## H. Edward Roberts, PC Pioneer, Dies at 68

By STEVE LOHR/ New York Times (April 2010).

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.



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 greatgrandchild.

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 <u>light-emitting</u> <u>diodes</u>. 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."