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Ed Roberts: 1941–2010

PC Pioneer Inspired Microsoft Founders

By STEPHEN MILLER

The January 1975 issue of Popular Electronics featured on its cover a box with switches and blinking lights called the Altair 8800, considered by many to be the first personal computer.

Ed Roberts, who died Thursday at age 68, created the Altair, the computer that brought Microsoft Corp. founders Bill Gates and Paul Allen into desktop computing. His machine inspired a legion of hobbyists who became the foundation of a vibrant new industry.

Bill Gates Remembers Personal Computer Pioneer

Bill Gates sent the Wall Street Journal this remembrance of Henry Edward Roberts:

"Ed Roberts was in the Air Force and ended up at the base in Albuquerque. In his spare time he started a company to sell kits for things you would put on rockets–something to take the temperature when it gets to the top or take a photo. He called the company Micro Instrumentation Telemetry Systems and it did a small amount of business. Then he came up with a kit calculator and that sold in significant volume and made money. **Read more.**

Then he walked away and became a country doctor.

"Ed deserves to be called the father of the personal computer," says Bill Gates in an email.

An Air Force trained engineer who had designed electronics for Christmas window displays, Mr. Roberts and a colleague in 1969 founded MITS Inc., in Albuquerque, N.M. The company's name was an acronym for Micro Telemetry Instrumentation Systems; it initially built equipment for model-rocketry hobbyists.

MITS soon began building kit-based electronic calculators, which were then considered new-fangled, high-tech and expensive. But by 1973, MITS was losing money because of competition from Texas Instruments and other manufacturers. With several years of experience producing electronics kits for hobbyists, Mr. Roberts decided to stake his small company on a programmable computer, something that he had long envisioned.

Despite the fact that few knew just what to do with a computer that lacked a keyboard, display or storage, MITS was overwhelmed with orders after the Altair appeared on the cover of Popular

Electronics magazine. Two attentive readers of that issue were Messrs. Gates and Allen, who had been working on a version of the programming language Basic.

 *Associated Press*

Ed Roberts with the Altair 8800 computer in 1997.

"I grabbed it off the shelf, I looked at it and I bought it and I ran back to Bill's dorm," Mr. Allen said in the 1996 PBS documentary "Revenge of the Nerds." (Mr. Gates was a student at Harvard at the time.)

Mr. Allen ended up flying to Albuquerque with a preliminary version of the program, which later shipped with each Altair. Mr. Gates dropped out of Harvard, Mr. Allen quit his job and the two young programmers moved to Albuquerque. There they founded Microsoft to provide software for the Altair.

"MITS was the pioneer of a lot of things—helping to create computer clubs, getting a software library going, lots of new additions to their personal computer including the disk," says Mr. Gates.

The Altair garnered 5,000 orders in its first year, with the base model selling for $397.

"He was a seed of this thought that computers would be affordable," says Steve Wozniak, co-founder of Apple Computer Inc. Mr. Wozniak credits an Altair demonstration at the first meeting of the storied Palo Alto Homebrew Computer Club for convincing him that microprocessor-based computers, as opposed to mainframes, could be worthwhile.

New companies soon opened to provide circuit boards and other peripherals that made the Altair more useful. The Altair helped inspire some of the first computer magazines and conventions, and also the first clones—copies built on the same design principles around the same Intel Corp. chip.

Mr. Roberts in 1977 sold MITS to Pertec Computer Corp. of Los Angeles, a manufacturer of disk drives. He took up farming and later attended medical school.

In the late 1980s, Mr. Roberts moved to rural Cochran, Ga., where the town's only doctor had recently died. He set up a clinic with a modern laboratory, built a local network to link the office's computers and wrote record-keeping software.

He said he had few regrets. "I think I'm making a fairly substantial contribution here," Mr. Roberts told the New York Times in 2001. "Maybe not to the wider world, but I think what I do now is important."

—Email

H. Edward Roberts, PC Pioneer, Dies at 68

By STEVE LOHR

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Not many people in the computer world remembered H. Edward Roberts, not after he walked away from the industry more than three decades ago to become a country doctor in Georgia. Bill Gates remembered him, though.

William Berry /Atlanta Journal-Constitution

H. Edward Roberts with the Altair 8800 computer in 1997.

As Dr. Roberts lay dying last week in a hospital in Macon, Ga., suffering from pneumonia, Mr. Gates flew down to be at his bedside.

Mr. Gates knew what many had forgotten: that Dr. Roberts had made an early and enduring contribution to modern computing. He created the MITS Altair, the first inexpensive general-purpose microcomputer, a device that could be programmed to do all manner of tasks. For that achievement, some historians say Dr. Roberts deserves to be recognized as the inventor of the personal computer.

For Mr. Gates, the connection to Dr. Roberts was also personal. It was writing software for the MITS Altair that gave Mr. Gates, a student at Harvard at the time, and his Microsoft partner, Paul G. Allen, their start. Later, they moved to Albuquerque, where Dr. Roberts had set up shop.

Dr. Roberts died Thursday at the Medical Center of Middle Georgia, his son Martin said. He was 68.

When the Altair was introduced in the mid-1970s, personal computers — then called microcomputers — were mainly intriguing electronic gadgets for hobbyists, the sort of people who tinkered with ham radio kits.

