

Freeman PC Museum PC Timeline

Prior To 1970

1899 Quote by Charles H. Duell, Commissioner of US Patent Office....Everything that can be invented has been invented.
1900 A pioneer is one who originates anything or prepares the way for others.....pioneer definition in Webster's Dictionary
1938 David Packard and William Hewlett found Hewlett-Packard (HP) in Palo Alto garage.
December 1947 William Shockley, Walter Brattain, and John Bardeen, scientists at Bell Labs, demonstrate their new point-contact transistor amplifier invention.
January 1952 Suit filed against IBM, alleging monopolistic practices in its computer business.
1954 Commodore founded by Jack Tramiel as a typewriter repair service.
February 24, 1955 Baby boy born to Mrs. Jobs and named Steven.
October 28, 1955 Baby boy born to Mrs. Mary Gates named William Henry Gates III.
October 4, 1957 Sputnik 1, first artificial satellite, launched into space by the Soviets.
September 1958 Jack St. Clair Kilby, of Texas Instruments, combined transistors, resistors, and capacitors in a single monolithic integrated circuit.
1959 Xerox introduces first copy machine.
1959 Robert N. Noyce at Fairchild Semiconductor introduced the idea of building an IC with components connected by aluminum lines deposited on a silicon-oxide surface layer bonded to a plane of silicon. Metal-oxide-silicon (MOS) structure.
1963 Tandy acquires Radio Shack. Consisted of (9) retail stores.
1965 DEC ships PDP-8 minicomputer.
1968 Robert Noyce and Gordon Moore leave Fairchild Semiconductor to found Intel along with Andy Grove.
1969 Bill Gates and Paul Allen of Lakeside Programming Group get contract to report PDP-10 software bugs in exchange for computer time.
June 1969 ARPANET goes online. Evolves to become Internet.
July 20, 1969 Neil Armstrong and Edwin Aldrin walk on the surface of the Moon.
1969 UNIX is developed at AT&T's Bell Labs.

1970

1970 First version of the UNIX operating system running on the DEC PDP-7.
1970 Floppy disk is announced by IBM, an 8-inch floppy plastic disk.
1970 Daisywheel printer is announced by IBM.

1971

Freeman PC Museum PC Timeline

1971 Bill Gates and Paul Allen form **Traf-O-Data** to sell their computer traffic analysis systems.

1971 Don Hoefler, of Electronic News, coins Silicon Valley USA. Check out the complete unabridged works of Don Hoefler's MicroElectronics Newsletter at <http://smithsonianchips.si.edu/schreiner/index.htm>

1971 First network email message sent by Ray Tomlinson of Bolt Beranek and Newman.

1971 IBM introduces the first floppy disk.

November 1971 Intel introduces MCS-4 microcomputer system. Features 4001 ROM chip, 4002 RAM chip, 4003 shift register chip, and the 4004 (108 Khz) cpu. Uses 2300 transistors and can address 640 bytes. Developed by team headed by F. Fagin, Ted Hoff and S. Mazor. Price \$300.

November 1971 Steve Wozniak and Steve Jobs start first business selling **blue boxes** in the UC Berkeley dorms.

1972

1972 C programming language developed by Dennis Ritchie at Bell Labs.

April 1972 Intel introduces first commercial microprocessor, the 8-bit 8008. Features 16Kb of memory, 3500 transistors(10 micron technology), 60,000 instructions per second at 200KHz. Intels first chip as part of its MCS-8 family of computer chips. Family developed for Computer Terminal Corporation (Datapoint). Launched the personal computer revolution.

1972 Gary Kildall (Digital Research) writes PL/M, the first programming language for the 4004.

1972 Intel introduces the 8080 microprocessor.

1972 Ray Tomlinson, author of first email software, chooses @ sign for email addresses.

1972 Bye-bye Slide rule as it is replaced by hand-held calculators.

November 1972 Atari is founded by Nolan Bushnell and ships Pong, the first video game.

1972 Small talk developed by Alan Kay at Xerox Parc. Quote...The best way to predict the future is to invent it.

1973

April 1973 Radio Electronics publishes an article by Don Lancaster's TV Typewriter. Displayed 2 pages of 16 lines of 32 characters each. Complete construction details were \$2/each and sold thousands.

April 1973 Xerox Parc develops the first PC called Alto with a GUI and Mouse plus Ethernet.

1973 IBM launches 370 mainframe computer.

1973 Bob Kahn and Vint Cerf present basic ideas of the Internet.

1973 Gary Kidall writes simple operating system in his PL/M language. Called CP/M (Computer Program/Monitor) the first operating system for minicomputers.

1973 IBM develops hard disk drive. Called the Winchester named after the rifle. It used two 30 Mb platters.

1974

Freeman PC Museum PC Timeline

March 1974 Scelbi-8H personal computer introduced by Scelbi Computer Consulting, Inc. Used Intel 8008 CPU and assembled was \$565. Some circles say this was the first personal computer. It was the first advertised personal computer using a microprocessor. Designed by Nat Wadsworth and Robert Findley. 200 units sold.

March 1974 Radio Electronics article appears to build your own Mark-8 personal minicomputer. Designed by Jonathan A. Titus.

April 1974 First 4Kbit dRam chip becomes available.

April 1974 Intel releases 8080 chip, an 8-bit microprocessor. Can access 64 Kb of memory and uses 6000 transistors. Designed by Federico Faggin, Masatoshi Shima and Stan Mazor. Federico Faggin quote The 8080 really created the microprocessor market. The 4004 and 8008 suggested it, but the 8080 made it real.

April 1974 Steve Jobs takes job at Atari.

1974 BBN opens Telenet, the first public packet-switched network.

May 1974 Mark 8, the first home computer kit, was introduced.

1974 Motorola introduces 6800 cpu. The 8-bit microprocessor was designed by Chuck Peddle and Charlie Melear.

September 1974 Ed Roberts of MITS computers borrows \$65,000 to complete work on the Altair computer.

October 1974 Creative Computing magazine, created by David Ahl, starts publication.

1974 Ted Nelson invents Hypertext.

December 1974 Popular Electronics publishes MITS article announcing the Altair 8800 computer kit for \$439. Name was based on a Star Trek episode. The Altair pictured on the cover of the magazine is actually a mock-up, as an actual computer was not available. Altair used Intel 8080 cpu.

1975

January 1975 IBM introduces the first laser printer.

February 1975 Zilog announces the Z-80 cpu.

March 1975 Homebrew Club founded. Fred Moore and Gordon French hold the first meeting in French's garage, in Menlo Park, California. Meeting included Bob Albrecht, Steve Dompier, Lee Felsenstein, Bob Marsh, Tom Pittman, Marty Spergel, Alan Baum, Steven Wozniak and others. Bob Albrecht demonstrates an Altair and Steve Dompier reports MITS has 4000 orders.

