

History in the Computing Curriculum

Appendix A7

1980 to 1989

- 1980: IBM selects PC-DOS from upstart Microsoft Corporation as the operating system for its new PC. (e,t)
- 1980: After a long development period, the Ada language emerges. Developed by the US Department of Defense, it is designed for process control and embedded applications. (a,e)
- 1980: Brian Reid develops Scribe, the first word processor. (a)
- 1980: The 64 kilobit dynamic RAM is created. (a)
- 1980: 32-bit microchips are developed. They are the Motorola 68000, the Intel 80186, and the NS 16000. (a)
- 1980: Wayne Ratliff develops dBase II, the first version of a PC database program. It goes on to enjoy wide market success. (e)
- 1980: The Osborne 1 "portable" computer weighs 24 pounds and is the size of a small suitcase. (e)
- 1980: David A. Patterson at UC Berkeley begins using the term "reduced-instruction set" and, with John Hennessy at Stanford, develops the concept. (e)
- 1981: Barry Boehm devises Cocomo (Constructive Cost Model), a software cost estimation model. (e)
- 1981: Japan grabs a big piece of the chip market by producing chips with 64 Kbits of memory. (e)
- 1981: Xerox introduces the Alto computer. It used a mouse, had built-in Ethernet, and used Smalltalk. (a)
- 1981: Xerox introduces a commercial version of the Alto called the Xerox Star. It was the first commercially available workstation with a "desktop" WYSIWYG user interface. (a,e,p)
- 1981: The last IBM Stretch computer is retired. (a)
- 1981 [August]: The open-architecture IBM Personal Computer (PC) is launched, signaling to corporate America that desktop computing is going mainstream. (a,e,t)
- 1981: A year after its announcement, the doomed Apple III ships and suffers nearly a 100% failure rate. (a)
- 1981: Because connections to the Arpanet are limited, rival networks emerge. Because It's Time Network (BITnet) and the Computer Science Network (Csnet) are established using Arpanet technology. (f)
- 1981: Osborne produces the first commercially successful portable computer, the Osborne I. It weighed 23 pounds, used the Z80 chip, had 64K RAM, and used the CP/M operating system. (a)
- 1982: Columbia Data Products produces the first IBM PC "clone." Compaq soon follows with its own version. (e)
- 1982: The Commodore 64 is launched with the 6510 chip, 64K RAM, 20K ROM at an initial cost of \$595. (a)
- 1982: Sony announces compact disk technology. (a)
- 1982: Autodesk is founded and ships the first version of AutoCAD later that year. (e)
- 1982: John Warnock develops the PostScript page-description language and with Charles Geschke founds Adobe Systems. (e)
- 1982: Time magazine names the computer as its "Man of the Year." (e)
- 1982: The Cray X-MP (two Cray-1 computers linked in parallel) proves three times faster than a Cray-1. (e)
- 1982: Japan launches its "fifth generation" computer project, focusing on artificial intelligence. (e)

1982: Commercial email service begins among 25 cities. (e)

1982: The term Internet is assigned to a connected set of networks. (f)

1982: Vint Cerf and Bob Kahn create Transmission Control Protocol/Internet Protocol (TCP/IP) as a set of connectionless transport protocols used to support Internet services. IP is a packet-switching protocol; TCP checks, tracks, and corrects transmission errors. TCP/IP becomes an Internet standard. (f)

1982: In November, Compaq unveils an IBM-compatible portable PC. (e)

1982: More than 3,275,000 PCs sold, a jump from the 300,000 sold in 1981. (t)

1983: By introducing graphics such as pie charts and bar graphs, Lotus 1-2-3 does for the IBM PC what VisiCalc did for the Apple II. Lotus 1-2-3, developed by Mitch Kapor, combined spreadsheets, graphics, and database programs in one package. (e,t)

1983: A Josephson junction is developed on the basis of Brian Josephson's 1962 prediction, bringing higher speed and lower power dissipation to ICs. (e)

1983: The IBM PC-XT heads for market success, while the PC Junior faces quick extinction. (a,e)

1983: Completion of the TCP/IP switchover marks the creation of the global Internet. (e)

1983: Microsoft announces Windows, a graphical user interface for personal computers. (a)

1983: The divestiture of AT&T takes place. (a)

1983: Though not destined for commercial success, Apple's Lisa, launched in May, shows what can be done with a mouse, icons, and pulldown menus. Its price of \$10,000 led to its early demise. (a,e)

1983: Thinking Machines Corp. and Ncube are founded, providing a boost to parallel processing. (e)

1983: At AT&T Bell Labs, Bjarne Stroustrup continues work on C++, an OO extension to C. (e)

1983: UNIX System V is developed.

