

**Seagate**



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**1001**

**AMAZING**

**TECH FACTS**

**TRIVIA THAT GIVES YOU THE EDGE**



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presents

# 1001 AMAZING TECH FACTS

**TRIVIA THAT GIVES YOU THE EDGE**



>>> Your Technology Navigator



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## INTRODUCTION

In 1981, in an apparent moment of epiphany, William Henry Gates III told a gathering that in the future 640 KB of RAM ought to be enough for anybody.

Today, Gates, one of the richest men in the universe, makes most of his money selling software so heavy even a Sumo wrestler would blush. Ergo, even the most successful, or foresighted, people in the world are not infallible.

Twenty-three years later, we don't really know whether Gates is still haunted by that statement. What we know for sure is that statements like these become more than just that, and people exchange notes with malicious glee: "Did you know that Bill Gates was stupid enough to say this. I mean, how *did* he become the richest man on earth?"

This special compilation of 1001 amazing technology facts is not filled with malice, but with stuff that would make you smile, raise your eyebrows, or, god forbid, make you exchange notes with malicious glee at that next Saturday night party.

Technology, like most aspects of our life that pass us by and we take for granted, has history. Since technological progress has been fast enough to send every one of us into a tizzy, we tend to lose sight of the pioneers, of the technologies that changed our lives. This book is meant to bring us closer to reality, closer to our technology history, closer to the people who made it happen.

We learn from history, and from those lessons alone alone can we shape our future. So sit back, put your feet on the table, let your hair down, and let time pass you by. And yes, tell us if you didn't get that smile on your face.





# History of Computing



- 1001.** Alan Turing is considered the father of Computer Science. In 1937, he published the paper "On Computable Numbers, with an Application to the Entscheidungsproblem".
- 
- 999.** Beginning in 1934, Konrad Zuse, a German engineer, built a series of computers, the Z1 through Z4, utilising binary arithmetic.
- 
- 998.** Claude Shannon is usually called the father of Information Technology. In 1948, he published "A Mathematical Theory of Communication" in the Bell System Technical Journal.
- 
- 997.** The first high-level programming language was Fortran. It was developed in 1956 by an IBM team headed by John Backus. Fortran became commercially available in 1957.
- 
- 996.** The first object-oriented language was Simula. It was developed by Kristen Nygaard and Ole-Johan Dahl in the mid 1960s.
- 
- 995.** 1981 was the year that PCs began, when IBM debuted the IBM PC. Microsoft shipped it with BASIC. The operating system, too, was developed by Microsoft.



**994.** The first 'computer', the steam-driven calculating machine, was built in 1823 by Charles Babbage.

**993.** Christopher Pile was sentenced to 18 months for releasing a toolkit that would boost the impact of existing viruses by randomizing their codes.

**992.** In 1951, Jay Forrester and Robert Everett, graduate students at MIT, constructed the 'Whirlwind,' a 'real-time computer,' working at twice the speed of the ENIAC.

**990.** In 1969, computer firm Honeywell released the H316 "Kitchen Computer", the first home computer, priced at \$10,600.

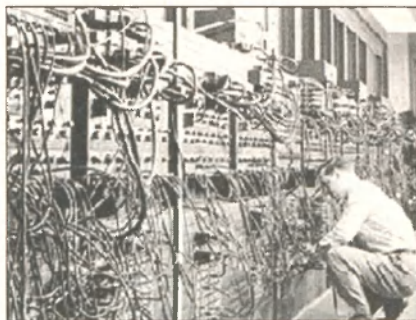
**989.** In 1976, the term "personal computer" first appeared in print, in the May issue of Byte Magazine.

**988.** In 1981, while working on the original version of Microsoft's Disk Operating System (DOS), Bill Gates made a remarkable prediction: "640 K (of RAM) should be enough for anyone."

**987.** The term 'bug' was probably coined after Admiral Grace Hopper

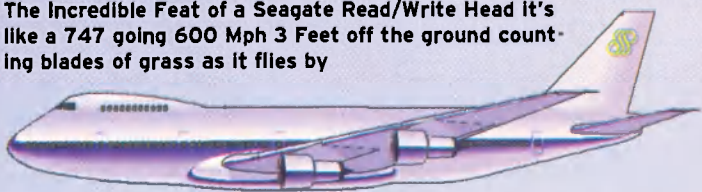
**991.**

**It is much debated whether any single person can be said to have invented the first computer. Examples of candidates are Charles Babbage and Konrad Zuse.**



*The ENIAC, the first real computer*

**The Incredible Feat of a Seagate Read/Write Head It's like a 747 going 600 Mph 3 Feet off the ground counting blades of grass as it flies by**







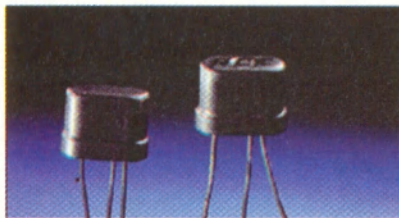
found a moth in the Mark II computer at the US Naval Surface Warfare Center, causing the machine to malfunction.

**985.** In 1970, Steve Wozniak played a huge prank by distributing 25,000 leaflets for a non-existent computer, which was later referred to as the Zaltair Hoax.

**984.** The ENIAC had 20,000 vacuum tubes and 40 racks of equipment, and ran up a daily electric bill of \$60, a large amount at the time, the mid 1940s.

**983.** The first computer to perform a trillion operations per second was called the Gravity Pipeline.

**982.** Les Solomon, publisher of the magazine Popular Electronics, and Ed Roberts were looking for a name to release their new computer under. They finally called it the Altair.



*The first silicon transistor*

**981.** Mitch Kapor founded Lotus Development Corp. in 1982 with Jonathan Sachs, who was instrumental in launching Lotus 1-2-3.

**980.** Founder Paul Gavin came up with the name Motorola when his company started manufacturing radios for motorcars.

**979.** In 1989, Steve Chase, Founder of the Internet Bulletin-Board System Quantum Computer Services, renamed it America Online.

**978.**

**Vinton Cerf is hailed as the Father of the Internet, and earned his nickname when he co-authored, with Dr Robert Kahn in 1973, a paper that gave the world TCP and IP.**

**977.** On 4<sup>th</sup> July, 1996, Sabeer Bhatia and Jack Smith launched Hotmail. In 1997, they sold it to Microsoft for an estimated price of \$385 million.

**976.** AT&T Bell Labs was the first company to transmit human voice across the Atlantic, on January 25, 1915. The exercise was conducted to celebrate the opening of the Panama Canal to Alexander Graham Bell.

**975.**

**In 1991, 450 complete works of literature were published on one CD-ROM.**

**974.** Paul Allen, who co-founded Microsoft with Bill Gates, is now the chairman of Vulcan Northwest, an investment firm.

**973.** Mathematician Blaise Pascal attempted automated computing as early as 1642.

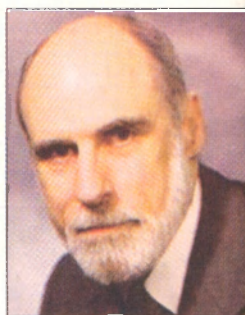
**972.** In 1993, the US Department of Commerce created InterNIC to maintain a central database to contain all registered domain names and IP addresses.

**971.** In 1998, online pornography accounted for 80 percent of all e-commerce. However, the figure has today fallen to 20 per cent.

**970.** Online pornography was a \$1 billion industry in 1998.

**969.** In 1949, J Woodland and B Silver invented the bar code. It was patented in 1952 and was used commercially for the first time in 1974.

**968.** In 1971, Intel launched the world's first single-chip microprocessor, the Intel 4004. The Pioneer 10 spacecraft used the 4004 microprocessor.



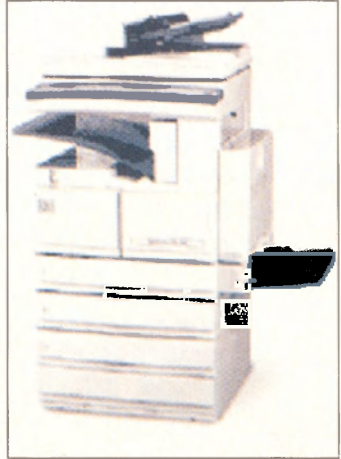
*Vinton Cerf, co-creator of TCP/IP and the Internet*

**967.**

**In 1897, German Karl Ferdinand Braun invented the CRT oscilloscope—the Braun Tube. It was the forerunner of today's TV and radar tubes.**



- 966.** On 9<sup>th</sup> March, 2004, the US government bought the world's biggest ever solid state disk (SSD) from Texas Memory Systems.
- 965.** In August 1944, John Mauchly and Presper Eckert proposed the building of a new machine called the electronic discrete variable automatic computer (the EDVAC). It was to become the first stored-program computer.
- 964.** Niklaus Wirth developed the Pascal programming language in 1971.
- 963.** 1975 saw the emergence of the first word processing software, the Electric Pencil.
- 962.** WordStar, another word processing software, was released in 1975.
- 961.** In 1975, Microsoft, the unofficial partnership of Bill Gates and Paul Allen, attained sales of \$16,000.



*Chester Carlson invented the photocopier machine at Xerox*

- 960.** In 1958, Chester Carlson invented the Xerox machine. The integrated circuit was invented at the same time, enabling the miniaturisation of electronic devices.
- 958.** Edmund Gunter of England invented the slide rule as early as 1692.
- 957.** The EDSAC ran its first program on May 6, 1949. It wasn't the first stored-program computer, but rather, the first practical one.

**959.**

**VisiCalc was developed by Dan Bricklin and Bob Frankston in 1979. Retailing for \$99 apiece, VisiCalc sold over 700,000 copies.**

**956.**

**In December 1970, Gilbert Hyatt filed a patent application entitled "Single Chip Integrated Circuit Computer Architecture", the first basic patent on the microprocessor.**

**955.** In the 1940s, Hungarian-American John von Neumann devised the von Neumann architecture for computers, which is the basic architecture that you see today in virtually every non-parallel-processing computer around, and ever to have been built.

**954.** The first von Neumann-architecture computer to be actually constructed and operated was the Manchester Mark1, designed and built at Manchester University in England.

**953.** In the summer of 1969, UNIX was developed. Linus Torvalds, the creator of Linux, was born the same year.

**952.** The first edition of the *Unix Programmer's Manual*, by K Thompson and D Ritchie, was released in 1971.

**951.** In 1993, Intel released the Pentium processor. It was a 60 MHz processor, incorporating 3.2 million transistors. It sold for \$878 apiece.

**950.** In 1991, Linus Torvalds, then a student in Finland, introduced Linux. He posted the following words to the comp.os.minix newsgroup: "Hello everybody out there using minix - I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones."

**948.** In 1995, SCO acquired the UNIX Systems source technology business from Novell Corporation.

**947.** In August, 1995, Microsoft Windows 95 was released. It sold more than a million copies within the first four days of its launch.



*The Intel Pentium processor was released in 1993*

**949.**

**In 1991, Sun unveiled the Solaris 2 operating environment, fined-tuned for symmetric multiprocessing.**

**946.** **2004 saw Lindows changing its name to Linspire on April 14, after it lost a legal battle against Microsoft.**





- 945.** In 2001, Microsoft filed a trademark suit against Lindows.com in December. It won the case in early 2004.