April 1975 Bill Gates and Paul Allen found Micro-Soft. The hyphen is later dropped to Microsoft.

April 1975 Bill Gates and Paul Allen write first BASIC interpreter. It is shipped on paper tape.

April 1975 Scelbi-8B business computer introduced, designed by Nat Wadsworth and Robert Lindley.

April 1975 MITS delivers the popular Altair 8800, priced at \$397 with 1 Kb memory in kit form. MITS could not build them fast enough. Assembled \$498.

1975 Bill Gates and Paul Allen license BASIC to MITS, their first customer. This is the first computer language program written for a personal computer.

1975 Bill Gates and Paul Allen ship 4K and 8K versions of BASIC v2.0.

1975 Bob Marsh and Gary Ingram found Processor Technology.

Freeman PC Museum PC Timeline

1975 Processor Technology delivers the first S-100 4Kb memory boards for the Altair 8800.
1975 Canadian chip maker Microsystems International shuts down due to \$50 million in losses.
1975 Lee Felsenstein and Bob Marsh begin work on a complete 8080 based computer with a keyboard and built-in color video display.
1975 Cromemco founded by Harry Garland and Roger Melen. Company is named after their Crowthers Memorial dorm at Stanford.
1975 Homebrew Computer Club Steve Dompier plays music Fool on the Hill and Daisy using the Altair and a radio.
1975 Ed Roberts from MITS hires Paul Allen as Director of Software.
1975 Moore's Law. Gordon Moore revises 1965 prediction about transistor density, from doubling every 12 months to doubling every 18 months.
1975 Harry Garland and Roger Melen receive Altair serial number 0002 which they would use to attach their Cyclops camera for use as a security camera.
1975 IBM's Entry Level Systems unit unveils Project Mercury, the IBM 5100 Portable Computer(55 lbs.). A briefcase-size minicomputer with BASIC, 16Kb RAM, tape storage, and built-in 5-inch screen for \$9000.
1975 IMSAI hires Ed Faber as Director of Sales.
June 1975 IMSAI announces the IMSAI 8080 microcomputer.
June 1975 MOS Technology announces MC6501 cpu(\$20) and MC6502 cpu(\$25) undercutting Intel 8080 cpu selling at \$150.
July 15, 1975 Dick Heiser opens first retail computer store Arrow Head Computer Co., dba The Computer Store, in Santa Monica, selling assembled Altair computers.
1975 Micom Data Systems ships its first product the Micom 2000 word processing computer.
1975 Microcomputer Associates releases the JOLT computer kit.
1975 The National Computer Conference (NCC) is held in Anaheim, California.
1975 MITS begins work on Motorola 6800 cpu based Altair.
1975 MITS releases 4K and 8K versions of MicroSoft BASIC 2.0 for its Altair 8800.
November 1975 John French with Hal Lashley and George Tate open Computer Mart of Orange selling the IMSAI! One of the first computer retail stores in USA.
1975 Dick Brown opens The Computer Store on Route 128 in Burlington, Massachusetts.
1975 Southwest Technical Products releases its M6800 computer kit.
1975 Sphere Corporation introduces Sphere I computer kit, with Motorola 6800 cpu, 4Kb RAM, ROM, keyboard and video interface. Selling price \$650.
1975 The Amateur Computer Group of New Jersey is formed.
1975 The Southern California Computer Society (SCCS) is formed.
1975 Wavemate releases its Jupiter II computer kit.
1975 Zilog is founded.

Freeman PC Museum PC Timeline

December 8, 1975 Paul Terrell opens The Byte Shop in Mountain View, California One of the first computer retail stores in the US. First to offer franchises.

December 1975 Paul Terrell signs deal with MITS in which Terrell would receive a 5% commission on every Altair sold in Northern California.

1976

1976 JVC introduces VHS format to the video recorders.

1976 Altair coins name of the S-100 bus.

1976 Dr. Dobb's Journal of Computer Calisthenics and Orthodontia begins publication.

1976 Hewlett-Packard begins **Project Capricorn** to build a computer calculator.

1976 Advanced Micro Devices and Intel sign cross-licensing agreement giving AMD rights to use Intel's microcode.

1976 Bill Gates drops out of Harvard.

1976 Bill Gates writes a second open letter to computer hobbyists, condemning software piracy.

1976 Bill Gates writes software routines for BASIC on the Altair to use diskettes for storage.

1976 Commodore International buys MOS Technology.

March 1976 Steve Jobs and Steve Wozniak create the Apple I

April 1, 1976 Steve Wozniak and Steve Jobs found the Apple Computer Company on April Fool's Day.

1976 Computer Shack is incorporated. The name is later changed to ComputerLand due to legal objections from Radio Shack.

1976 Cromenco introduces **TV Dazzler S-100** color graphics card for Altair/MITS for \$215.

1976 David Bunnell publishes an open letter from Bill Gates to the microcomputer hobbyists, complaining of software piracy.

1976 David Jackson founds Altos Computer Systems.

1976 Dick Wilcox demonstrates Alpha Micro at Homebrew Computer Club meeting.

1976 Digital Research copyrights CP/M.

1976 Don French and Steve Leininger begin microcomputer development for Radio Shack.

1976 Fairchild introduces **Channel F** the first programmable home video game system. Retail price \$170.

1976 Gary Kildall founds Intergalactic Digital Research.

1976 Gary Kildall releases CP/M operating system for 8-bit Personal Computers.

1976 George Morrow founds MicroStuf.

1976 IBM releases the first Inkjet Printer

June 1976 Processor Technology introduces Sol-20 microcomputer. Uses Intel 8080 processor and sold in kit form. Introduced at PC '76 conference in Atlantic City.

