talking about was the 25th anniversary of a revolution." French and Bell worked side by side to curate the "Museum at COMDEX," co-sponsored with SOFTBANK COMDEX, Motorola and Ziff-Davis. French recalls of the co-curating relationship, "If it had been anyone else but Gwen, we would have gotten bogged down in lists of artifacts."

Intel's foresight to form the partnership assured an inclusive retrospective that highlighted the advancements made by a variety of microprocessors. The "Museum at COMDEX" attracted 30,000 people, or 10 percent of the attendees, in five days. When it was over, Intel and SOFTBANK donated the vignettes from the exhibit to The Computer Museum. Installation in Boston was sponsored by Museum Board members Michael Simmons and David Nelson. Subsequently, The Intel Museum became a founding corporate supporter of The Computer Museum History Center. A win-win situation for all.

Nostalgic Journey

The most popular COMDEX vignette installed at The Computer Museum is a life-sized re-creation of a 1970s' hacker's garage, which captures the essence of this era.

"We were a group with a purpose: the revolution of home computers," Steve Wozniak, co-founder of Apple Computer, reflected in 1986 at The Computer Museum. "I couldn't afford a computer so I started to think about building one for myself." Woz built his computer, the Apple I, in 1976, testing it in the now-legendary garage of his friend and Apple co-founder, Steve Jobs. The Hacker's Garage was unveiled in June, with enhancements to two existing 1980s' vignettes that re-create early uses of the IBM PC and Apple Macintosh.

Located in the Museum's historical exhibit, *People and Computers: Milestones of a Revolution*™, the three vignettes highlight important aspects of the PC revolution, which was spurred on by the invention of the microprocessor by Intel in 1971. By 1974, hobbyists were using microprocessors such as the Motorola 6800, Intel 8008 and RCA 1802 to assemble their own "home-brew" computers in workshops similar to the Hacker's Garage. The two 1980s' milestones represent the next steps in the revolution: the personal computer's commercialization and vastly expanded use by individuals and large organizations.

"It was an incredible time," says Dan Bricklin, co-inventor in 1979 of *VisiCalc*, the first electronic spreadsheet written.

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Snapshots of a Revolution *(continued from p.1)*

"The Garage is really a metaphor for a way of thinking—that anyone could do it—a kind of grassroots entrepreneurial spirit. Actually, Bob Frankston and I worked on *VisiCalc* in his attic, which was more typical of the East Coast. Out West, hackers worked in garages, owing to the earthquake risk."

The '70s: Hobbyist Heaven

The Museum draws on artifacts from its collections, including the Apple I and Altair 8800, to furnish the Garage. Rich in period detail, it includes a 1960s' Model 33 Teletype (widely used before keyboards and printers were standard), an oscilloscope, a ham radio, an old TV tube, a drum set, a guitar, and posters of a young Mick Jagger and the Beatles.

Sitting on a worktable in its own homemade wooden box is Woz's Apple I board. One of the rarer items, the Apple I was used primarily for developing programs, playing games or running BASIC. Buyers supplied their own cases for this easy-to-assemble single-board computer that ran on an MOS Technology 6502 microprocessor. When Steve Jobs got the first order from the Byte Shop for 100 Apples at $500 each, he and Woz plugged in a keyboard, TV, and transformers and tested every board with an oscilloscope. They sold about 200 out of Jobs' garage before 1977 when they announced the Apple II.

Photograph: The Computer Museum Collection

This arresting photo graced *Computer Space*'s advertising brochure in 1971.

Photograph: Copyright The Production Network Inc., Seattle, Wash.; courtesy SOFTBANK COMDEX

The Hong Kong race track vignette's woodwork and walls were meticulously chipped and aged to look seedy.

The MITS Altair 8800 (1975) was featured on the January 1975 cover of *Popular Electronics* and sold as a hobbyist's kit for $439. MITS sold more Altairs the first day than it expected to sell during the product's lifetime. The first computer to offer BASIC on an Intel 8080 microprocessor, the Altair had 64K of memory, and was programmed via toggle switches. Bill Gates and Paul Allen wrote a 4K BASIC interpreter for its 4K memory board; the signed and dated original is on display.

Computer Space, the first coin-operated video game, developed in 1971 by Atari founder Nolan Bushnell, adds a fantasy factor to the Garage. Inspired by *SpaceWar!*, a game available on university research computers, *Computer Space* was a bit too complicated for most consumers. A modest failure, the game sold only 2,000 copies, despite ads that hailed its "beautiful, space-age cabinet" and "the reality of controlling your own rocket ship in gravity-free outer space."

On the other hand, *Pong* (standing beside *Computer Space*) was a runaway hit. Introduced by Bushnell in 1972, this simple game ushered in the era of video arcades and home game machines. In 1974, a home version debuted, made possible by a drop in microchip prices.

The '80s: PCs Go Commercial

More than any other personal computers, the IBM PC (1981) and Apple Macintosh (1984) transformed how organizations and people thought about and used computers. Each machine has its own recently enhanced vignette. The IBM display re-creates an early use of a Lotus *1-2-3* spreadsheet running on an IBM PC at the Hong Kong Jockey Club. It was used to track race-course statistics from more than 5,000 ticket windows across Hong Kong.

The vignette on the Macintosh features Granada High School in Livermore, Calif., where students used a Mac 512 running early *PageMaker* software to create their school newspaper. Both vignettes also include interactive stations where visitors can experiment with spreadsheets on a PC and create postcards on a Mac.