## THE HISTORY OF COMPUTERS AND COMMUNICATION

- 944.** Computers were sold commercially for the first time in 1951.
- 943.** AT&T manufactured the first commercial modem, the Bell 103, in 1962.
- 942.** The world's first minicomputer, Digital Equipment's PDP-8, was introduced in 1965, and cost a phenomenal \$18,000.
- 941.** In 1966, Xerox invented the Telecopier—the first successful fax machine.

- 940.** The floppy disk was invented in 1971.

- 939.** The microprocessor was invented in 1971. The creation was considered a computer on a chip.

- 938.** Cray Research Incorporated introduced the first supercomputer in 1976—the Cray 1. It could perform 240 million calculations per second.

- 937.** The Apple I home computer was released in 1976.

- 935.** During the same year, Ted Turner launched and implemented the first nationwide programming—via satellite.

944.

**ARPANET, the first 'Internet', was launched in 1969.**



*The world wasn't always a wired place*

936.

**1981: The first IBM PC is sold. Laptop computers sold to public for the first time.**

**934.** The first cellular phone communication network was launched in Japan, in 1979.

**933.** Pacman, one of the most popular arcade games of all times, was released in 1980.

**931.** Time magazine named the computer the Man of the Year in 1983. The first cellular phone network was launched the same year in the US.

**932.**

**BASIC was written in 1964 by Tom Kurtz and John Kemeny of Dartmouth.**

**930.** The Apple Macintosh was released in 1984, along with IBM PC AT.

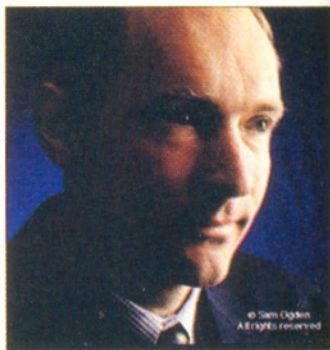
**929.** The US government released control of the Internet in 1994, and the WWW was born.

**928.** Dr Brent Townshend invented the 56K modem in 1996.

**927.** The first business application to go live on a stored-program computer was in November 1951 when the J Lyons company began weekly operation of a bakery valuations job.

**926.** The Z1, a pre-war electro mechanical binary computer designed by German inventor Konrad Zuse, and its blue prints, were destroyed without trace by wartime bombing during WW II.

**925.** Konrad Zuse, a construction engineer at the Henschel Aircraft Company in Berlin, developed the world's first programmable computer in 1941.



*Sir Tim Berners-Lee, the father of the World Wide Web*

**924.**

**In 1964, John Kemeny and Thomas Kurtz developed the BASIC programming language at Dartmouth College.**





**923.** In 1843, mathematician Ada Lovelace, daughter of the poet Lord Byron, published the first computer programs.

**921.** In 1972, Bob Metcalfe created Ethernet, a trademark of the Xerox Company.

**920.** In December, 1968, Douglas C. Engelbart, of the Stanford Research Institute, demonstrated his system of keyboard, mouse and windows at the Fall Joint Computer Conference in San Francisco's Civic Center.

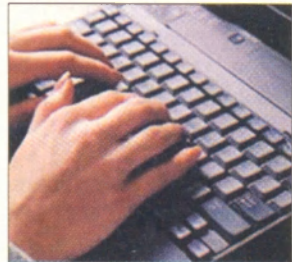
**922.**

**In 1964, the American Standards Association adopted ASCII (American Standard Code for Information Interchange) as a standard code for data transfer.**

**919.** The first transistorised computer was completed, the TX-O, at MIT in early 1956.

**918.** The first mechanical calculator capable of multiplication was invented by Gottfried Wilhelm Leibniz, who also co-invented the calculus, in 1673.

**917.** In 1801, Joseph-Marie Jacquard invents a machine to automatically control the patterns in fabrics using punch cards. They were called Jacquard Looms.



*The QWERTY keyboard was actually designed with the intention of slowing down typists*

**916.** Gay Lussac and Thenard extracted impure amorphous silicon in 1811.

**915.** George Boole published his Mathematical Analysis of Logic, inventing Boolean algebra in 1854. This became the basis for computer design.

**913.** In 1890, Herman Hollerith constructs a punch-card tabulating machine for use in the US Census.

**914.**

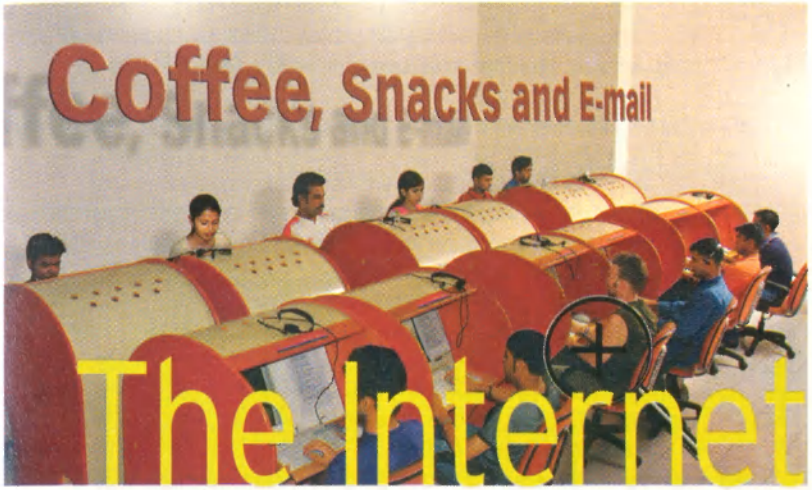
**Radio Shack introduced, in 1971, the first computer with a keyboard and CRT display.**

- 912.** John Backus of IBM created FORTRAN in 1954.
- 911.** Digital Equipment Corporation was founded by Ken Olsen in 1957.
- 910.** In 1973, PROLOG was developed by Alain Comerauer.
- 908.** The CompuServe online service was launched in 1979.
- 907.** Software Application giants, Aldus and Adobe, merged in 1994F.
- 906.** Jack Kilby of Texas Instruments patented the first integrated circuit in 1959.
- 905.** 1951 saw the first commercial use of the transistor, invented by William Shockley, John Bardeen, and Walter Brattain.
- 904.** In 1903, Nikola Tesla, an American engineer, patented an electrical logic circuit called a gate or switch.
- 903.** Charles Babbage invented his Analytical Engine in 1833, the first punch-card programmable general-purpose computer.
- 902.** The first known English-language use of the word 'computer', was found in the writings of Sir Thomas Browne, in 1846.
- 901.** The optical laserdisc was developed by both Philips and MCA in 1972.

**909.**

**In 1989, Microsoft's sales reached \$1 billion, the first year to do so.**





- 900.** Yahoo! derived its name from the word Yahoo coined by Jonathan Swift in *Gulliver's Travels*. A Yahoo is a person who is repulsive in appearance and action and is barely human!
- 
- 899.** In the Deep Web, the part of the Web not currently catalogued by search engines, public information said to be 500 times larger than on the WWW.
- 
- 898.** Researchers consider that the first search engine was Archie, created in 1990 by Alan Emtage, a student at McGill University in Montreal, Canada.
- 
- 897.** The first search engine for Gopher files was called Veronica, created by the University of Nevada System Computing Services group.
- 
- 896.** Tim Berners-Lee predicted in 2002 that the Semantic Web would "foster global collaborations among people with diverse cultural perspectives", but the project never seems to have really taken off.
- 
- 895.** The top visited websites in February 2004, including affiliated sites, were Yahoo!, MSN, the Time Warner Network, EBay, Google, Lycos, and About.com.
- 
- 894.** In February 2004, Sweden led the world in Internet penetration, with 76.9 percent of people connected to the Internet. The world average is 11.1 per cent.

**893.** Marc Andreessen founded Netscape. In 1993, he had already developed Mosaic, the first Web browser with a GUI.

**892.** The search engine "Lycos" is named for Lycosidae, the Latin name for the wolf spider family.

**891.** The US International Broadcasting Bureau (Voice of America, basically), created a proxy service to allow Chinese, Iranians and other 'oppressed' people to circumvent their national firewalls, relaying forbidden pages behind silicon curtains.

**889.** It was once considered a letter in the English language. The Chinese call it a little mouse, Danes and Swedes call it 'elephant's trunk', Germans a spider monkey, and Italians a snail. Israelis pronounce it 'strudels' and the Czechs say 'rollmops'... What is it? The @ sign.

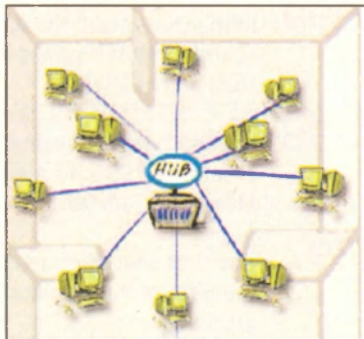
**888.** *Lurking* is to read through mailing lists or news groups and get a feel of the topic before posting one's own messages.

**887.** SRS stands for Shared Registry Server. The central system for all accredited registrars to access, register and control domain names.

**886.** WAIS stands for 'Wide Area Information Servers'—a commercial software package that allows the indexing of huge quantities of information, then makes those indices searchable across the Internet.

**890.**

Developed at the University of Nevada, Veronica is a constantly-updated database of the names of almost every menu item on thousands of gopher servers.



The world average for internet penetration is 11.1 percent.

**885.**

**An anonymiser is a privacy service that allows a user to visit Web sites without allowing anyone to gather information about which sites they visit.**





**884.** Archie is an information system offering an electronic directory service for locating information residing on anonymous FTP sites.

**883.** On the Internet, a 'bastion host' is the only host computer that a company allows to be addressed directly from the public network.

**881.** 'Carnivore' is the Internet surveillance system developed by the US Federal Bureau of Investigation (FBI), who developed it to monitor the electronic transmissions of criminal suspects.

**882.**

**Did you know that the original URL of Yahoo! was <http://akebono.stanford.edu/> ?**

**880.** The Electrohippies Collective is an international group of 'hacktivists' based in Oxfordshire, England.

**879.** UIML (User Interface Markup Language) is a descriptive language that lets you create a Web page that can be sent to any kind of interface device.

**878.** In Internet terminology, a demo is a non-interactive multimedia presentation, the computer world's equivalent of a music video.

**877.** Did you know that the name of the famous search engine AltaVista came into existence when some one accidentally read and suggested the word 'Alto' written near the word 'Vista' on an unclean whiteboard as 'AltaVista'?



*Boeing was the first airliner to discover the Y2K problem.*

**876.** Cyber Patrol, Surf Watch, Net Nanny and Big Brother are all access filters used to block access to objectionable Web sites.

**875.** Boeing was the first airline to discover the Y2K problem, way back in 1993.

**874.**

**Did you know that Domain Registration was free until an announcement by the National Science Foundation on 14<sup>th</sup> September, 1995, changed it?**

**873.** The Internet was initially called the 'Galactic network' in memos written by MIT's J C R Licklider in 1962.

**872.** Shokyu Ishiko, a doctorate in agriculture and chief priest of Daioh Temple in Kyoto has created an online virtual temple which will perform memorial services for lost information.

**871.** A 55 kg *laddu* was made for Lord Venkateswara at Tirumala as a Y2K prayer offering.

**870.**

**On an average, each person receives 26.4 e-mails a day.**

**869.** The morning after Internet Explorer 4 was released, certain mischievous Microsoft workers left a 10-by-12-foot letter 'e' and a balloon with the message, "We love you", on Netscape's front lawn.

