

It introduced computers to the Silicon Age

Overview

Development challenges

Market rollout

Inventory management

When the IBM System/370 Model 145 debuted in 1970, its memory chips were comprised of an element that would soon come to symbolize computer technology in the late 20th century — silicon.

System/370 marked IBM's first departure from magnetic iron ferrite core technology, which had been the mainstay of computer memory since the mid-1950s. Along with other technology companies of the day, IBM made the shift to silicon memory chips to store data and instructions because they produced faster operating speeds and required much less space. Six months after System/370 was announced, the moniker "Silicon Valley" first appeared in print in an issue of *Electronic News*. The Silicon Age had begun.

System/370 Model 145 was the first IBM computer that had a main memory in which all the elements — resistors, capacitors and diodes — were fabricated on a single silicon chip. The mainframe's internal operating speed was up to five times faster than the widely used IBM System/360 Model 40 and up to 11 times faster than the Model 30. It featured more than 1,400 microscopic circuit elements etched onto silicon chips, each measuring just one-eighth-inch square. Memory on a silicon chip would soon become a computer industry standard and remains so to this day.