

Technology in Focus: History of the PC



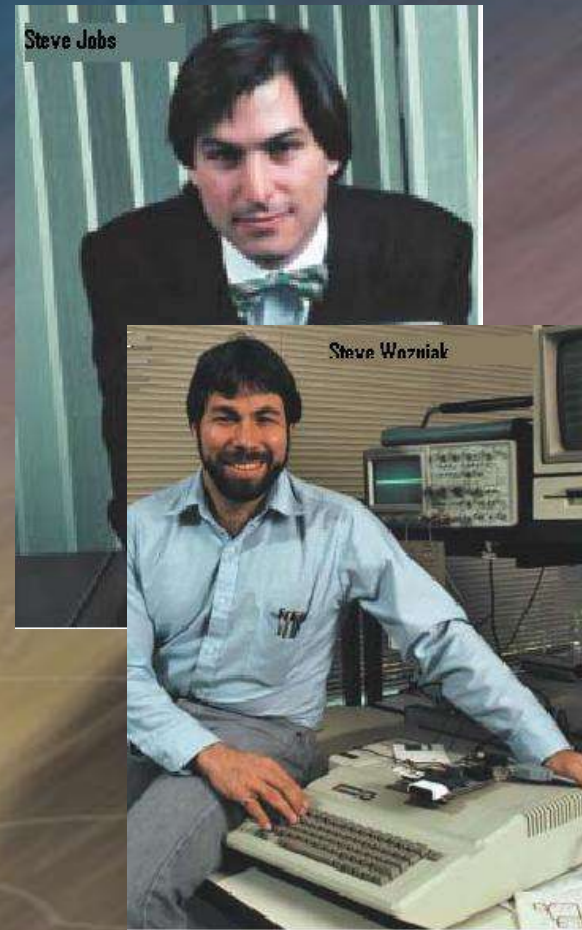
Intel 8080 and the Altair 8800

- The first microcomputer
- Sold as a kit
- Switches for input
- Lights for output
- Gates and Allen create a compiler for Basic
- MITS receives 4,000 orders



Apple I and Apple II

- Apple I built by Steve Wozniak in 1976
- Apple II developed by Steve Jobs in 1977
- Uses Motorola processor
- First fully contained microcomputer
- Highly successful



Early Competitors

- Commodore
- TRS-80
- Osborne



IBM PC

- IBM enters small computer market 1981
- Uses open architecture
- Purchases operating system from Microsoft



Beginners All-Purpose Symbolic Instruction Code (BASIC)

- Revolutionized the software industry
- Programming language that beginners could easily learn
- Key language of the PC
- Bill Gates and Paul Allen used BASIC to write the program for the Altair
- Led to the creation of Microsoft



Advent of Operating Systems

- Steve Wozniak invents floppy drive
- Disk Operating System (DOS): Operating system that controlled the first Apples
- Control Program for Microcomputers (CP/M): First operating system for Intel-based PCs
- MS-DOS
 - Operating system for IBM PCs
 - Based on an operating system called Quick and Dirty Operating System (QDOS)
 - Created by Bill Gates and Paul Allen
 - All PCs using the Intel chip used MS-DOS

Software Application Explosion

- Electronic Spreadsheets
 - VisiCalc
 - Lotus 1-2-3 and Microsoft Excel
- Word Processing
 - WordStar
 - Word for MS-DOS
 - Word Perfect



Bricklin and Frankston

A screenshot of the VisiCalc spreadsheet application. The spreadsheet has four columns: PAYEE, CHECK, DEPOSIT, and BALANCE. The data is as follows:

PAYEE	CHECK	DEPOSIT	BALANCE
SEARS	14.22		220.00
VISA	50.75		150.00
JOES MKT	20.11		100.00
GAS CO.	19.84	250.94	200.00

VisiCalc screenshot

Graphical User Interface

- Xerox
 - Palo Alto Research Center
 - Alto: 1972
- Apple
 - Lisa: 1983
 - Macintosh: 1984



Xerox Alto



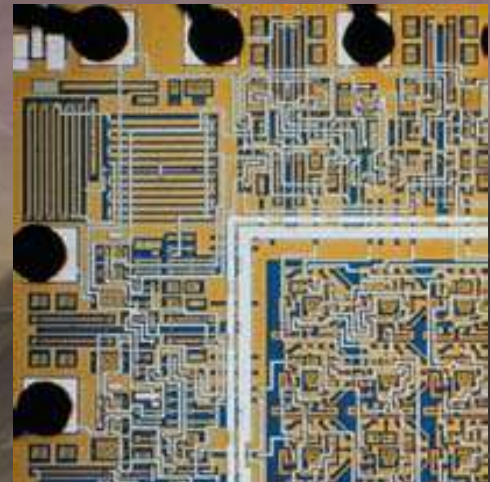
The Internet Boom

- Mosaic
- Netscape
- Internet Explorer
- Windows 95



Early Computer History

- Transistors 1945
 - Invented at Bell Laboratories
 - Replaces vacuum tubes
- Integrated circuits 1958
 - Invented by Jack Kilby of Texas Instruments
 - A small chip containing thousands of transistors
 - Enabled computers to become smaller and lighter



Early Computer History

- Microprocessor chip 1971
 - Created by Intel Corporation
 - A small chip containing millions of transistors
 - It functions as the central processing unit (CPU)



Computer Generations

- First-generation computers (1946–1958)
 - UNIVAC
 - Use vacuum tubes to store data
- Second-generation computers (1959–1964)
 - Use transistors to store data
- Third-generation computers (1965–1970)
 - Use integrated circuits
- Fourth-generation computers (1971–Today)
 - Use a microprocessor chip