**868.** If you were a resident of Tonga, a monarchy in the southwest Pacific, you could own domains as cool as 'mail.to' and 'head.to'.

**867.** The American Registry for Internet Numbers (ARIN) began the administration and registration of Internet IP addresses in North and South America in March 1998.

**866.** The testbed for the Internet's new addressing system, IPv6, is called the 6bone.

**865.** The first Internet worm was created by Robert T. Morris, Jr, and attacked more than 6,000 Internet hosts.



*The Internet was initially called Galactic Network.*

**864.** According to *The Economist* magazine, the first truly electronic bank on the Internet, called First Virtual Holdings, was opened by Lee Stein in 1994.

**863.** The French Culture Ministry has banned the word 'e-mail' in all government ministries, documents, publications and Web sites,

**862.**

**The first computer company to register for a domain name was Digital Equipment Corporation.**





because 'e-mail' is an English word. They prefer to use the term 'courriel'.

**861.** The German police sell used patrol cars over the Internet, because earlier auctions fetched low prices and only a few people ever showed up.

**860.** Rob Glaser's company, Progressive Networks, launched the RealAudio system on April 10, 1995.

**859.** 'Browser safe colours' refer to the 216 colours that are rendered the same way in both the PC and Mac operating systems.

**857.** The 'Dilbert Zone' Web site was the first syndicated comic strip site available on the Internet.

**856.** Butler Jeeves of the Internet site *AskJeeves.com* made its debut as a large helium balloon in the Macy's Thanksgiving Day parade in 2000.

**855.** Sun Microsystems sponsors NetDay, an effort to wire American public schools to the Internet, with help from the US government.

**854.** In Beijing, the Internet community has coined the word 'Chortal' as a shortened version of 'Chinese portal'.

**853.** Google got its name from the mathematical figure googol, which denotes the number 'one followed by a hundred zeroes.'

**852.** Telnet is one of the oldest forms of Internet connections. Today, it is used primarily to access online databases.

**858.**

**Though the World Wide Web was born in 1989 at CERN in Switzerland, CERN is mainly involved in research for particle physics.**



*Dilbert Zone was the first comic strip to go online.*

**851.**

**Domain names can really sell at high prices! The most expensive domain name was 'business.com', which was bought by eCompanies for \$7.5 million in 1999.**

**850.** The first ever ISP was CompuServe. It still exists, under AOL Time Warner.

**849.** In 1969, ARPA (Advanced Research Projects Agency) went online, connecting four major US universities. The idea was to have a back up in case a military attack destroyed conventional communications systems.

**847.** Ray Tomlinson, a scientist from Cambridge, introduced electronic mail in 1972. He used the @ to distinguish between the sender's name and network name in the e-mail address.

**848.**

'Content, commerce and community' are referred to as 'the three big Cs', the most important aspects of the Internet.

**846.** Transmission Control Protocol/Internet Protocol (TCP/IP) was designed in 1973.

**845.** The Apple iTunes music store was introduced in the spring of 2003. It allows people to download songs for an affordable 99 cents each.

**844.** Satyam Online became the first private ISP in December 1998 to offer Internet connections in India.



*Satyam Online was the first private ISP to offer Internet connections in India*

**843.** 56 percent of US companies sold their products online by 2000, as compared to 24 percent in 1998.

**842.** More than a million new jobs were created by the US high-tech industry since 1993.

**841.** The number of UK Internet users increases by an estimated 75 percent each year.

**840.** The Internet is the third-most used advertising medium in the world, closely catching up with traditional local

**839.**

**Ian Cobain, a journalist from the Times, London, used Internet search engines to track down four people on Interpol's 'most wanted' list—in just 82 minutes!**



newspapers and Yellow Pages.

**838.** It took 13 years for television to reach 50 million users—it took the Internet less than 4 years.

**837.** As of now, there are over 260 million people with Internet access worldwide.

**836.** Preliminary employment data show that the US high-tech industry employed 4.8 million workers in 1998, making it the nation's largest industry.

**834.** 1 out of 6 people used the Internet in North America and Europe, as per a 1999 survey.

**833.** Internet Advertising in the US generated \$1.92 billion in 1998, double the 1997 figure.

**832.** The average computer user blinks 7 times a minute.

**831.** In 1946, the Merriam Webster Dictionary defined computer as 'a person who tabulates numbers; accountant; actuary; bookkeeper.'

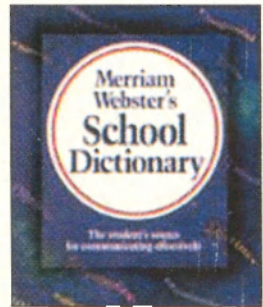
**830.** An estimated 2.5 billion hours were wasted online last year as people waited for pages to download, according to a study sponsored by Nortel Networks.

**829.** AOL says spam is the number one complaint of its customers, and that it has to block over one billion unsolicited e-mails every day.

**828.** In 2002, the average Internet user received 3.7 spam messages per day. The total rose to 6.2 spam messages per day in 2002. By

**835.**

Did you know that Digital Equipment Corporation was the first computer company to register a domain name?



"A computer is a ... actuary ... bookkeeper"

**827.** In 1965, high-tech's share of business spending in the US was 3 percent. In 1996, it shot up to 45 per cent.

2007, it is expected to reach 830 messages per day.

**826.** A technology industry research firm called Basex says that unsolicited e-mail cost nearly \$20 billion in lost time and expenses worldwide in 2000.

**825.** In 2003, an Atlanta-based ISP called Earthlink won a lawsuit worth \$16.4 million (US) against a spammer in Buffalo NY, and a \$25 million (US) lawsuit against a spammer in Tennessee.

**824.** In Canada, five billion junk e-mails were sent last year. The cost to the economy reaches \$1 billion annually.

**823.** Brightmail, the leading supplier of anti-spam software, reported that in 2003, spam actually exceeded legitimate e-mail, growing from 40 per cent to more than 56 percent of all internet e-mail...in just one year!

**822.**

**In 1993, there were 26,000 domain names in use. In 1999, there were 5 million web sites.**

**821.** After English, Japanese and then German are the most used languages on the Net.

**820.** It is estimated that by 2005, 60 per cent of all Internet users will speak a language other than English.

**819.** An estimated 2.2 percent of the world's population is currently online.

**818.** The latest stats indicate that China appears to be the fastest growing Internet market in the world.

**817.** Recent studies indicate that more than two out of every five people in North America are now Internet users.

**816.** About 60 percent of North American Internet users have used the Web to shop.

**815.**

**Spam drains productivity from businesses, as employees spend from 15 minutes to an hour every day pressing the delete key.**





**814.** Use of home PCs to surf the Net has dropped by almost 40 percent in the last four years as Internet use has penetrated the workplace.

**813.** On a per capita basis, the US only ranks 5<sup>th</sup> in terms of Internet users. Iceland, Norway, Sweden & Finland have a higher per-capita use.

**811.** Where do most news addicts go to on the Web? The top three destinations are msnbc.com, weather.com and cnn.com.

**810.** After the April 2001 collision of a US navy spy plane and a Chinese fighter jet, Chinese hackers launched Denial of Service (DoS) attacks against American web sites.

**812.**

Which companies spend the most on Web advertising? Microsoft tops the list, with Amazon.com taking second spot and TRUSTe the third.

**809.** Subhash Ghai's film *Taal* was the first Bollywood movie to be widely promoted on the Net.

**808.** Ziggy, a cat, has become the first animal in the world to own shares of a dotcom, called intersaver.co.uk.

**807.** Jeff Bezos, when starting his business could not name his Web site Cadabra (as in 'abra cadabra') due to copyright issues. He later named it *amazon.com*.



*Taal* was the first Bollywood flick to be promoted online.

**806.** China had 150 billion junk e-mails last year, making it the second-biggest target of spam.

**805.**

The top e-tail sites on the Web are Amazon.com, Ticketmaster.com, and Buy.com.

**804.** There are between 1.5 million to 2 million closed circuit television cameras in Britain, making Britons the most watched people on earth.

**803.** The Microsoft Terraserver is a free Web site that has more than 999 gigabytes of black-and-white photos featuring specific parts of the Earth's surface taken by Russian and American airplanes and satellites during the Cold War.

**802.** In the 1980s—well before the Internet became something the general public wanted to use—scores of free 'bulletin board services' (BBSs) sprang up around the United States. The first free public BBS was 'Cleveland Free-Net', and they shut down On 1<sup>st</sup> October 1999, because the software that ran the service couldn't recognise the year 2000.

**801.**

**According to a study by Nielsen Media Research, households with Internet access watch 13 percent less TV than households that are not online.**

**800.** The three legitimate names for copycat viruses inspired by the infamous Melissa virus were Ping, Madcow and Syndicate.

**799.** Viral marketing is when your app 'infects' other users via usage. The recipient finds out about the service by receiving a card from his or her friend.

**798.** Just like astronomers would love to find the elusive 'Dark Matter', Yahoo! is now working on its Content Acquisition Program to map and explore the 'Deep Web', the part of the Web that search engines typically do not crawl. As a result of this, much, much more of the Web will be accessible via Yahoo!'s search engines.



*Saddam: Most searched.*

**797.**

**According to Yahoo!, cloning, Saddam Hussein and Iraq were the most searched-for news stories in 2003.**





**796.** You get spam because your e-mail address makes its way to spammers through various channels. For example, if you sign up for a newsletter, the site may sell your e-mail to a spammer. Sites maintain e-mail lists that they send spam to. Prices can be as low as Rs 2,500 for one lakh e-mails.

**795.** Many researchers and surfers consider that the first search engine was Archie, created in 1990 by Alan Emtage, a student at McGill University in Montreal.

**793.** Niue is a small island in the Pacific that makes much of its revenue selling domain names. The country code is .nu, and there was a time in the recent past when one could easily get domain names like rajesh.nu.

**792.** In 1999, PhotoHighway.com introduced the first Internet Photography site to offer software that allows people to load photos directly from a digital camera to a website.

**794.**

In 2003, the top 10 searched-for terms on Yahoo! were Kazaa, Harry Potter, American Idol, Britney Spears, 50 Cent, Eminem, WWE, Paris Hilton, Nascar and Christina Aguilera.