Freeman PC Museum PC Timeline

1976 iCOM announces 8 floppy drive named the Frugal Floppy and priced at \$1200.
1976 IMS is renamed IMSAI.
1976 IMSAI begins shipping the IMSAI 8080.
1976 Intel introduces 5MHz 8085 cpu. 8-bit bus, 3 micron 5v technology, speed 0.37 mips, has 6500 transistors.
1976 John Martin sells Bill Millard retail computer store chain concept. Later becomes ComputerLand.
July 1976 First Apple I delivered to The Byte Shop at \$666.66. It did not include power supply and keyboard.
July 1976 Zilog releases Z80, an 8-bit cpu. Speed 2.5 MHz. Instruction set is a superset of Intel 8080.
August 1976 Wozniak completes prototype of the Apple II . Chris Espinosa begins developing game software.
1976 Kentucky Fried Computers is founded.
1976 First Processor Technology Sol-20 computer delivered to Les Solomon of Popular Electronics magazine by Bob Marsh and Lee Felsenstein.
1976 Lore Harp and Carole Ely form Vector Graphic, Inc., first offering 4K memory boards for S-100 bus based systems.
1976 Radio Shack management approves proposal to build and sell TRS-80 microcomputer line.
1976 Mike Markkula, VC and ex-Intel marketing guru visits Steve Jobs garage to see the Apple computer.
1976 Mike Markkula recruits Mike Scott, Gene Carter and Phil Roybal from National Semiconductor to assume positions at Apple.
1976 MITS introduces small footprint Altair 680 microcomputer based on Motorola 6800 cpu.
1976 MOS Technology, Inc. ships the 6502 cpu. The 6502 was developed by Chuck Peddle.
1976 MOS Technology Inc. announces KIM-1 Microcomputer System, with 1 MHz 6502 cpu, 1Kb RAM, 2Kb ROM, LED readout, 23-key keypad, cassette and serial interfaces. Retail price \$245.
1976 National Semiconductor announces SC/MP 8-bit microprocessor with advanced multiprocessing.
October 1976 Wozniak exits Hewlett-Packard to work at Apple full-time.
1976 Paul Allen resigns from MITS.
1976 Paul Terrell begins The Byte Shop franchising program. Byte Shop to open new franchises throughout US.
1976 Paul Terrell incorporates Byte, Inc.
1976 Paul Terrell orders 50 Apple computers from Steve Jobs to be sold at Byte Shop along with Altair computers. Considered genesis of Apple Computer.
1976 Polymorphic Systems introduces Poly-88 microcomputer.
1976 Processor Technology introduces the Sol-20 sold at \$995 in kit form.
1976 Processor Technology releases VDM(video display module) for Altair, IMSAI, Proc Tech, Polymorphic computers, and other S-100 bus computers.
1976 First Personal Computing Festival takes place in Atlantic City, New Jersey. Boot-strapped by several hobbyist computer clubs.
1976 Shugart announces 5.25 disk drive(minifloppy) for \$390.

Freeman PC Museum PC Timeline

1976 Stephen Wozniak demo's Apple I at Bay area Homebrew Computer Club meeting.
November 17, 1976 Advanced Computer Products, Inc. opens one of first computer retail stores
1976 Steve Wozniak and Randy Wigginton demo prototype Apple II at Homebrew Computer Club meeting.
1976 Steve Wozniak begins work on Apple II.
1976 Texas Instruments introduces TMS9900 cpu, first 16-bit microprocessor, for use on TI 990 minicomputer.
1976 First World Altair Computer Convention held in Albuquerque, New Mexico.
1976 The Midwest Area Computer Club conference is held.
1976 Trademark Microsoft is registered.
1976 Trenton Computer Festival is held in New Jersey.
1976 Western Digital introduces MCP-1600, 3-chip, 16-bit cpu.
1976 Tom Snyder's Tomorrow TV show features Sol-20 computer playing Target game.
November 1976 November ComputerLand and Gordon French opens a pilot retail computer store in Hayward, California. Also will serve as training center for franchisors.
1976 Robotics founded in Skokie, Illinois.
December 1976 December Michael Shroyer introduces the Electric Pencil word-processing program.
1976 Warner Communications buys Atari from Nolan Bushnell for outrageous sum of \$26 million.

1977

January 3, 1977 Apple Computer is incorporated by Steven Jobs and Stephen Wozniak. Appoints Intel's Mike Markkula chairman with key objective to obtain new venture capital.
1977 Apple first employees move into office on Stevens Creek Blvd. in Cupertino, California.
1977 IMSAI licenses CP/M for its microcomputers for \$25,000 fee.
1977 Apple Computer moves from Steve Jobs' parents garage to new office in Cupertino, California.
January 1977 Apple incorporates, taps Intel's Mike Markkula as first chairman with key objective to obtain new venture capital.
January 1977 Commodore Business Machines shows prototype PET computer at Winter Consumer Electronics Show.
February 1977 Toy Fair in New York, Milton Bradley announces new electronics division that will create electronic toys. First product will be electronic version of Mastermind game.
February 1977 Don Tarbell ships Tarbell Cassette Interface board for the S-100. Kit \$120, assembled \$175, manual add \$4.
1977 First working model Radio Shack TRS-80 computer is demo'd to Charles Tandy(President).
1977 The First West Coast Computer Faire held at Brooks Civic Auditorium in San Francisco. 13,000 computer hobbyists attended the weekend event. Founded by Jim Warren.

Freeman PC Museum PC Timeline

April 1977 Apple Computer delivers first Apple II system.

April 1977 Apple Computer introduces the Apple II at the First West Coast Computer Faire. Features a 6502 CPU, 4 Kb RAM (expandable to 48K), 16 Kb ROM, keyboard, 8-slot motherboard, game paddles, speaker, graphics/text interface to color display, and built-in BASIC. Price \$1298. It is the first personal computer with color graphics. Featured breakout game. Apple II motherboard also available for \$598.

1977 Apple releases Applesoft I version of BASIC licensed from Microsoft on cassette.

April 1977 D.C. Hayes Associates, Inc., founded by Dennis Hayes with \$5000, introduces first Hayes S-100 modem products. January 1978 named changed to Hayes Corp.

1977 First shipments of Apple II computers to Europe by independent distributor Eurapple.

April 1977 Commodore Business Machines introduces prototype of PET 2001 computer at the West Coast Computer Faire. Features 6502 CPU, 4 Kb RAM, 14 Kb ROM, 8K Microsoft BASIC, keyboard, display, and tape drive. Price only \$600.

1977 Mike Markkula, president of Apple Computer, states floppy disk drive as company's top priority.

May 1977 Byte magazine publishes The Apple II, article by Steve Wozniak.

June 1977 Intel introduces 4.77 Mhz 8086 cpu. Uses 16-bit registers, 16-bit data bus, and 29,000 transistors.

June 1977 Lear Siegler ADM-3 dumb terminal becomes output device of choice for hobbyist S-100 computers. Price \$995 eventually sold in kit form for \$695

1977 Atari introduces Atari Video Computer System which became the Atari 2600.

1977 Bally completes design of a new home computer.

1977 Bill Gates and Paul Allen sign partnership agreement to officially create Microsoft.

1977 First Computer Camp called Camp Retupmoc held in Terre Haute, Indiana.

1977 Chuck Peddle of Commodore demonstrates first PET to potential customer Radio Shack.

1977 Compu-Serv changes name to CompuServe Incorporated.

June 1977 Advanced Computer Products, Inc. of Santa Ana, CA. announces 4K RAM card for S-100 bus.

July 1977 Technical Design Labs (TDL) announces XITAN alpha 1 Z-80-based S-100 kit for \$769. Assembled \$1039.

August 1977 Cromemco ships Z-2 S-100 microcomputer with Z-80 cpu for \$595 kit and \$995 assembled.

1977 CP/M written by Gary Kildall from Digital Research. Becomes the standard operating system for 8080 and 8088 microcomputers. CP/M means **Control Program for Microcomputers**.

