

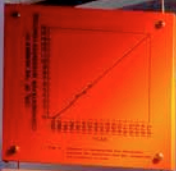


Punched Cards

Hollerith







MOORE'S LAW

"The number of transistors and other components on integrated circuits will double every year for the next 10 years," he predicted. Gordon Moore, Fairchild Semiconductor's R&D Director, in 1965.

"Moore's Law" came true. In part, this reflected Moore's accurate insight. But Moore also set expectations—inspiring a self-fulfilling prophecy.

Doubling chip complexity without doubling power without significantly increasing cost. The number of transistors per chip rose from a handful in the 1960s to billions by the 2010s.

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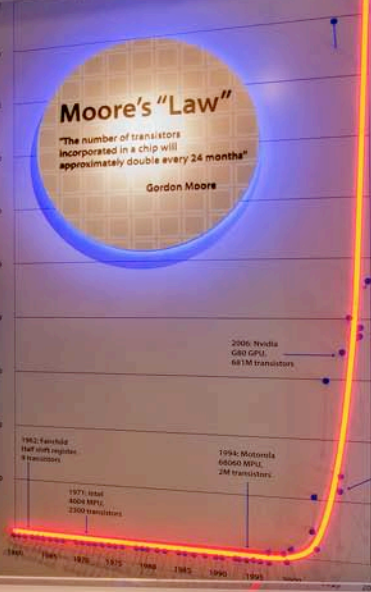


Moore's "Law"

"The number of transistors incorporated in a chip will approximately double every 24 months"

Gordon Moore

TRANSISTORS

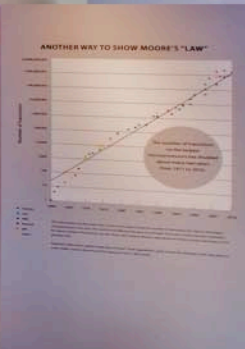


2010: Intel Itanium Tukwila MPU 2000M transistors

2010: AMD Opteron 6100 MPU 1.800M transistors

2006: IBM/Sony/Toshiba Cell GPU 241M transistors

2006: Nvidia G80 GPU 681M transistors





THE MANUFACTURING PROCESS

A step-by-step process (fabrication) produces the integrated circuit (IC) chip, which will later form an integral part of a computer. This process is a photolithographic technique, where a photoresist is applied and then etched to form individual chips, which are mounted in a package for longer life and protection.

"MOS technology was considered a 100-year technology of the semiconductor industry."
—William S. Hooper, 2001

COMPUTERS FOR EVERYONE

Computers evolved primarily for military, scientific, government, and corporate users with substantial needs...and substantial budgets. They populated labs, universities, and big companies. Homes? Small businesses? Not so much.

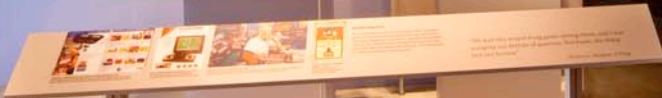
Over time, however, costs dropped. Equally important, computers grew sophisticated enough to hide their complex, technical aspects behind a user-friendly interface. Individuals could now afford and understand computers, which dramatically changed everyday life.

Personal Computers



PONG

Pong was the first commercially successful video game. It was developed by Atari in 1972 and was one of the first games to be played on a television set. The game is a simple two-player game where the goal is to hit a ball back and forth between two paddles. It was a huge success and paved the way for the video game industry.



PLAYING ON COMPUTERS

As the video game industry grew, the first home computers were developed. These computers were designed to be used for a variety of purposes, including playing video games. The first home computer was the Altair 8800, which was released in 1975.

Games like Pong and Tetris on home computers paved the way for the modern video game industry. These games were designed to be played on a computer screen and were a huge success.

Computer Games