*Yahoo! is now mapping the 'Deep Web'.*

**791.**

**On 5<sup>th</sup> June 2001, Nevada became the first US state to vote to legalise online gambling—which is not surprising, since Las Vegas is in Nevada.**

# timeline

- |      |      |  |
|------|------|--|
| 790. | 1976 | US Presidential candidate Jimmy Carter uses e-mail to plan campaign events. Queen Elizabeth sends her first e-mail. She's the first state leader to use this service.      |
| 789. | 1982 | The word "Internet" is used for the first time, short for "internetwork".  |
| 788. | 1984 | Domain Name System (DNS) is established, with network addresses identified by extensions such as .com, .org and .edu. Novelist William Gibson coins the term "cyberspace". |
| 787. | 1985 | Quantum Computer Services, which later changes its name to America Online, debuts. It offers e-mail, electronic bulletin boards, news, and other information.              |
| 786. | 1988 | A virus called the Internet Worm temporarily shuts down about 10 percent of the world's Internet servers.  |
| 785. | 1990 | The first effort to index the Internet is created by Peter Deutsch at McGill University in Montreal, who devises Archie, an archive of FTP sites.                          |
| 784. | 1993 | Marc Andreessen develops Mosaic at the National Center for Supercomputing Applications (NCSA). It becomes the dominant system for navigating the World Wide Web.           |
| 783. | 1994 | The White House launches its website, <a href="http://www.whitehouse.gov">www.whitehouse.gov</a> .   |
| 782. | 1994 | Initial commerce sites are established and mass marketing campaigns are launched via e-mail, introducing the term 'spamming'.  |

- 781.** **1994** Marc Andreessen and Jim Clark introduce the Navigator browser.
- 780.** **1995** CompuServe, America Online, and Prodigy start providing dial-up Internet access. Sun Microsystems launches Java.
- 779.** **1996** Around 45 million people are using the Internet, with roughly 30 million of those in the US and Canada, 9 million in Europe, and 6 million in Asia Pacific.
- 778.** **1997** On July 8, Internet traffic records are broken as the NASA website broadcasts images taken by Pathfinder on Mars.
- 777.** **1999** "e-commerce" becomes the new buzzword as Internet shopping rapidly spreads.
- 776.** **1999** College student Shawn Fanning invents Napster, a computer application that allows users to swap music over the Internet.
- 775.** **2000** Deviant computer programmers begin spreading viruses with increased frequency. The Internet bubble bursts, as the fountain of investment capital dries up and the Nasdaq plummets.
- 774.** **2001** Napster is dealt a fatal blow when the 9th US Circuit Court of Appeals in San Francisco rules that the company is violating copyright laws."
- 773.** **2002** A staggering 58.5 percent of the US population uses the Internet.
- 772.** **2003** It's estimated that Internet users illegally download about 2.6 billion music files each month.





- 771.** 'Finger' is an Internet tool for locating people on other sites. It gives access to non-personal information.
- 770.** The term 'petabit' is used in discussing possible volumes of data traffic per second in a large network.
- 769.** RDF (Resource Definition Framework) is a set of rules for creating descriptions of information available on the World Wide Web.
- 768.** SOAP (Simple Object Access Protocol) is a protocol for client-server communication that sends and receives information 'on top of' HTTP.
- 767.** Wake-on-LAN (WOL) is a technology that enables a computer motherboard to switch itself on (and off) based on signals arriving at the computer's network card.
- 766.** A hacker with benign intentions is called a 'white hat'.
- 765.** A 'blue bomb' is a technique for causing the Windows operating system of someone you are communicating with to crash.
- 764.** OCSP (Online Certificate Status Protocol) is one of two common schemes for maintaining the security of a server.
- 763.** Certificate Revocation List (CRL) is a method of using a public key infrastructure for maintaining access to servers.





**762.** South Pacific Railroad laid down telegraph wires across tracks to help railway stations keep in touch.

**761.** The high-speed data highways of the Internet are called backbones. Sprint and AT&T own the major backbones in the US.

**760.** Silver is the most conductive material, but copper is widely used in communications because it costs much less and is better in terms of strength and flexibility.

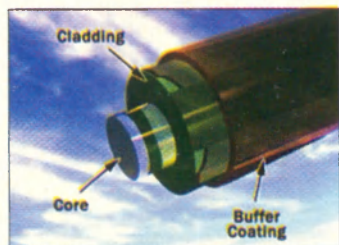
**759.** A typical fibre-optic cable five-thousandths of an inch thick can carry up to 2.5 billion bits of data per second, or 32,000 simultaneous telephone calls.

**758.** The idea of Bluetooth technology was born in 1994. The name Bluetooth is derived from a Danish Viking King, Harald Blåtand—translated as Bluetooth in English—who lived in the latter part of the 10th century. Blåtand united and controlled Denmark and Norway, hence the inspiration for the name, as in 'uniting devices through Bluetooth'.

**757.** Long before the expression 'local area network' (LAN) became part of the world's technical vocabulary, IBM researchers were working on this type of technology that connects printers, work stations and various servers in office buildings, factories and college campuses. IBM devised token-ring technology to control LAN traffic more efficiently and reliably. A token ring controls access of individual computers to the network, or ring. Since its introduction in 1985, IBM's token-ring architecture has become an industry standard for LANs.

**754.**

**Most intercontinental Internet traffic passes through underwater fibre-optic cables. The first such layout was across the Atlantic, in 1988.**



*The construction of a fibre-optic cable*

**756.** Modems use ASCII character encoding.

- 
- 755.** Vannevar Bush, later the vice-president and dean of the Electrical Engineering department, MIT, first proposed the basics of hypertext in 1945. Tim Berners-Lee set down the basics of the World Wide Web, HTML (hypertext markup language), HTTP(HyperText Transfer Protocol) and URLs (Universal Resource Locators) in 1990.
- 
- 754.** Chuq von Rospach of Apple Computer, circa 1983, coined the word 'netiquette'.
- 
- 753.** NANA is the newsgroups news.admin.net-abuse.\*, devoted to fighting network abuse and spam. Each individual newsgroup is often referred to by adding a letter to NANA. For example, NANAU would refer to news.admin.net-abuse.usenet.
- 
- 752.** Programs that are small and un-useful, but demonstrate a point, are called 'Noddy' programs. Noddy programs are often written by people learning a new language or system. The archetypal noddy program is the "hello world" program. In North America this might be called a 'Mickey Mouse' program.
- 
- 751.** In the mid-1980s, engineers at Apple Computer developed a high-speed method of transferring data to and from the hard drives in Macintosh desktops while simplifying the internal cabling. They called it FireWire.
- 
- 750.** About 60 million devices shipped with FireWire ports in 2002, according to research firm In-Stat/MDR.
- 
- 749.** In 1994, Ericsson Mobile Communications initiated a study to investigate the feasibility of a low-power low-cost radio interface between mobile phones and their accessories. In 1998, a special-interest group was formed, codenamed "Bluetooth" by five companies: Ericsson, IBM, Intel, Nokia, and Toshiba.

**748.**

**'Toothing' is random sending of sexually charged, flirtatious messages that users of Bluetooth enabled mobile devices broadcast to other Bluetooth enabled devices in the area.**



## COMPUTER VIRUS TIMELINE

- 747.** **1949** Theories for self-replicating programs are first developed.
- 746.** **1981** Apple Viruses 1, 2, and 3 are some of the first viruses "in the wild," or in the public domain. Found on the Apple II operating system, the viruses spread across Texas through pirated games.
- 745.** **1983** Fred Cohen defines a computer virus as "a program that can affect other computer programs by modifying them in such a way as to include a (possibly evolved) copy of itself."
- 744.** **1986** Two daredevil Pakistani programmers, Basit and Amjad, replace the executable code in the boot sector of a floppy disk with their own code designed to infect each 360KB floppy accessed on any drive.
- 743.** **1987** The Lehigh virus, one of the first file viruses, infects command.com files.
- 742.** **1988** One of the most common viruses, Jerusalem, is unleashed. The virus affects both .exe and .com files. MacMag and the Scores virus cause the first major Macintosh outbreaks.



- 741.** **1990** Symantec launches Norton AntiVirus, one of the first anti-virus programs developed by a major company.
- 740.** **1991** Tequila is the first widespread polymorphic virus found in the wild. Polymorphic viruses were specially designed to make detection difficult for virus scanners.
- 739.** **1992** As many as 1,300 viruses are in existence.
- 738.** **1990** The Dark Avenger Mutation Engine (DAME) is created. It's a toolkit that turns ordinary viruses into polymorphic viruses. The Virus Creation Laboratory (VCL) is also made available.
- 737.** **1994** The Good Times e-mail hoax tears through the Internet community. The hoax warns of a malicious virus that will erase an entire hard drive.
- 736.** **1995** Word Concept becomes one of the most prevalent viruses in the mid-1990s. It is spread through Microsoft Word documents.
- 735.** **1996** The Baza, Laroux and Staog viruses are the first to infect Windows95 files, Excel, and Linux respectively.
- 734.** **1998** StrangeBrew was the first virus to infect Java files. The Chernobyl virus spreads quickly via .exe files.
- 733.** **1999** The Melissa virus executes a macro in a document attached to an e-mail, which, in turn, forwards the document to 50 people in the user's Outlook address book. Bubble Boy is the first worm that does not depend on the recipient opening an attachment for infection to set in. As soon as the user opens the e-mail, Bubble Boy strikes.
- 732.** **2000** The Love Bug, also known as the ILOVEYOU virus, sends itself out via Outlook. It also sends usernames and passwords to the virus' author.
- 731.** **2000** W97M.Resume.A, a new variation of the Melissa virus, is determined to be in the wild. The 'resume' virus uses a Word macro to infect Outlook and spread itself.





- |      |      |  |
|------|------|--|
| 730. | 2000 | China tightens regulations against viruses, mandating a fine and imprisonment for people who spread them.  |
| 729. | 2000 | The 'Stages' virus, disguised as a joke e-mail about the stages of life, spreads across the Internet.  |
| 728. | 2000 | 'Stages' is hidden in an attachment with a false ".txt" extension, luring recipients into opening it.  |
| 727. | 2001 | Shortly after the September 11 <sup>th</sup> attacks, the Nimda virus infects computers all over the world. The virus is one of the most sophisticated to date.        |
| 726. | 2001 | The 'Anna Kournikova' virus worries analysts who believed it was written with a 'tool kit' that would allow programmers to create viruses.                             |
| 725. | 2002 | Author of the Melissa virus, David L. Smith, is sentenced to 20 months in federal prison in New Jersey.  |
| 724. | 2003 | In January, the relatively benign 'Slammer' worm, also known as Sapphire, becomes the fastest spreading worm till date, infecting 75,000 computers in just 10 minutes. |
| 723. | 2003 | The Sobig worm becomes the one of the first to join the spam community.  |
| 722. | 2004 | The MyDoom or Novarg worm spreads through e-mails faster than any previous virus or worm. The target is 'denial of service attack' on the SCO Group.                   |

## COMMUNICATIONS TIMELINE



- |      |         |   |
|------|---------|---|
| 721. | 3500 BC | 3500 BC to 2900 BC: The Phoenicians develop an alphabet. The Sumerians develop cuneiform writing—pictographs of accounts written on clay tablets. The Egyptians develop hieroglyphic writing. |
| 720. | 1775 BC | The Greeks use a phonetic alphabet written from left to right.  |
| 719. | 1400 BC | Oldest record of writing in China, on bones.  |
| 718. | 1270 BC | The first encyclopedia is written in Syria.   |
| 717. | 900 BC  | The very first postal service, for government use, in China.  |
| 716. | 776 BC  | First recorded use of homing pigeons used to send a message the winners of the Olympic Games to Athenians.  |
| 715. | 530 BC  | The Greeks start the very first library.  |
| 714. | 500 BC  | to 170 BC: Papyrus rolls and early parchments made of dried reeds—first portable and light writing surfaces.  |
| 713. | 200 BC  | to 100 BC: Human messengers on foot or horseback common in Egypt and China with messenger relay stations built. Sometimes fire messages used instead of humans.                               |
| 712. | 14 AD   | The Romans establish postal services.   |
| 711. | 37      | Heliographs—Roman Emperor Tiberius uses mirrors to send messages.   |
| 710. | 105     | Tsai Lun of China invents paper as we know it. Many say that this, along with the invention of the wheel, were what changed the world most.   |
| 709. | 305     | First wooden printing press invented in China, which used symbols carved on a wooden block.   |
| 708. | 1049    | First movable type, clay, invented in China by Pi Sheng.  |



- 707.** 1450 The first newspapers appear in Europe.
- 706.** 1455 Johannes Gutenberg invents a printing press with metal movable type. His first printed book? The Holy Bible.
- 705.** 1560 Camera Obscura invented—primitive image making makes its entry.
- 704.** 1650 First daily newspaper is published in Leipzig, Germany. It was called the *Einkommende Zeitung*.
- 703.** 1714 Englishman Henry Mill receives the first patent for a type-writer.
- 702.** 1793 Claude Chappe invents the first long-distance telegraph line.
- 701.** 1814 Joseph Nicephore Niépce achieves the first photographic image.
- 700.** 1821 Charles Wheatstone reproduces sound in a primitive sound box the first microphone.
- 699.** 1831 Joseph Henry invents the first electric telegraph.
- 698.** 1835 Samuel Morse invents the Morse code.
- 697.** 1843 Samuel Morse invents the first long distance electric telegraph line. Alexander Bain patents the first fax machine.
- 696.** 1861 The US starts the Pony Express for mail delivery. Coleman Sellers invents the Kinematoscope—a machine that flashed a series of still photographs onto a screen.
- 695.** 1876 Thomas Edison patents the mimeograph, an office copying machine. Alexander Graham Bell patents the electric telephone.
- 694.** 1876 Melvyl Dewey invents the Dewey Decimal System for ordering library books.