1977 Dan Bricklin creates idea for VisiCalc spreadsheet program.

1977 Gilbert Hyatt has 1970 patent application modified to include single-chip computer.

1977 Heath Company introduces H-8 personal computer kit, based on the Intel 8080 cpu.

1977 Microsoft ships FORTRAN for CP/M computers.

1977 Microsoft wins BASIC ownership legal battle with Pertec/MITS.

1977 MITS the company that started personal computer market with the Altair 8800 in 1975 is sold to Pertec Computer Corp for \$6 million in stock.

Freeman PC Museum PC Timeline

August 1977 Radio Shack, a division of Tandy, introduces TRS-80 Microcomputer. Features Z80 CPU, 4 Kb RAM, 4 Kb ROM, keyboard, black-and-white video display, and tape cassette. Price \$600.

August 27, 1977 Heathkit announces H8 8080-based microcomputer with 1K ROM monitor for \$375 at the PC'77 show in Atlantic City, New Jersey.

August 27-28, 1977 2nd annual PC'77 show held in Atlantic City, New Jersey.

1977 One month after introduction TRS-80 sales rocket to 10,000 sold against first year sales projection of only 3,000 units.

1977 Paul Terrell sells his retail chain of 74 Byte Shops for \$4 million.

1977 Radio Shack opens its first retail store offering only computers in Fort Worth, Texas.

September 1977 Microsoft licenses BASIC to Apple Computer.

September 1977 SOROC ships IQ120 termina kit for \$995 or assembled \$1295. Jim Placak liked Coors beer and rearranged the letters to define company name SOROC.

September 1977 Bally announces Bally Professional Arcade videogame machine based on Z-80 processor. Product never ships due to the beginning of the video game market crash.

October 15, 1977 First 100 Commodore PET computers shipped to customers. Basic PET with 4K memory \$595.

October 28-30, 1977 Personal Computer Expo held in New York with 80 exhibitors and 14,000 attendees. Featured Commodore PET, Radio Shack TRS-80, MITS, Alpha Micro, Heathkit, Ohio Scientific Challenger III and Digital Group.

1977 Steve Wozniak writes floppy disk controller software for Apple II.

1977 Altair Software Distribution Company changes name to Peachtree Software.

1977 The first ComputerLand franchise is opened in Morristown, New Jersey, initially named Computer Shack.

1977 First issue Personal Computing is published by David Bunnell, formerly from MITS.

1977 North Star Computer introduces Horizon personal computer. Features Z-80 cpu, 16K RAM, 5.25 floppy drive, (12) S-100 slots and built-in serial I/O. Retail price was \$1999.

1977 Vector Graphic Inc. (Lori and Bob Harp) introduces Vector Graphic I personal computer.

1977 First 10 months only 175 Apple I kits have been sold.

November 1977 Tarbell ships Floppy Disc Interface for S-100 computers, kit \$190, assembled \$265.

November 1977 IMSAI ships VDP-80 computer with built-in monitor for \$5995, only to have most of them come back due to design problems. Start of the fall and demise of IMSAI Corp.

1977 Xerox names David Liddle to develop marketable version of the Alto computer.

December 1977 HP announces HP-01, first wristwatch with LED display and built-in calculator. Retail price \$650 stainless steel.

December 1977 Steve Wozniak begins work on a floppy disk drive and controller for the Apple II.

1978

1978 Apple introduces and begins shipping floppy disk drives for the Apple II.

Freeman PC Museum PC Timeline

February 1978 Cromemco ships Z-2D S-100 microcomputer with Z-80 cpu for \$1495 kit and \$2095 assembled. Z-2 owners could purchase upgrade in kit form for only \$935.

February 1978 PolyMorphic Systems announces System 8813 professional computer at \$3295.

February 1978 Call A.P.P.L.E. begins publication.

February 1978 Hayes ships first 300 baud modem.

February 1978 First PC Bulletin Board System (BBS) goes online. Created by Ward Christianson and Randy Seuss in Chicago, IL.

February 1978 RCA introduces COSMAC VIP hobbyist single-board computer based on CDP1802 cpu with 2K bytes of prgrammable memory using 4K staic memory chips and 512 bytes of ROM for \$275.

March 3-5, 1978 2nd annual West Coast Computer Faire held at San Jose Convention Center.

April 1978 Exidy Sorcerer cartridge programmable computer was introduced at the Long Beach Computer Show by Paul Terrell for \$895 retail.

1978 Dan Bricklin and Bob Frankston create the first electronic spreadsheet. VisiCalc was introduced for the Apple II in 1979.

1978 DEC announces doomed line of personal computers.

1978 HP introduces HP 9000 technical computer(called 1st Desktop Mainframe) based on 32-bit superchip technology.

1978 Intel introduces 8086 16-bit cpu.

June 1978 CES Show Texas Instruments Inc. unveils Speak & Spell, first device to use synthesized human speech. The toy was used in Steven Spielberg's 1982 film E.T. Retail price \$60.

August 1978 Paul Terrell demonstrates Exidy Sorcerer microcomputer at the Personal Computer Show in Philadelphia. Features Z-80 cpu, plug-in ROMpac cartridges, 12K ROM, 8K RAM, a 79-key keyboard with 64x30 line display. Retail price \$1100.

September 1978 FY78 Apple sells 7600 computers.

September 1978 Microsoft sales for the year climbs to \$1 million. 2003 Microsoft profit is \$27 million/day.

October 1978 Thinker Toys ships DISCUS 1 full size floppy disk system for S-100 for \$995.

1978 WordStar introduced for CP/M based systems.

1978 Xerox releases 810 and 820 Star computers.

October 1978 Rockwell introduces AIM 65 6502-based single board computer with 6502 cpu and 1K RAM for \$375 retail.

October 1978 Ohio Scientific announces C3-OEM microcomputer with dual 8 floppy drives, 32Kb static RAM, triple processors including Z-80, 6502 and 8080.

October 1978 Ohio Scientific introduces Challenger 1P microcomputer for \$349.

October 1978 Dynabyte ships DB8/2 Z-80 based S-100 system with dual 5.25: floppy drives.

November 1978 Computerland has 58 locations in the US.

November 1978 Radio Shack TRS-80 with 4K RAM offered at \$599. 16K at \$899.

November 1978 Soild State Music (SSM) releases new 8080 CPU Board for S-100 for only \$129.

Freeman PC Museum PC Timeline

November 1978 The first COMDEX trade show is held at MGM Grand(now Bally's) in Las Vegas. 150 exhibitors and 4,000 attendees jammed into small exhibition area at the rear of the hotel on the way to Jai-Alai courts.

December 1978 Atari announces Atari 400 and 800 (code-named Colleen) personal computers based on 6502 cpu.

December 1978 Epson announces MX-80 dot matrix printer. One of the first low-cost printers.

1979

January 1979 Microsoft moves its offices from Albuquerque, New Mexico to Bellevue, Washington.