1983: Time magazine chooses the computer as the "Machine of the Year" instead of a person. The event acknowledges the impact of computers on society. (t)

1984: In January, the Macintosh is unveiled with a publicity campaign that includes an Orwellian-themed ad during the Superbowl. The machine had a graphical user interface. (a,e,p)

1984: Apple gives computer graphics a boost with its MacPaint program. (e)

1984: MIDI (Musical Instrument Digital Interface) standards are developed for interfacing computers and digital music synthesizers. (e)

1984: The CD-ROM, introduced by Sony and Philips, provides significantly greater storage capacity for digital data. (e)

1984: Motorola introduces the MC68020 with 250,000 transistors. (e)

1984: A motion picture, The Last Starfighter, uses extensive supercomputer-generated graphics. (e)

1984: Domain name system (DNS) is introduced. DNS allows organizations to associate easy-to-remember network names with their Internet sites. (f)

1984: NEC manufactures a 256-Kbit chip, and IBM introduces a 1-Mbit RAM chip. (e)

1984: The antitrust suit against IBM is withdrawn. (a)

1984: IBM issues its DB2 relational database program. (a)

1984: In Neuromancer, novelist William Gibson coins the term "cyberspace." (e,f)

1984 [August]: Beginning in August, Intel's 16-bit 80286 chip, installed in IBM's new PC AT, expands desktop computer capabilities. (e,t)

1985: Supercomputer speeds reach 1 billion operations per second with the release of the Cray 2 and Thinking Machines' parallel-processor Connection Machine. (e)

1985: Inmos introduces transputers, featuring concurrent processing architecture. (e)

1985: The National Science Foundation establishes four national supercomputing centers. (e)

1985: Microsoft ships Windows. (a)

1985: The Commodore Amiga and the Atari 520 ST computers are produced. (a)

1985: The Omnibot 2000 from Tony Kyogo can move, talk, and carry objects. (e)

1985: The MIT Media Laboratory creates the first computer-generated 3-D holographic image. (p)

1985: With the development of Windows 1.0, Microsoft brings Machintosh-like features to DOS-compatible computers. (e)

1985: The C++ language is issued from Bell Labs. (a)

1985 [October]: Intel introduces the 80386 chip with 32-bit processing and on-chip memory management. (e)

1985: Paul Brainard's PageMaker by Aldus becomes the first PC desktop publishing program and is widely used, first on the Macintosh and later on IBM compatibles. (a,e,p)

1986: An article in the Wall Street Journal helps to popularize the concept and term CASE, for computer-aided software engineering. (e)

1986: Computer use in the stock market induce large price swings. (a)

1986: Danny Hillis develops the Connection Machine. (a)

1986: Adobe produces Postscript. (a)

1986: Video display terminal safety is a continuing concern as is repetitive motion syndrome. (a)

1986: The four-processor Cray XP performs 713 million floating-point operations per second. (e)

1987: Experimental 4- and 16-Mbit chips are introduced. (a,e)

1987: Hypercard is introduced and is available for the ordinary user with the introduction of Apple's Hypercard. (a,p)

1987: The IBM PS/2 computer with its OS/2 operating system come to market. (a)

1987: The FBI estimates the average computer fraud at \$650,000 for a total of \$3 billion to \$5 billion per year. The average value of fraud in financial institutions is \$1.5 million. (a)

1987: Watts Humphrey and William Sweet, of the Software Engineering Institute, publish a "process maturity framework," which becomes the Capability Maturity Model, designed to help predict a developer's ability to produce reliable software. (e)

1987: Intel's 80386 microprocessors are used in several personal computers. (t)

1988: Barry Boehm publishes a description of the spiral model of software development, which recognizes the need to incrementally build systems. (e)

1988: Approximately 325,000 LANs link 3.5 million devices. (a)

1988: Motorola's 32-bit 88000 series of RISC microprocessors offer processing speeds of up to 17 million instructions per second. (e)

1988 [November 2]: Graduate student Robert Morris, Jr. reveals the need for greater network security by releasing a worm (malevolent) program into the Internet network on November 2. (a,e,f,p)

1988: The Computer Emergency Response Team (CERT) is formed. (f)

1988: Jarkko Oikarinen invents the Internet Relay Chat (IRC), which is a multiuser chat system that allows people to discuss topics on the Internet. (f)

1988: Steve Jobs' Next computer debuts but, despite advanced features, attracts too few buyers to compete in the market. (a,e)

1988: The "Cuckoo's Egg" hacker causes great concern about network security. (a)

1989: Clifford Stoll's *The Cuckoo's Egg*, a true story about cyberspying, becomes a best seller. (f)

1989: Tim Berners-Lee proposes the World Wide Web project to CERN (European Council for Nuclear Research). (e)

1989 [April]: Intel's 80486 chip with 1.2 million transistors on a 0.4" x 0.6" wafer executes at 15 MIPS. (a,e,t)

1989: Seymour Cray founds Cray Computer Corp. and begins developing the Cray 3 using gallium arsenide chips. (e)

1989: U.S. satellite positioning system is cracked by a 14 year-old. (a)

1989: One thousand U.S. hospital computer systems die 2^{15} days after 1 January 1900. (a)

1989: The first set of SPEC benchmarks is released, facilitating machine performance comparisons for scientific computation tasks. (e)