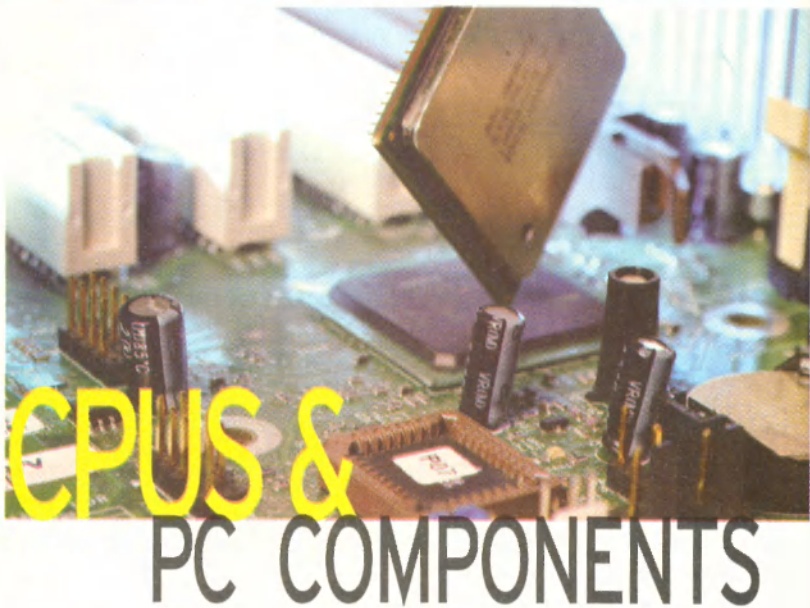
- 693.
1877
Thomas Edison patents the phonograph with a wax cylinder as recording medium.
- 692.
1879
Eadweard Muybridge invents high-speed photography creating the first pictures that captured motion.
- 691.
1887
Emile Berliner invents the gramophone. This is debatable, though—some say it was Edison, some say it was Charles Cros.
- 690.
1888
George Eastman patents the Kodak roll film camera.
- 689.
1889
Almon Strowger patents the direct dial telephone or automatic telephone exchange.
- 688.
1894
Guglielmo Marconi improves wireless telegraphy.
- 687.
1898
First telephone answering machines come up.
- 686.
1904
First regular comic books.
- 685.
1906
Lee DeForest invents the electronic amplifying tube or triode. It allowed electronic signals to be amplified, improving telephones and radios.
- 684.
1910
Thomas Edison demonstrates the first talking motion picture.
- 683.
1914
First cross-continental telephone call made.
- 682.
1916
First radios with tuners giving access to different stations.
- 681.
1923
Iconoscope, the first TV camera, is invented by Vladimir Kosma Zworykin.
- 680.
1925
John Logie Baird transmits the first experimental television signal.





- 679.** 1926 Warner Brothers Studios invents a way to record sound separately from the film on large disks, and synchronised sound and motion picture tracks upon playback.
- 678.** 1927 NBC starts two radio networks. CBS is founded. First television broadcasts in England. Warner Brothers releases *The Jazz Singer*, the first successful talking motion picture.
- 677.** 1930 Radio popularity spreads with the Golden Age of radio. First TV broadcasts in the US. Movietone system of recording film sound on an audio track right on the film invented.
- 676.** 1939 Scheduled TV broadcasts begin.
- 675.** 1944 Computers such as Harvard's Mark I put into public service.
- 674.** 1948 The Long Playing record is invented, playing at 33 rpm. The transistor is invented.
- 673.** 1949 Network TV starts in the US. The 45-rpm-record is invented.





# CPUS & PC COMPONENTS

- 672.** Intel is short for Integrated Electronics.
- 671.** ULSI stands for Ultra Large Scale Integration, used in microchips with over one million transistors.
- 670.** A fat Mac application is an application program for the Macintosh computer that works on a Mac running on a Motorola 68000 series chip.
- 669.** FC-PGA (Flip Chip-Pin Grid Array) is a microchip design developed by Intel for its faster microprocessors.
- 668.** Intel co-founder Gordon Moore said in 1965, "The amount of information storable in one square inch of silicon will double every 18 months." This came to be known as Moore's Law.
- 667.** In 1963, Douglas Engelbart invented the mouse as a pointing device for computers. It was patented as the X-Y indicator in 1968.
- 666.** VisiCalc, invented in 1979, was the first spreadsheet program available for computers.



**665.** IBM was incorporated in 1911 under the name Computing-Tabulating-Recording Company.

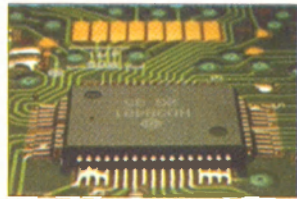
**663.** Intel's Flying Pentium Ads and the 'Intel Inside' logo were made on an Apple Macintosh.

**662.** In 1938, Claude Shannon first showed that electronic switching circuits could perform logical operations.

**661.** The computing for the Pioneer 10 spacecraft was done by the Intel 4004 microprocessor.

**660.** The CVAX chip used a DEC Micro VAX II microprocessor. A message was inscribed on the chip, in Russian, which said, "VAX, when you care enough to steal the very best"!

**659.** A modern quarter-inch square silicon chip has the power of the 1949 ENIAC computer, which occupied a full city block.



*This chip is more powerful than a room-sized '40s computer*

**658.** Andrew Grove, former Chairman, Intel Corporation, was flooded with over 120 names to choose from for its latest processor. He finally settled on 'Pentium' after spending \$40,000.

**657.** Ted Hoff, Stan Mazor and Federico Faggin designed the Pentium Chip that was launched on March 22, 1993.

**656.** In July 1968, Robert Noyce and Gordon Moore, started N M Electronics. Soon after, they started calling it Intel.

**655.** Intel's code name for its effort to make the one GHz micro processor was Project Foster.

**664.**

1984 was the year of the GUI. Apple introduced the Macintosh, the first PC with a graphical user interface.

**653**

**If you happened to open up the case of the original Macintosh, you would find 47 signatures, one for each member of Apple's Macintosh division as of 1982.**

**654.** Intel's project on the first processor to use the new 64-bit architecture was under the code name Merced.

**652.** Intel created the Timna processor in 2001, a low-end product, but it was given a hasty burial after problems cropped up with the memory translator hub (MTH).

**650.** The first microprocessor to make it into a home computer was the Intel 8080, a complete 8-bit computer on one chip, introduced in 1974.

**649.** The first microprocessor to make a real splash in the market was the Intel 8088, introduced in 1979 and incorporated into the IBM PC.

**648.** The Pentium 4 runs code about 5,000 times faster than the 8088.

**647.** Wintel computers, PCs with an Intel processor and running a Windows operating system, account for 80 percent of PCs in use today.

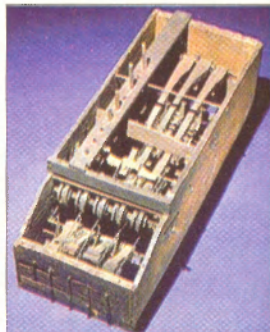
**646.** Windows Me started a new technology called System File Protection that prevented applications from overwriting key system files.

**645.** Hewlett Packard's first order, for eight oscillators, came from Walt Disney, while he was making the film *Fantasia* in 1940.

**644.** Hewlett Packard introduced the mopier in 1996, a printer that offers a low-cost, high-quality alternative to photocopying.

**651.**

The Comptometer was invented by Dorr Felt. It was the first entirely key-operated calculating machine—a practical adding and listing machine.



*The comptometer, an early calculating machine*

**642.**

**In 1984, Apple Computer introduced the Apple IIc model laptop, which had an internal 5.25-inch floppy drive.**





**643.** The Biztalk Server is a Microsoft product. It unites enterprise application integration (EAI) and business-to-business (B2B) integration in a single product.

**641.** 'Stinger' was the codename Microsoft used for its smart phone platform that was unveiled in 2001.

**640.** A peer-to-peer Network is a type of network in which each workstation has equivalent capabilities and responsibilities, without there being, for example, a central server.

**639.** PROM (Programmable Read-Only Memory) is memory programmed at the time of manufacturing.

**638.** The first ever ISP was CompuServe, established in 1969. It still exists, under AOL Time Warner.

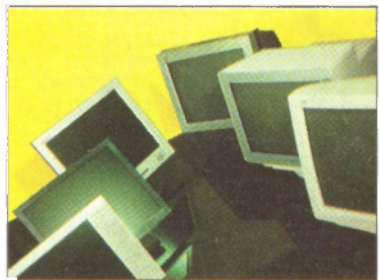
**636.** The TWAIN Working Group is a not-for-profit organisation. It represents the imaging industry. TWAIN is short for 'technology without an interesting name', and you'll most frequently see TWAIN drivers with scanners.

**635.** In a computer monitor, the voltage gets boosted to 30,000 volts in parts of the circuitry.

**634.** When it opened way back in 1993, The Trojan Room became the world's first Internet site to use a webcam. It took little time for it to develop a cult following.

**637.**

**James Gosling created Java at Sun Microsystems. He came up with the name 'Java' while debating over it at a coffee shop.**



*In a monitor, the voltage gets boosted to 30 KVolts in some parts*

**631.**

**Did you know that the first computer to perform a trillion operations per second was called Gravity Pipeline?**

**633.** 'Biometrics' is the term for the technology that performs identification by fingerprint, retinal, and voice scans.

**632.** The high-speed data highways of the Internet are called backbones.

**630.** The Commodore 64 was the best-selling PC of its time. It had a large memory capacity for the time—64 KB; low-cost floppy disks; and colour graphics.

**629.** The ENIAC was developed way back in 1946 at the University of Pennsylvania. It calculated at the then-phenomenal rate of 5,000 additions per second.

**627.** In 1982, Andrew Fluegelman created the first ever shareware, known as PC-Talk. It was a communications software.

**626.** The popular CD recording software Nero Burning ROM is named after the Roman Emperor Nero Claudius Caesar Augustus Germanicus, who is said to have been playing music while Rome was burning.