February 1979 Atari announces(ship in August) model 400/800 6502 cpu model computers. 400 features 8K RAM(non-expandable), 16 colors, touch keyboard with audio feedback, cartridge slot, cassette I/O port, with retail price of \$500. Atari 800 features 8K RAM(expandable to 48K), cassette recorder, enhanced color features and high resolution graphics, full keyboard, built in 8K BASIC , two cartridge ports, with retail price of \$1000.

February 1979 Microsoft releases DOS 3.2.

February 1979 Apple President Mike Scott prohibits Apple employees from using typewriters.

1979 Orange Computer (one of the first Apple II clones) shown at the Third West Coast Computer Faire.

1979 CompuServe and The Source begin online service.

March 1979 Cellular phones introduced in Chicago (AT&T) and Japan.

March 1979 FCC issues cease-and-desist order on all personal computer manufacturers without FCC approval on their products before making them available for sale.

March 1979 Motorola introduces 68000 cpu eventually used in Apple Macintosh computers. It uses 68,000 transistors giving it its name.

March 1979 Tandy Corporation begins offering their TRS-80 line of personal computers through their own sales stores. Several makers of personal computers withdraw their products.

March 1979 Texas Instruments announces Speak and Spell learning aid for kids based on the TMS 1000 cpu.

1979 Microcomputer Products introduces MicroModem 100 for S-100 bus computers.

April 1979 McGraw-Hill purchases Byte(from Virginia Londoner Green) and onComputing magazines.

April 1979 Taito introduces Space Invaders game in Japan.

May 1979 Tandy announces TRS-80 Model II.

1979 Intel introduces the 4.77 MHz 8088 processor. 16-bit internally with 8-bit bus and can access 1Mb of memory.

June 1979 Apple Computer introduces Apple II Plus with 48 KB memory and retail price \$1195.

June 1979 Apple introduces Silentyper printer (uses thermal paper).

June 1979 Applesoft Firmware Card released for Apple II allowing older computers to use Applesoft.

June 1979 Texas Instruments introduces TI-99/4 personal computer based on TI 9940 16-bit cpu. Retail price of \$1500.

1979 TI-99/4 Computer by Texas Instruments introduced featuring 16-bit TMS9900 cpu, color monitor, and inadequate keyboard design. Retail price \$1150. Computer was slow and TI made it difficult for 3rd party developers to design support products for it.

Freeman PC Museum PC Timeline

July 1979 FCC requires Apple, Atari, Commodore, Heath, Radio Shack, Southwest Technical Products and others to submit their computers for TV interference testing.

August 1979 Apple Pascal and the Language System released.

August 1979 Wayne Ratliff develops the Vulcan database (later Ashton-Tate dBase II)

September 1979 Apple sells 35,100 computers in FY 1979.

September 1979 After preliminary work in 1978 by Jef Raskin the MacIntosh project begins. Code name Macintosh as developer Raskin's favorite apple was the Mackintosh.

September 1979 New England Electronics full page ad in Byte Magazine announcing the Revolutionary TI-99/4 Personal/Educational Computer with caution availability is subject to allocation.

October 17, 1979 Personal Software (Software Arts) releases VisiCalc Software for the Apple II retail price \$99. Copies shipped per month rise from 500 to 12,000 between 1979 and 1981. First released by Dan Bricklin and Bob Fransen on May 11, 1979.

October 1979 By 1980 Apple will reach 50% market share of personal computer market.

October 1979 International Apple Core formed in San Francisco.

October 1979 Mattel Electronics announces a keyboard unit for Intellivision.

October 1979 Telecomputing Corporation of America (McLean, VA) starts a Personal Computer Network accessed by terminals or personal computer systems. Initially the The Source offers access to 2,000 programs and databases on-line. Service available in 200 cities(\$2.75/hour) from 6PM to 7AM weekends and holidays and higher during normal working hours.

October 1979 Sybex Publishing, Rodney Zaks writes and publishes Your First TI-99/4A Program.

October 1979 Texas Instruments releases TMS 9927 video controller chip.

November 1979 Computer Shopper releases first issue. Annual subscriptions for \$10/year or \$5/year for charter subscribers.

November 1979 FCC completes its radiation tests on six personal computers and only Atari passed.

November 1979 Milton Bradley launches Microvision handheld mini-video game machine. Retail price of \$51.25

1980

January 1, 1980 Hewlett-Packard introduces HP-85 microcomputer(Project Capricorn). Features 16Kb RAM, 32-character wide 5 CRT display, built-in printer, cassette tape recorder, and keyboard. Retail price is \$3250.

January 1980 Nibble Apple magazine begins publication.

1980 Adam Osborne jumps into PC arena with Osborne 1 portable weighing only 24 pounds.

1980 Activision founded on April 25, 1980 by David Crane, Larry Kaplan, Bob Whitehead and Alan Miller all formerly from Atari.

1980 Commodore introduces VIC-20 featuring 6502A cpu, 5K RAM, BASIC in ROM, color, serial, modem, cartridges, cassette interfaces. Retail price \$299.

1980 Digital Research announces CP/M-86.

Freeman PC Museum PC Timeline

February 1980 Sinclair Research announces the ZX80 computer to US marketmarket. Features 3.25 MHz NEC 780-1 8-bit cpu, 1 KB RAM and 4 KB ROM. First microcomputer to cost less than \$200
1980 IBM selects PC-DOS (developed by Microsoft) as the operating system for the new IBM PC.
May 1980 Apple introduces Apple III at the National Computer Conference(NCC) in Anaheim, California. The Apple III utilizes a 2MHz 6502A cpu, 128 Kb RAM and 5.25 floppy drive. Retail price from \$4500-8000.
May 1980 Online Systems starts business with the first hi-res graphics adventure Mystery House for the Apple II.
June 1980 Seagate Technologies announces first Winchester 5.25 5Mb hard drive with (4) platters. Priced at \$600.
June 1980 Sirius Software begins business.
July 1980 Doug and Gary Carlston starts Broderbund Software to market Galactic Empire.
July 1980 Radio Shack introduces TRS-80 Color Computer featuring Motorola 6809E cpu, 4Kb RAM, ROM program cartridges. Retail price \$400.
July 1980 Radio Shack introduces the TRS-80 Pocket Computer with 24 character display, 1.9 KB of programmable memory. Retail price of \$230.
1980 Microsoft is approached by IBM to develop BASIC for IBM PC to be released in August of 1981.
August 1980 Microsoft announces Microsoft XENIX OS, commercial version of the UNIX operating system, for Intel 8086 and Zilog Z8000.
1980 Personal Software introduces Zork Adventure game for the Apple II.
September 1980 Apple introduces Apple III with 6502B cpu, floppy disk drive, 4 slots, and retail price of \$3495.
September 1980 FY 1980 Apple sells a whopping 78,100 computers.
September 1980 Softalk commences publication.
October 1980 Paul Allen from Microsoft negotiates with Tim Paterson of Seattle Computer Products for rights to DOS. Rights eventually purchased for \$50,000.
November 1980 Mike Markkula becomes President and CEO, Mike Scott becomes Vice-Chairman in Apple reorg.
1980 Sinclair Research introduces ZX80 (UK) using Z-80 cpu, 4K ROM (integer BASIC), 1K RAM and membrane keyboard. ZX81 introduced later in US by Timex-Sinclair.
1980 The first 50 planned Xerox computer retail stores opens in Dallas.
December 1980 Apple's blue-skyed initial public stock offering sells out 4.6 million shares.
1980 WordPerfect software introduced for Data General computers.