Dr. Roberts, it seems, was a classic hobbyist entrepreneur. He left his mark on computing, built a nice little business, sold it and moved on — well before personal computers moved into the mainstream of business and society.

Mr. Gates, as history proved, had far larger ambitions.

Over the years, there was some lingering animosity between the two men, and Dr. Roberts pointedly kept his distance from industry events — like the 20th anniversary celebration in Silicon Valley of the introduction of the I.B.M. PC in 1981, which signaled the corporate endorsement of PCs.

But in recent months, after learning that Dr. Roberts was ill, Mr. Gates made a point of reaching out to his former boss and customer. Mr. Gates sent Dr. Roberts a letter last December and followed up with phone calls, another son, Dr. John David Roberts, said. Eight days ago, Mr. Gates visited the elder Dr. Roberts at his bedside in Macon.

“Any past problems between those two were long since forgotten,” said Dr. John David Roberts, who had accompanied Mr. Gates to the hospital. He added that Mr. Allen, the other Microsoft founder, had also called the elder Dr. Roberts frequently in recent months.

On his Web site, Mr. Gates and Mr. Allen posted a joint statement, saying they were saddened by the death of “our friend and early mentor.”

“Ed was willing to take a chance on us — two young guys interested in computers long before they were commonplace — and we have always been grateful to him,” the statement said.

When the small MITS Altair appeared on the January 1975 cover of Popular Electronics, Mr. Gates and Mr. Allen plunged into writing a version of the Basic programming language that could run on the machine.

Mr. Gates dropped out of Harvard, and Mr. Allen left his job at Honeywell in Boston. The product they created for Dr. Roberts’s machine, Microsoft Basic, was the beginning of what would become the world’s largest software company and would make its founders billionaires many times over.

MITS was the kingpin of the fledgling personal computer business only briefly. In 1977, Mr. Roberts sold his company. He walked away a millionaire. But as a part of the sale, he agreed not to design computers for five years, an eternity in computing. It was a condition that Mr. Roberts, looking for a change, accepted.

He first invested in farmland in Georgia. After a few years, he switched course and decided to revive a childhood dream of becoming a physician, earning his medical degree in 1986 from Mercer University in Macon. He became a general practitioner in Cochran, 35 miles southeast of the university.

In Albuquerque, Dr. Roberts, a burly, 6-foot-4 former Air Force officer, often clashed with Mr. Gates, the skinny college dropout. Mr. Gates was “a very bright kid, but he was a constant headache at MITS,” Dr. Roberts said in an interview with The New York Times at his office in 2001.

“You couldn’t reason with him,” he added. “He did things his way or not at all.”

His former MITS colleagues recalled that Dr. Roberts could be hardheaded as well. “Unlike the rest of us, Bill never backed down from Ed Roberts face to face,” David Bunnell, a former MITS employee, said in 2001. “When they disagreed, sparks flew.”

Over the years, people have credited others with inventing the personal computer, including the Xerox Palo Alto Research Center, Apple and I.B.M. But Paul E. Ceruzzi, a technology historian at the Smithsonian Institution, wrote in “ History of Modern Computing” (MIT Press, 1998) that “H. Edward Roberts, the Altair’s designer, deserves credit as the inventor of the personal computer.”

Mr. Ceruzzi noted the “utter improbability and unpredictability” of having one of the most significant inventions of the 20th century come to life from such a seemingly obscure origin. “But Albuquerque it was,” Mr. Ceruzzi wrote, “for it was only at MITS that the technical and social components of personal computing converged.”

H. Edward Roberts was born in Miami on Sept. 13, 1941. His father, Henry Melvin Roberts, ran a household appliance repair service, and his mother, Edna Wilcher Roberts, was a nurse. As a young man, he wanted to be a doctor and, in fact, became intrigued by electronics working with doctors at the University of Miami who were doing experimental heart surgery. He built the electronics for a heart-lung machine. “That’s how I got into it,” Dr. Roberts recalled in 2001.

So he abandoned his intended field and majored in electrical engineering at Oklahoma State University. Then, he worked on a room-size I.B.M. computer. But the power of computing, Dr. Roberts recalled, “opened up a whole new world. And I began thinking, What if you gave everyone a computer?”

In addition to his sons Martin, of Glenwood, Ga., and John David, of Eastman, Ga., Dr. Roberts is survived by his mother, Edna Wilcher Roberts, of Dublin, Ga., his wife, Rosa Roberts of Cochran; his sons Edward, of Atlanta, and Melvin and Clark, both of Athens, Ga.; his daughter, Dawn Roberts, of Warner Robins, Ga.; three grandchildren and one great-grandchild.

His previous two marriages, to Donna Mauldin Roberts and Joan C. Roberts, ended in divorce.

His sons said Dr. Roberts never gave up his love for making things, for tinkering and invention. He was an accomplished woodworker, making furniture for his household, family and friends. He made a Star Wars-style light saber for a neighbor's son, using light-emitting diodes. And several years ago he designed his own electronic medical records software, though he never tried to market it, his son Dr. Roberts said.

"Once he figured something out," he added, "he was on to the next thing."

An earlier version of this article misidentified the location of the town of Cochran. It is 35 miles southeast of the university, not northwest.