*Today, CD burning is child's play*

**625.** Did you know that the University of Waterloo 'stole' Version 7 of Unix before it was released?

**624.** Alan Kay of the Xerox Palo Alto Research Center envisioned the first notebook-sized, portable computer called the Dyna book in the 1970s. The first laptop computer was designed in 1979 by William Moggridge of Grid Systems Corp. It had 340 kilobytes of bubble memory.

**628.**

The CD-ROM made its debut in 1984 through the combined efforts of Phillips and Sony.

**621.**

In 1994, Intel shipped about 2 million flawed Pentium chips. Intel soon adopted a no-questions-asked return policy for computers with the flawed chips.

**623.** In early 2002, Microsoft announced that the BMW 7-series luxury sedans were now running the Windows CE embedded operating system. Passengers could access and control in-car navigation, telephone and entertainment systems.

**622.** In CD-ROM drives, 1X is equal to 150 KBps. In DVDs, 1X equals 1.38 MBps—a little over nine times faster than CDs.

**620.** In old Fortran compilers, if you said  $a=2$ , and then said  $3=a$ , then 3 would 'become' 2, and  $3+3$  would add up to 4!

**619.** Did you know that Windows XP was code-named Whistler?

**617.** The first digital computer weighed 30 tons.

**616.** A 'dongle' is a security or copy protection device consisting of hardware, software or both working in combination, and/or any hardware device that attaches to a PC's I/O port to add hardware capabilities.

**615.** In 1980, Microsoft introduced the Z-80 SoftCard, a circuit board, marking Microsoft's first foray into the hardware world. The card was designed for the Apple II computer.

**614.** Handheld Device Markup Language (HDML) is a simple language used to define hyper text-like content and applications for hand held devices.

**613.** Many medical schools in the US provide financial aid to students to purchase handhelds as they offer

**618.**  
 Within just six years of the release of the 80286 processor, a whopping 15 million 286-based personal computers were installed globally.



*PDA's have come a long way since devices like the Newton*

**611.** The Celeron processor was launched in 1999, as part of Intel's strategy to develop processors for specific market segments.

services like patient trackers, drug databases, etc.

609.

**The Pentium III processor was launched in 1999. It enhanced performance of advanced applications.**

**612.** One of the first PDAs to be commercially available was Apple's Newton Message Pad. But the Newton was too big, expensive and complicated, and its handwriting recognition program was poor. It flopped, even though it was ahead of its time.

**610.** The Palm OS fits in less than 100K, which is less than one percent the size of Windows 98 or the Mac OS.

**608.** A PDA doesn't have a hard drive. It stores basic programs on a ROM chip—they remain intact even when the machine shuts down. Data and programs added later are stored in RAM.

**607.** Two popular handwriting recognition software for PDAs are Graffiti and Jot. Graffiti requires that each letter be recorded in one uninterrupted motion, and has a specialised alphabet.

**606.** 'MIDI' stands for Musical Instrument Digital Interface. It's a standard for sending digitally encoded music information between electronic devices, such as between synthesizers and computers.



*A cabinet should always be properly ventilated*

**605.** CPUs typically operate at 40 to 50 degrees Celsius. The 'danger zone' is typically when the temperature goes above 60 degrees.

### **Seagate Tech Factoid:**

**What does 50 GB of storage really mean? You can stack 3 piles of single spaced type written pages taller than the Eiffel tower and the data to support this information is about 50 gigabytes.**





**604.** The difference between CDRs and music CDs (or other commercially produced CDs) are that the former are burnt, while the latter are pressed. 'Pressing' is a manufacturing technique very different from burning.

**603.** In 1953, Remington-Rand developed the first high-speed printer for use on the Univac computer.

**602.** The nVidia GeForce 6800 Ultra has 222 million transistors, which is the record for the maximum number of transistors on a chip.

**600.**

'Colossus' was the first totally electronic computing device. It used only vacuum tubes, and had no relays.

**601.** The original laser printer called EARS was developed at the Xerox Palo Alto Research Center beginning in 1969 and completed in November 1971. According to Xerox, "The Xerox 9700 Electronic Printing System, the first xerographic laser printer product, was released in 1977."

**599.** According to IBM, "the very first IBM 3800 was installed in the central accounting office at F. W. Woolworth's North American data center in Milwaukee, Wisconsin in 1976." The IBM 3800 Printing System was the industry's first high-speed, laser printer that operated at speeds of more than 100 impressions per minute.



*French keyboards are 'AZERTY' instead of 'QWERTY'*

**598.** The inkjet printer was invented in 1976 but it took two decades for it to become a common household item. The first Hewlett-Packard DeskJet printer for household use cost \$1000.

**597.** Did you know that the IBM PC once sold as 'Model 5150'?

**596.**

**In France, most keyboards are 'AZERTY' instead of the regular QWERTY.**

# timeline

## INTEL PROCESSOR TIMELINE

- |      |      |   |
|------|------|---|
| 595. | 1971 | The 4004 micro processor. This was Intel's first ever microprocessor.   |
| 594. | 1972 | The 8008 microprocessor. In 1974, Radio Electronics referred to a device called the Mark-8 that used this processor. Interestingly, the Mark-8 was hailed as one of the first computers for the home.                 |
| 593. | 1974 | The 8080 microprocessor became the brains of the first PC—the Altair, named after a destination of the Starship Enterprise from the popular Star Trek series. Users could afford a kit for the Altair for just \$395. |
| 592. | 1978 | The 8086 and 8088 microprocessors became the brains of IBM's new superhit product the IBM PC. Its success skyrocketed Intel into Fortune 500.   |
| 591. | 1982 | The 80286 microprocessor. Within just six years of its release, a whopping 15 million 286-based personal computers were installed globally.   |
| 590. | 1985 | The 80386 microprocessor. This processor featured a staggering 275,000 transistors.   |
| 589. | 1989 | The 486 DX microprocessor. With this, the user graduated from command-line to point-and-click computing.  |
| 588. | 1993 | The Pentium processor. This processor allowed computers to process real-world data, such as sound, hand-written and photo images.   |
| 587. | 1995 | The Pentium Pro processor. It was designed specifically to fuel 32-bit server and workstation applications. The processor eventually propelled speedy computer-aided design.  |



- 586.** 1997 The Pentium II Processor. This chip enabled PC users to capture, edit and share digital photos via the Internet.
- 585.** 1998 The Pentium II Xeon Processor. This processor features innovations specially designed for workstations thriving on business applications.
- 584.** 1999 The Pentium III Xeon processor. The processor enabled the speeding up of e-commerce applications.
- 583.** 2000 The Pentium 4 processor. While the 4004 chip ran at 108 kilohertz, this processor clocked a phenomenal 1.5 gigahertz. Users could now create professional-quality movies and render 3D graphics in realtime.
- 582.** 2001 The Xeon processor. This processor offers users a choice of operating systems, along with high performance, all at affordable prices.
- 581.** 2001 The Itanium processor. It delivered world-class performance, apart from enabling e-commerce security transactions.
- 580.** 2002 The Itanium 2 processor. It promised outstanding performance, supporting business applications.
- 579.** 2003 The Intel Centrino Mobile technology launched. The technology offers new capabilities specifically for the mobile world, such as increased battery life.
- 578.** 2003 Intel releases the Pentium 4 Processor Extreme Edition that supports HyperThreading technology. The processor has 2 MB of L3 cache, and is designed for gamers and the like.
- 577.** 2004 The Centrino M (Mobile) Processor debuts. It is built on Intel's 90 nm fabrication technology. It features a 2MB L2 cache, and a 400 MHz power-optimized system bus.





- 576.** Prior to newer forms of DRAM, FPM DRAM (Fast Page Mode DRAM) was the most common kind of dynamic RAM in personal computers.
- 575.** The production of a 32 MB DRAM chip that weighs two grams requires 32 Kg of water, 1.6 Kg of fossil fuel, 700 gm of elemental gases and 72 gm of hazardous chemicals.
- 574.** Robert Heath Dennard, of the IBM T J Watson Research Center, was the inventor of RAM.
- 573.** In 1970, the newly formed Intel publicly released the 1103, the first DRAM chip. By 1972 it was the best selling semiconductor memory chip in the world.
- 572.** In 1970, Fairchild Corporation invented the first 256-K Static Random Access Memory (SRAM) chip.
- 571.** Static Random Access Memory (SRAM) is faster and better than Dynamic Random Access Memory (DRAM).
- 570.** In the 1950s, Jacob Rabinow invented the first magnetic computer memory to use a disk instead of a tape for data storage.
- 569.** Reynold Johnson, who headed the IBM team that was to develop the first RAM, was a B.S. in Education Administration.





**568.** In late 1955, Reynold Johnson presented the first-ever working hard drive to IBM management, termed the RAMAC.

**567.** Super Audio CD players, created by Sony and Philips Electronics, can accommodate more than four times the information of the current CD format.

## Magnetic Storage

**566.** On April 22nd 2004, scientists at Stanford announced the discovery of the upper speed limit at which data can be written to a hard drive. This limit is much higher than what is achieved by current drives.

**564.** The first hard drives commercially available were about 5 to 10 MB, and sold for \$100 per megabyte. At those prices, a 40 GB hard disk would cost \$4,000,000, or Rs 18 crore, in today's prices.

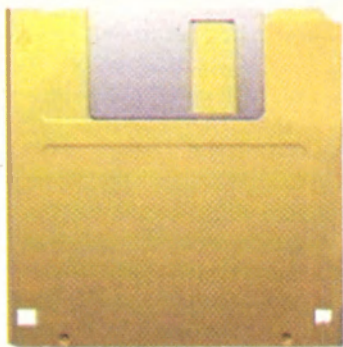
**563.** Magnetoresistive (MR) head technology is used in disk drives to allow higher storage densities than the older inductive-head technology.

**562.** Just a Bunch Of Disks (JBOD) is a term for one or more disk drives that form a single volume. However, the information on these disks is not striped in any way or protected.

**561.** The first hard drive available for the Apple II had a capacity of 5 B.

**565.**

Contrary to what most people believe, a hard disk head does not touch the platter surface. It floats a few micrometres above the platter.



*Sony introduced the 3-1/2 inch floppy disk in 1981.*

**560.**

**Seagate introduced the first hard disk for PCs in 1979. It held 5 MB of data.**

**559.** Sony introduced the 3 1/2-inch floppy in 1981.

**558.** CD-ROM XA was developed jointly by Sony, Philips, and Microsoft, and its specifications were published in an extension to the Yellow Book.

**557.** A hard disk is very vulnerable to vibrations: a minor bump can make the head crash into the disk's surface. The damage usually cannot be repaired, causing data loss and hard disk damage.

**556.**

**GDDR3 is a new standard for RAM in graphics, aimed at increasing speed and reducing power consumption.**

**555.** NRAM is a new kind of RAM being developed by Nantero Corp. in Massachusetts. It will use nanotubes to store 1s and 0s. It will be faster and denser than DRAM, and will be non-volatile.

**554.** MRAM—magnetic RAM—will probably be out this decade, and will replace DDR and flash. It promises faster data access, lower power consumption, and greater data storage density.

**553.** Regular RAM is electricity-based, and that's why it's volatile. In contrast, memory like flash is magnetism-based, which is why no power supply is required to keep data intact.

**552.** The difference in CD and DVD technology lies mostly in the laser. DVDs pack the data elements closer together on the disk, so a much more precise laser is required to read and write data off DVDs.