1981

January 1981 Commodore introduces VIC-20 featuring 6502A cpu, 5Kb RAM (exp. to 32 Kb), 22 character text display, color graphic, 61-key with 4-key function keyboard. Retail price of \$299. Demand took off production increased to 9000 units/day.
1981 Apple Computer prohibits mail order sales stating sales must be completed face to face. Apple retailers given 10 days notice to exit the mail order business.

Freeman PC Museum PC Timeline

1981 Mattel introduces Intellivision home video game.
February 1981 Steve Wozniak and his fiance, Candy Clark, injured in plane crash.
March 1981 Apple reaches first \$1,000,000 shipping day.
April 1981 Adam Osborne introduces the Osborne 1 at the West Coast Computer Faire. Features Z80A cpu, 5" display, 64 Kb RAM, keyboard, keypad, modem, (2) 5.25 100 Kb floppy disk drives. Retail price of \$1795. Only 24 pounds! Includes \$1500 worth of software, including BASIC, CP/M, WordStar, and SuperCalc. Forecasted first year sales 10,000 units and sold that many in the first month.
April 1981 Steve Jobs elected chairman of Apple Computer.
May 1981 TI-99/4 Home Computer selling for retail price of \$599.
May 1981 Xerox announces 8010 Star at the National Computer Conference(NCC). Many Alto invented features incorporated in the design. Includes WYSIWYG word processor, mouse, laser printer, Smalltalk language, Ethernet, and software for combining text and graphics in the same document. Price from \$16-17,000. Not profitable venture as less than 100K units were sold.
June 1981 Central Point Software releases Copy II Plus v1.0.
July 1981 Apple Dick Cavett becomes spokesman for Apple commercials.
July 1981 Mike Scott exits Apple.
1981 Apple II Viruses 1, 2, and 3 called in the wild, called the first public domain viruses. Found in pirated computer games at Texas A&M University.
August 13, 1980 IBM announces IBM 5150 PC Personal Computer in New York. Features a 4.77 MHz Intel 8088 cpu, 64 Kb RAM (exp. to 256 KB), 40 Kb ROM, 5.25' 160 Kb floppy drive, PC-DOS 1.0, Microsoft BASIC, VisiCalc, UCSD Pascal, CP/M-86 and Easywriter 1.0. Retail price of \$3000. Color graphics version \$6000.
September 1981 Apple introduces Profile 5Mb external hard drive for Apple III. Retail price \$3499.
September 1981 FY81 Apple sells 180,000 computers.
September 1981 Microsoft begins work on graphical user interface(GUI) for MS-DOS. Later becomes Windows.
October 1981 Apple introduces Family System for home use. Apple II Plus with Disk II floppy drive, M&R Enterprises RF modulator, tutorial, software and manuals. Retail only \$2495!
October 1981 IBM release first open architecture PC called the IBM PC. Start of the PC revolution.
1981 Quote from Tandy President, John Roach, I don't think IBM's entry into the microcomputer field is that significant.
November 1981 Ashton-Tate ships dBase II database software.
November 1981 Six retailers file suit against Apple for mail order ban. Retailers include Olympic Sales and Advanced Computer Products.
1981 Timex-Sinclair 1000 sold hits \$99 price point in the U.S.
December 1981 Intel ships 8087 math coprocessor chip.
1981 Wall Street ad by Apple, "Welcome IBM... Seriously!"

1982

Freeman PC Museum PC Timeline

1982 Time Magazine names computer as Man Of The Year for 1981.
January 1982 Commodore states Commodore 64 becoming the best selling personal computer of all time.
January 1982 Commodore Business Machines demonstrates Commodore 64 personal computer at Winter CES show in Las Vegas. Features a 6510 cpu, 64Kb RAM, 20Kb ROM with Microsoft BASIC, custom SID sound chip, 16-color graphics and 40-column video screen. Retail price \$595.
January 1982 Microsoft agrees develop software for upcoming Apple Macintosh.
1982 David Norman founds Businessland, opens first retail store in San Jose, California
February 1982 Rod Canion, Jim Harris and Bill Mutro leave TI and found Compaq Computer Corporation.
February 1982 Steve Jobs appears on cover of Time.
February 1982 Sun Microsystems is founded by Vinod Khosla, Scott McNealy, and Andy Bechtolsheim, all formerly from Stanford .
February 1982 The first issue of PC Magazine hits the newstands.
February 1982 Intel introduces 6MHz(0.9 MIPS 80286 cpu. Features 16-bit data bus and 134,000 transistors. Access up to 16Mb memory or 1Gb virtual memory. 100 piece price is \$360 each. 8/10/12 MHz versions followed.
March 1982 Apple announces legal action against makers of Apple II clones.
March 1982 Andy and David Kay of Non-Linear Systems announce Kaypro II (Basically a knock-off of the Osborn 1). Features Z80 (2.5 MHz) cpu, 64 Kb RAM, (2) 5.25 (193 Kb floppy drives, CP/M v.2.2, Perfect Software and a 9 80-column green monochrome monitor. Compact 18 x 18 x 15 1/2 and only 26 pounds. Retail price \$1795
1982 Columbia Data Products produces the first PC Clone , soon after Compaq comes out with theirs.
1982 Commodore 64 introduced, features a 6510 cpu, 64K RAM, 20K ROM with Microsoft BASIC, color and custom sound chips, and serial interface. Retail price \$595.
1982 Compaq Portable introduced, one of the first IBM PC compatible computers.
1982 Franklin Ace 100 introduced (Apple II clone).
May 1982 Apple sues Franklin Computer Corporation for patent and copyright infringement for its Apple II Clone.
May 1982 Microsoft releases MS-DOS 1.1 for IBM PC to IBM. Microsoft also releases MS-DOS 1.25 for IBM-compatible computers.
1982 John Warock founds Adobe Systems to market his Postscript technology.
June 1982 Atari Home Computer Division president Roger Badertscher resigns due to poor profits.
June 1982 Apple Computer ranks 598 on Fortune Double 500 list.
June 1982 Atari owners can purchase a 40-track, single-head master. For \$399.00 they can purchase a 40-track, single-head slave unit.
June 1982 Columbia Data Products announces the first PC clone named the MPC.
June 1982 Digital Equipment Rainbow 100. Uses both the Zilog Z80 and Intel 8088 cpu's. Supports CP/M, CP/M-86 or MS-DOS. Features 64 Kb RAM, Monochrome or color monitor, 80x24 or 132x24 text, (2) 5.25 400 Kb floppy disk drives. Retail prices from \$3000. Sales suffered from MS-DOS compatibility issues and arrogant marketing strategy.
June 1982 Percom Data Company, Inc. announces DS/DD drives for the Atari. Retail price only \$799!

Freeman PC Museum PC Timeline

July 1982 Timex Computer launches Timex Sinclair 1000 at retail price of only \$99.95. Sold through through over 1000 Timex retail outlets.

August 1982 Colecovision video game console introduced by Coleco (Connecticut Leather Company).

1982 Kaypro introduces the Kaycomp II portable, with 9-inch screen and software included, to compete with the Osborne.

August 1982 Hercules Computer Technology introduces Hercules Graphics Card with monochrome graphics at 720x348 resolution. Retail price \$499.

September 1982 Steve Wozniak produces the first and last US Festival held in Southern California.

October 1982 Apple releases Dot Matrix Printer for \$699 and Letter Quality Printer for \$2195.

October 1982 Price Update: Street price for VIC-20 is \$259.95, Commodore 64 is \$595.00, Atari 400 is \$167.95, Atari 800 is \$649.95 and the TI-99/4A for \$199.95.

November 1982 Anchor Automation announces Signalman Mark III modem for TI-99/4A. Retail price \$139.00

November 1982 Broderbund Software releases Bank Street Writer.

November 1982 Compaq Computer introduces Portable PC at Comdex Las Vegas. Features 8088(4.77 MHz) cpu , 128Kb RAM, 5.25(320 KB) disk drive, 9-inch monochrome monitor and true IBM PC BIOS compatibility. Retail price \$3000.

November 1983 First AppleFest opens in San Francisco.

November 1982 Lotus 1-2-3 introduced with huge fanfare at Comdex Las Vegas. Vern Raburn's marketing program makes 1-2-3 instant success!

1982 Shack introduces TRS-80 Model 16, with 68000 and Z-80 cpu's, 128K RAM and 8 disk drive. Retail price \$4999).

1982 Shugart introduces 1.5 height floppy disk drives.

December 1982 Apple throws a Billion Dollar Party for employees, celebrating becoming first personal computer company to reach \$1 billion annual sales rate.

December 1982 Time Magazine reports top sellers for 1982: Timex Sinclair 1000 at \$99, VIC-20 at \$299, Atari 400/800 at \$299 and \$899, TI-99/4A at \$450, Epson HX-20 at \$795, TRS-80 Model III at \$999, Apple II Plus at \$1330, IBM PC at \$1565 and Osborne I at \$1795.

December 1982 TCP/IP is coined for linked networks.

1982 TCP/IP (Transmission Control Protocol and Internet Protocol) established as the standard for ARPANET.

1983

January 1983 Apple Computer announces Lisa business computer. Features 5MHz 68000 cpu, graphical user interface(GUI), 5.25 (860Kb)floppy drive, 12 B&W screen, detached keyboard, and mouse.

January 1983 A+ Magazine ships first issue.

January 1983 Apple and Franklin settle patent and copyright infringement suit out of court.

January 1983 Apple Computer introduces Apple IIe. Features 6502 (1MHz) cpu, 64Kb RAM, 5.25 (140 Kb) floppy drive, Applesoft BASIC, 40x24 and 80x24 text, up to 560x192 graphics, upper/lower case keyboard, (7) expansion slots and Apple DOS 3.3. Retail price \$1395.

January 1983 Atari introduces 1200XL home computer with 64Kb RAM and 256 color capability for \$900 retail.

Freeman PC Museum PC Timeline

January 1983 Street price for Colecovision game console hits \$199.95.

January 1983 Commodore claims it has sold over a million VIC-20's.

January 18, 1983 Franklin Computer demonstrates Franklin Ace 1200 Apple II clone at the CP/M Show. Features 8-bit cpu, 128Kb RAM, color display, upper/lower-case keyboard, floppy drive(143 Kb), CP/M card, 80-column text card. Retail price \$2200.

January 19, 1983 Apple Computer releases Lisa computer with huge advertising and marketing blitz. Features 68000 (5 MHz) cpu, 1Mb RAM, 2 MB ROM, (2) 5.25 floppy drives(860 Kb), 12 built-in B/W monitor, 720x364 graphics, graphical user interface (GUI), 5Mb Profile hard drive, and six integrated programs. Retail price \$10,000. Development costs reported to be in excess of \$50 million plus \$100 million for the software. Lisa, name of engineers daughter, stands for Local Integrated Software Architecture. Less than 100,000 units were produced and suffered from significant technological problems. Big loser for Apple Computer due to design flaws and was over-priced for the market. Retail price \$9995.

January 1983 Commodore announces SX-64 as the first color portable computer. Light, compact design with (2) 5.25 floppy drives and built-in 5 color monitor. Retail price \$1600.

January 1983 Data 20 Corporation of Laguna Hills, CA announces the Video Pak Cartridge that plugs into the VIC-20 expansion port and immediately gives the computer 40/80 column by 24 row display capability.

January 1983 Atari founder Nolan Bushnell announces new company Androbot and releases Topo a PC-controlled robot. Retail price \$995.

January 1983 Lotus Development ships Lotus 1-2-3 Release 1.0 for MS-DOS. US\$1 million was spent on promoting the release. It requires 256 KB of RAM, more than any microcomputer program at the time. Jonathan Sachs was the programmer, with Mitch Kapor as the software designer.

January 1983 Mattel announces Aquarius home computer at the Winter CES. The home computer sold back to Radofin Electronics and never marketed by Mattel. Cited decline in home computer computer profit margins and market saturation.

January 1983 Percom Data disk drives for the Atari 800 are priced at \$799.00 for the first drive, then \$459.00 for each add-on disk drive.

January 1983 Timex Sinclair 1000 now selling for only \$89.00.

February 1983 Home Computer sales as reported by Future Computing Commodore: 2 million, TI: 1.5 million, Atari: 500,000, Timex: 500,000, Tandy: 400,000, Others: 100000

March 1983 IBM announces the IBM Personal Computer XT and it becomes an instant hit in the marketplace. Features Intel's 8088 cpu, 128Kb RAM, 40Kb ROM, 5.25(360 Kb) floppy drive, 10Mb hard drive, (8) expansion slots, serial port, keyboard. Retail price \$4995.

March 1983 Lotus 1-2-3 replaces VisiCalc as best-selling software program in US.

March 1983 Microsoft announces MS-DOS 2.0 for PC's.