**551.** It is possible to run a P-III processor without a heatsink, because Intel bundles along protection devices that clocks down the CPU to get it back to a stable temperature.

**550.**

**An AMD 1400 chip running without a heatsink gets as hot as 370 degrees Celsius.**



# Operating Systems

- 549.** When Windows 3.1 was launched, 3 million copies were sold in the first two months.
- 
- 548.** Windows 95 can officially run on a 386DX at 20 Megahertz, with just 4 MB of RAM.
- 
- 547.** The Win95/98 logos were created with Freehand on a Macintosh.
- 
- 546.** At the turn of the millennium, Bill Gates went head to head with the United States Department of Justice over the company's bundling of software. At the trial, Gates claimed that Internet Explorer could not be unbundled from the rest of Windows. But an expert witness for the prosecution went to work in the courtroom and unbundled Explorer in just 10 minutes!
- 
- 545.** Did you know that the 'Save' icon—the floppy—in Microsoft Office applications is wrongly depicted? The small rectangle is on the right instead of on the left.
- 
- 544.** Though the highest possible encryption in Windows 2000 was 128-bit, Microsoft only sent the 40-bit version to India, because India was under US sanctions after Pokhran.
- 
- 543.** At Microsoft, 'Gone Gold' is when a gold computer disk is created,

indicating that a particular software product coding is frozen and production would now begin.

**542.** At one time, MS-DOS was referred to as 'Domestos', after a brand of local toilet cleaner, by people against this operating system.

**541.** David Bradley wrote the code for the [Ctrl] + [Alt] + [Delete] key sequence.

**540.** In 1994, Microsoft said that Adam Baratz—a 9 year old—was the youngest beta tester for Windows 95.

**539.** In the movie *True Lies*, the businessman who finances the terrorists runs the Arabic edition of Windows 3.1.

**538.** The book *The Rules of the Net* calls UNIX 'the Swiss army knife of the Net'.

**537.** In 1964, OS/2 was developed jointly by Microsoft and IBM. It is considered by many to be superior to Windows, and it runs on PC-compatible machines.

**536.** IBM Research labs is working on building a high-performance operating system targeted at the next generation of servers under the code name K42.

**535.** Gene Amdahl programmed the first operating system, for the IBM 704.

**534.** The Japanese version of MS Office has a character you can't find in any other version. The 'Office Lady' is a virtual assistant that bows, serves tea.



*This logo was created on a Macintosh!*

**533.**

**Alan Kay, Adele Goldberg, and David Robson, all of PARC, developed SmallTalk-72, the first truly object-oriented language and OS.**





- 532.** "Wyvern" was the code name for the version of Windows CE that supports colour screens for the Palm-sized PC format. A wyvern is a two-legged flying dragon with a poisonous spiked tail.
- 531.** 'WinPad' was Microsoft's failed handheld PC operating system, which it developed and killed before coming up with Windows CE. Microsoft scrapped the WinPad project reportedly because they couldn't figure out how to squeeze a variant of Windows into an affordable handheld size.
- 530.** MS-DOS was a rough imitation of CP/M, one of the first portable operating systems. 'Portable' means that the OS could run on different hardware.



# timeline

- 529.** 1957 Bell Labs found they needed an operating system for their computer centre which at the time was running various batch jobs. The BESYS operating system was created to deal with these needs.
- 528.** 1965 Bell Labs was adopting third generation computer equipment, and decided to join forces with General Electric and MIT to create Multics (Multiplexed Information and Computing Service).
- 527.** 1969 AT&T made a decision to withdraw Multics and go with GECOS. When Multics was withdrawn, Ken Thompson and Dennis Ritchie needed to rewrite an operating system in order to play space travel on another, smaller machine. The result was a system which a punning colleague called UNICS (UNiplexed Information and Computing Service)—an 'emasculated Multics'.
- 526.** 1971 The first edition of UNIX was released on the 3rd of December. The second edition was released on the 6th of December, 1972.
- 525.** 1973 UNIX had been installed on 16 sites, all within AT&T/Western Electric. It was publicly unveiled at a conference in October. The third, fourth and fifth editions followed.
- 524.** 1977 1BSD was released; 2BSD was released mid 1978. 3BSD was released late 1979.
- 523.** 1979 SCO was founded by Doug and Larry Michels as a UNIX porting and consulting company.
- 522.** 1983 SCO delivers its first packaged UNIX system, called SCO XENIX System V for Intel 8086 and 8088 processor-based PCs.



- 521.** 1984 Ultrix 1.0 was released.
- 520.** 1985 The GNU manifesto is published in the March 1985 issue of Dr. Dobbs's Journal. The GNU project started a year and a half later.
- 519.** 1987 1987: Sun and AT&T laid the groundwork for business computing in the next decade with an alliance to develop UNIX System V Release 4.
- 518.** 1988 HP-UX 2.0 was released. Version 3.0 followed.
- 517.** 1989 SCO ships SCO UNIX System V/386, the first volume commercial product licensed by AT&T to use the UNIX System trademark.
- 516.** 1990 AIX, short for Advanced Interactive eXecutive, was first entered into the market by IBM in February.
- 515.** 1994 FreeBSD 1.0 was released in December.
- 514.** 1994 Red Hat Linux is introduced.
- 513.** 1994 Caldera Inc. was founded by Ransom Love and Bryan Sparks.
- 512.** 1995 SCO acquired UNIX Systems source technology business from Novell Corporation, which had acquired it from AT&T's UNIX System Laboratories. SCO also acquired the UnixWare 2 OS from Novell.
- 511.** 1997 Caldera shipped OpenLinux Standard 1.1 on May 5, the second offering in Caldera's OpenLinux product line.
- 510.** 1998 IRIX 6.5, the fifth generation of SGI UNIX, was released on the 6th of July.
- 509.** 1998 SCO delivered the UnixWare 7 operating system.
- 508.** 1998 The Sun Solaris 7 operating system was released.
- 507.** 1998 FreeBSD 3.0 was released on the 16th of October.



# Companies/ Personalities

- 506.** Bill Gates' home was designed using a Mac!
- 
- 505.** The most frequently occurring company name or trademark on the World Wide Web is IBM.
- 
- 504.** Apple programmers named a beta version of a novel software application 'Sagan', in honour of the renowned astronomer Carl Sagan. Sagan sued Apple, and won the case.
- 
- 503.** On Bill Clinton's last day in the White House, his departing aides played a curious practical joke on the incumbent president, George W Bush. When his staffers arrived, they were astonished to find that none of the building's computer keyboards had Ws!
- 
- 502.** Bill Gates' computer-geek image was established well before his days at Microsoft. Steve Ballmer, a college buddy who later became the company's president, recalled that Gates never put sheets on his bed, and once left for vacation in the middle of a thunderstorm—with the windows and door wide open.
- 
- 501.** Bill Gates once said, "There are people who don't like capitalism, and people who don't like PCs. But there's no-one who likes the PC, who doesn't like Microsoft."





- 500.** Before joining Apple, John Sculley was CEO of Pepsi.
- 499.** Bill Gates visited Belgium in February 1998, and was hit in the face with a cream pie. You'd expect him to have pressed charges, or to have left the venue immediately. But Gates just remarked that the pie wasn't very tasty.
- 498.** Astronaut David Wolf was the first American to exercise his right to vote from space. He e-mailed his vote for the Houston Mayoral elections in November 1997, while aboard the Russian space station Mir.
- 496.** Fifth grade student Laney Rupp drew his vision of Bill Gate's \$42 million mansion, which was published in Harper's Magazine in February 1999. The only thing he missed out on was the electronic doggy door.

**497.**

**Steve Jobs announced Apple's partnership with Microsoft during the August 1997 MacWorld trade show. The audience booed for 42 seconds!**

- 495.** Microsoft asked Rolling Stones front-man, Mick Jagger, if they could use the Stones' hit 'Start me up' in promotions for Windows 95. Almost jokingly, he asked for a ridiculous \$12 million, thinking they'd turn him down. He was shocked when they agreed almost immediately!

- 494.** Mashayoshi Son founded Softbank at age 23. The company holds large stakes in Yahoo!, Comdex and Kingston Technologies.



*Mick Jagger of the Rolling Stones*

### Seagate Tech Factoid

Disk drive recording head fly height (gap between the head and the disc when the drive is spinning) is less than 1 microinch, while:

**A red blood cell is 300 microinches in diameter.**

**A particle of tobacco smoke is 250 microinches.**

**A particle of smog is 100 microinches.**

**A human hair is 4,000 microinches.**

**493.** The original retail price of the Apple I computer was \$666.66, because Steve Wozniak liked numbers with repeating digits!

**492.** The legendary magazine 'Byte', which ceased publication with its July 1998 issue, began in September 1975.

**490.** Did you know that composer, computer scientist and author Jaron Lanier coined the term 'virtual reality'?

**489.** The term 'cyberspace' was coined by sci-fi author William Gibson, and appeared in his 1984 novel *Neuromancer*.

**488.** The term 'bit' was coined by John Tuckey. The word first appeared in print in relation to computer science sense in 1949.

**487.** The code name for the 12 engineers who designed the first IBM PC was 'The Dirty Dozen'.

**486.** John Brunner is credited with writing the first cyberpunk novel, called *Shockwave Rider*.

**485.** Did you know that the three founders of Compaq all came from Texas Instruments?

**484.** Ted Nelson coined the term Hypertext in 1965, and was also the author of the book *Literary Machines*.

**483.** Sanai Mito, a former Osaka Municipal University working for Sharp in the early 1970s, invented the LCD.

**491.**

Of the many rumours about Microsoft, one was a spoof news release in 1994 that claimed Microsoft was purchasing the Catholic Church.



Byte Magazine ceased publication with its July 1998 issue

**482.**

A widely-circulated Internet hoax claimed that Intel engineers had etched a tiny, hidden message on the surface of the Pentium processor, saying 'Bill Sux'.



- 481.** Bill Gates' *The Road Ahead* has been translated into 25 languages.
- 480.** Hotmail, founded by Sabeer Bhatia and Jack Smith, went online on 4<sup>th</sup> July 1996. When Microsoft acquired Hotmail in January 1998, Hotmail had over 9 million customers.
- 479.** 'Adobe' came from the name of the river Adobe Creek that ran behind the house of founder John Warnock.
- 478.** 'Apache' got its name because its founders got started by applying patches to code written for NCSA's httpd daemon. The result was 'A PATCHy' server; thus, the name Apache.
- 476.** The name IBM was started by an ex-employee of National Cash Register. To one-up them in all respects he called his company International Business Machines.
- 475.** Larry Ellison and Bob Oats were working on a consulting project for the CIA. The code name for the project was Oracle. Later they kept the same name for the company.
- 474.** The term 'Silicon Valley' was coined by journalist Don Hoefler.
- 473.** Charles Wang, an immigrant from Shanghai, founded Computer Associates in 1976.
- 472.** Sandra Kesinor and Leonard Bosack started Cisco in 1984. The name was simply a shortened version of 'San Francisco'.
- 471.** Scott McNealy founded Sun Microsystems in 1982.