March 1983 Radio Shack announces TRS-80 Model 100 portable computer(based on NEC 8201 portable). Features Intel 80C85 cpu,8Kb RAM, 8 lines 40-column text, 240x64 graphics, built-in modem, serial and parallel ports, 32Kb ROM with text editor, telecom software, schedule book, address book, and Microsoft BASIC. Operates on (4) AA batteries. Retail price is \$799. 32Kb version, introduced later \$1134.

April 1983 John Sculley from Pepsi joins Apple as President and CEO, Mike Markkula becomes Vice-Chairman.

April 1983 The domain name system is established.

1983 Michael Krasny founds MPK Computers which would become CDW.

1983 Michel Krasny (CDW) sells his computer through ad in Chicago Tribune.

Freeman PC Museum PC Timeline

1983 Coleco introduces Adam computer game machine with detached keyboard, cassette interface, and printer. Product never reached lofty sales goals.

1983 Hewlett-Packard introduces HP150 with 8088 cpu and a new touchscreen monitor.

May 1983 Apple now at 411 on Fortune 500 list.

May 1983 Gavilan introduces the Gavilan full-function portable computer. Features 16-bit Intel 8088, 80Kb RAM, 3 microfloppy drive, 66x8 LCD screen, touch pad, keyboard, 300-baud modem, and I/O ports.

May 1983 Microsoft introduces The Microsoft Mouse, including card and software. Retail price \$200.

May 1983 Philippe Kahn founds Borland International. Held top spot in database software until 1993 when they began to lose marketshare.

June 1983 Steve Wozniak holds US concert.

June 1983 Eagle Computer has successful IPO and provides Eagle with millions of dollars in much-needed working capital. Dennis Barnhart, CEO becomes a wealthy man. Barnhart decided to celebrate and buy new yacht during lunchtime. After lunch lost control of his \$70,000 Ferrari, crashed and died. Eagle never recovered from the loss and eventually closed as the result of the clone wars.

June 1983 AT&T Bell Labs develops C++ programming language.

June 1983 Convergent Technologies announces Workslate portable computer. Features Hitachi 6303(1.228MHz) cpu, 16Kb RAM, 64Kb ROM, microcassette drive, 16-line by 46-character LCD display, 8.5x11x1 size, 300 bps modem, powered by (4) AA size batteries, 60-key button keyboard ad weighs only 3 pounds. Retail price \$895.

June 1983 Digital Research releases GEM graphical windowing operating system.

June 1983 IBM and Microsoft begin co-developing OS/2.

June 1983 Xerox selects Businessland, Inc. to distribute its copiers and typewriters in retail channel.

June 1983 Iomega introduces Bernoulli Box storage.

June 1983 Mattel Electronics introduces Aquarius home computer. Features Z80A cpu, 4Kb RAM, 8Kb ROM, 40x24 text output to a TV, 80x72 graphics in 16 colors. Retail price \$160.

June 1983 Microsoft marketer Rowland Hanson convinces Bill Gates to change the name of Interface Manager to Windows.

June 1983 Microsoft quote: "We have a long-term relationship with IBM and have solid plans involving PC-DOS."

June 1983 Microsoft announces MSX specifications. SpectraVideo, and other Japanese computer companies agree to adopt the standard and build MSX based machines. Specs include Zilog Z80, 64 KB RAM, TMS9918A video processor, GI AY-3-8910 sound chip, NEC cassette interface chip, Atari joystick interface, Microsoft 32Kb extended BASIC in ROM.

June 1983 Atari introduces the Atari 800 XL with 64K RAM at the CES show.

June 1983 Connecticut Leather Company (Coleco Industries) announces the ADAM home computer at the summer CES in Chicago. Features Zilog Z80A cpu, 80Kb RAM (64Kb user, 16Kb video), 16-color graphics, 256x192 graphics, 36x24 text, game cartridge slots, 3 sound channels, (4) MC6801 peripheral controller microprocessors, word processor in ROM, 75-key keyboard, CP/M and BASIC compatible with Applesoft BASIC, (3) expansion slots, (2) joysticks with keypads, 256-512Kb tape-cartridge, and 80-column SmartWriter daisy wheel printer. Retail price \$599.

June 1983 Syquest introduces SyQuest PC storage cartridge system.

June 1983 Texas Instruments ships one-millionth TI 99/4A.

June 1983 Steve Wozniak returns to Apple.

Freeman PC Museum PC Timeline

October 1983 Xerox decides to sell off all its poorly performing retail stores.
October 1983 Compaq introduces Portable Plus computer.
October 1983 Hewlett-Packard releases HP 150 microcomputer(code name Magic). Features Intel 8088 cpu, 256Kb RAM (exp. to 640 Kb), (2) 3.5 disk drives (710 Kb), 9 green touchscreen, text 80x27, graphics 512x390 and MS-DOS 2.0.
October 1983 Microsoft Windows 1.0 announced but won't be shipped until 1985 due to design problems.
October 1983 Osborne Computers files for Chapter 11 bankruptcy protection.
October 1983 "We're just sitting here trying to put our PCjr's in a pile and burn them. And the damn things won't burn. That's the only thing IBM did right with it - they made it flameproof!..." says Spinnaker Software CEO William Bowman.
October 1983 Visicorp releases VisiOn, integrated software package, for PC's. Retail price \$1795.
1983 Businessland buys Computercraft from Billy Laydin in Texas just in time as computer retail began to slide.
1983 Microsoft Word introduced.
November 1983 Bill Cosby dropped from TI-99/4A advertising campaign.
November 1983 Borland releases Turbo Pascal for CP/M and 8086 computers.
November 1983 TI pulls out of the home computer market, stops development of TI 99/8. Only 250 TI-99/8 are produced.
November 1, 1983 IBM launches the IBM PCjr.(code name peanut) home computer with lavish press conference held in midtown Manhattan at its Gallery of Science & Art . Features Intel 8088 cpu, 64Kb RAM, detached keyboard, (2) cartridge slots, joystick, light pen, serial port. Retail price \$669.00. With 5.25 floppy drive and 128Kb RAM \$1269.00.
November 1983 Microsoft launches Windows at the Plaza Hotel in New York. To be released in April, 1984.
November 1983 Microsoft officially releases Microsoft Word 1.0. Retail price \$375. Bundled with Microsoft Mouse for \$475.
1983 Radio Shack introduces TRS-80 Model 100 portable computer. Retail price \$800.
December 31, 1983 Apple sells 110,000 Apple IIe's during December setting new monthly sales record.
December 1983 Apple announces new improved Apple III Plus at retail price \$2995.
December 1983 Apple ImageWriter printer introduced for \$695.
December 1983 Atari announces Atari 1400XL. Features 64K RAM, built-in voice synthesizer, direct-connect modem, 66-key keyboard and built-in BASIC.
December 1983 Timex Computer announces the Timex Sinclair 2000. Features 24K RAM, supports 8-color high-res graphics, programmable sound, 2x24 character screen display, mini-cartridges and cassette tape storage. Retail price \$149.00. 48K version priced at \$199.99