**477.**

**Bill Hewlett and Dave Packard tossed a coin to decide whether the company they founded would be called Hewlett-Packard or Packard-Hewlett.**



*Adobe is the second largest software company in the world*

**470.**

**In 2001, the Guinness Book of World Records listed MSN Hotmail as the world's largest free e-mail provider, with more than a 100 million subscribers.**

- 
- 469.** Adobe, or Adobe Systems Incorporated, the company behind Photoshop, Acrobat, and so on, was founded in 1982.
- 
- 468.** Steven Gray founded the Amateur Computer Society in 1966 and began publishing the ACS Newsletter.
- 
- 466.** In 1952, Heinz Nixdorf founded Nixdorf Computer Corp. in Germany. It remained an independent corporation until merging with Siemens in 1990.

**467.**

Jeff Hawkins invented the Palm Pilot.

- 
- 465.** In 1969, Xerox Corp. bought Scientific Data Systems for nearly \$1 billion—90 times the latter's earnings.
- 
- 464.** Bill Gates' first company was called Traf-O-Data, which made software to analyse traffic, which enabled county governments to get federal money for road projects. The company was driven out of business by a huge monopoly—the federal government that gave away similar software for free.

---

**463.** Bill Gates' math SAT score was a perfect 800.

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**462.** The earliest reference by Bill Gates made to the company name 'Microsoft' was in a letter sent by Gates to co-founder Paul Allen on 29th November, 1975. In the letter, the name was spelt 'Micro-Soft', but the hyphen was eventually dropped.

---

**461.** 3Com changed the name of the PalmPilot to simply 'Palm' because Pilot Pen Company threatened a trademark lawsuit, citing possible brand confusion. So 3Com backed down and changed the name to 'Palm'. The irony is that the Palm Pen Company makes styli usable on Palm, Windows CE and other pen based devices.



*Bill Gates once got a pie thrown at him, and he just remarked it wasn't tasty*

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**460.** Brad Chase, Senior Executive at Microsoft in charge of Windows 95, left the company in 1999 and created a board game called Derivation, which is about English words and phrases and their origins and meanings.





**459.** Apple co-founder Steve Wozniak earned money in college by selling "blue boxes" to other students. A blue box attached to a pay telephone and created the proper signals to allow a user to make free phone calls.

**458.** Bill Gates launched his business career in 1969 at age 14 by forming a company named Lakeside Programming Group. Gates and his friend Paul Allen signed an agreement with Computer Center Corporation to report bugs in PDP-10 software, in exchange for computer time.

**457.** One of the largest companies in the world, AT&T is believed to have employed over a million people at one point.



*Apple has traditionally been at the forefront of PC innovation, in keeping with its trademark "Think Different"*





# Supercomputing

- 456.** Seymour Cray, creator of high-end computers, whose vehicle was tested against accidents by his own systems, could not save himself—he died in a car crash.
- 455.** A supercomputer executes a single program much faster than a mainframe. But mainframes are considered more powerful because they support more multitasking.
- 454.** Amongst other uses, supercomputers are used for weather forecasting, animated graphics, nuclear energy research and petroleum exploration.
- 453.** General Motors has purchased an IBM supercomputer the companies say is the fastest in the automotive industry. The new supercomputer, based on IBM's Power 4 and Power 5 technology, more than doubles the computing capacity of GM, and is expected to slash the amount of time it takes to get a vehicle to market from four years to 18 months.
- 452.** The four most powerful supercomputers in the world are owned by government agencies or universities. Japan's Earth Simulator Center is listed as the world-record holder at 35.8 teraflops.



- 451.** Automotive companies including Ford, Toyota and Daimler Chrysler own 12 of the 500 fastest supercomputers in the world.
- 450.** The performance of supercomputers is judged using the LINPACK benchmark, introduced by Jack Dongarra.
- 449.** Blue Gene is the nickname of the new supercomputer from IBM that would be 1,000 times faster than Deep Blue.
- 447.** The fastest supercomputer in India is the 574-CPU cluster at Intel, Bangalore.
- 446.** 'FLOPS' refers to 'floating point operations per second', and represents the speed at which a computer can perform mathematical calculations (like multiplication and division). Researchers making use of high-performance computing tend to be more interested in this number than in MIPS or the more familiar clock speed MHz rating. The MHz rating is not particularly useful here, as high-performance computers can perform several million mathematical operations per cycle.
- 445.** Since it went operational in 2001, the Japanese Earth Simulator has consistently claimed the top spot in the list of the world's most powerful supercomputers. It has been benchmarked at a speed of 35.86 TeraFLOPs/sec.
- 444.** Apple powers the world's third most powerful supercomputer—Virginia Tech's X is a cluster supercomputer that contains 1100 Apple G5 systems each having two IBM PowerPC 970 processors rated at 2 GHz. Each node has 4GB of

**448.**

**MIPS stands for 'millions of instructions per second'. This is a measure of the speed at which a computer can perform programmed instructions.**



*A view of the Japanese Earth Simulator*

**443.**

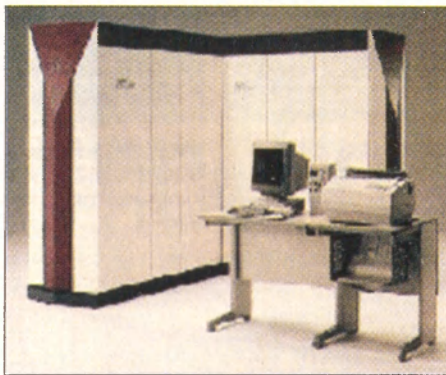
**The first fully transistorised supercomputer was the CDC 1604, designed by Seymour Cray in 1958.**

main memory and 160 GB of Serial ATA storage and 176 TB total secondary storage. The maximum computing speed benchmarked is 10.28 TeraFLOPs/sec.

**442.** The nine other supercomputers in the list of top 10 supercomputers are located in the United States, apart from Japan's Earth Simulator.

**441.** As of November 2003, there were seven 'cluster' supercomputers in the top 10 list, and just three traditional 'stratospheric' supercomputers. Two hundred and eight systems on the top 500 supercomputers list are classified as clusters, making them the most common architecture in the top 500 supercomputers in the world.

**440.** Cluster supercomputers are made up by clustering a lot of computers and connecting them through a high speed network; traditional supercomputers—the 'stratospheric' ones—are monolithic and have several CPUs working in parallel, using shared memory through high speed interconnects. Industry analysts often say that clusters cannot provide very high performance and this makes for interesting news—since clusters are now predominant on the list.



*A supercomputer looks something like this*

**439.** CDAC's ParamPadma cluster supercomputer was ranked in June 2003 as the world's 171st fastest; by November 2003, it fell down to 258 with newer and more powerful supercomputers entering the list.

**438.** "Central iron" is slang for a centrally funded computing resource. The CNS IBM RS/6000 Rack is an example of central iron.

**437.** The Berkeley Computer Corporation was formed in 1968 to build a supercomputer that could accommodate up to 500 users at a time.

**436.**

**India's fastest supercomputer is an Intel Xeon cluster owned by Intel, ranked at 105 in the world, in November 2003.**





- 435.** 50 per cent of the top 500 fastest systems are installed in the United States. Also, 90 percent of all 500 systems are produced in the United States.
- 
- 434.** The US Department of Energy's Oak Ridge National Laboratory has commissioned Cray Inc. to build the world's fastest supercomputer. This 50-100 teraFLOPs machine should surpass NEC's 35 teraFLOPs Earth Simulator and allow the US to regain the top spot in supercomputers. Cray's supercomputer will require 12 megawatts of dedicated power!
- 
- 433.** When it was introduced, Fortune magazine called the IBM 360 mainframe "the most crucial and portentous—as well as perhaps the most risky—business judgment of recent times."





# Displays

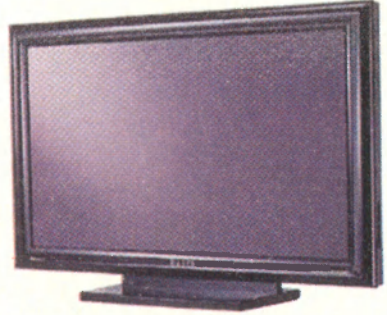
- 432.** A refresh rate of 85 Hz on your monitor means that every single pixel is refreshed 85 times a second.
- 
- 431.** Moire is a graphic effect that puts an undesirable pattern composed of small dots placed in a tight pattern on a plain image.
- 
- 430.** A nematic liquid crystal is a transparent liquid that is used in twisted nematic displays, the most common form of liquid crystal display.
- 
- 429.** Self-Scanned Amorphous Silicon Integrated Display (SASID) technology is used in flat-panel displays in notebook and portable computers.
- 
- 428.** TOLED (transparent organic light-emitting device) is a display technology being developed by the Universal Display Corporation (UDC). It uses transparent electrodes and light emitting materials in an organic light-emitting device (OLED).
- 
- 427.** The stair-step effect that can be seen in diagonal lines of some computer graphics is called 'the jaggies'.

**426.**

In a computer monitor, the voltage gets boosted to 30,000 volts in parts of the circuitry.



- 425.** The concept of plasma display panels was first conceived in July 1964 at the University of Illinois.
- 424.** Plasma monitors do not come with in-built tuner. An NTSC/ATSC television signal must be passed through a satellite box, cable box, HDTV receiver, VCR/VHS device, or an outboard tuning device.
- 423.** Unlike traditional displays, where the image is scanned across the screen, in plasma displays, pixels are 'lit' all at once.
- 422.** Plasma technology is different from that used in other display systems in that red, blue and green light is created in every pixel, reducing space. Charged electrodes between glass panels cause tiny pockets of inert gas to change the state of the plasma. This process causes ultraviolet light to be produced, which in turn reacts with the phosphors in each pixel to produce visible light.
- 421.** Plasma screens have no scan lines due to the fact that each and every pixel has its own transistor electrode. This creates a smooth, evenly lit image across the entire surface of the display.
- 420.** In 1968, a research group at RCA in the US, headed by George Heilmeier, developed the first LCDs based on DSM, or dynamic scattering mode.
- 419.** S Kobayashi of Japan produced first defect-free LCD. This was in 1972.
- 418.** NEC, in 1986, produced the first LCD laptop computer.
- 417.** Sharp produced the 28-inch TFT LCD in 1995.
- 416.** LCDs were first put into use as displays in electronic calculators.



*A high-definition, futuristic plasma screen looks something like this*





# Miscellaneous Peripherals

## PRINTERS AND SCANNERS

- 415.** A Page Description Language (PDL) specifies the arrangement of a printed page through commands from a computer.
- 414.** Printer Control Language (PCL) is a language that enables applications to control HP DeskJets, LaserJets, and other HP printers.
- 413.** The name Epson for the popular brand of printers was coined when the subsequent models of their first printer 'Electronic Printer 101' were called 'Sons of Electronic Printer'.
- 412.** HP's first Inkjet printer was launched in 1984.
- 411.** A Dichroic Mirror is an interference filter that reflects a specific part of the spectrum, transmitting the rest. It is used in scanners.
- 410.** Airport scanners in the UK will soon be able to capture naked images of travellers, even underneath several layers of clothing.
- 409.** When desktop scanners were first introduced, many manufacturers used fluorescent bulbs as light sources.





**408.** Before desktop scanners, colour pre-press companies used drum scanners, which were expensive and difficult to operate

**407.** The inventor of the scanner is Robert S. Ledley, who patented the whole-body CT (computerised tomographic) diagnostic X-ray scanner. He was a professor of physiology and biophysics and of radiology, and he was the first to do medical imaging and three-dimensional reconstructions.

**406.** TWAIN is an image capture API (Application-program Interface) for Microsoft Windows and Apple Macintosh operating systems. The standard was first released in 1992, and is currently ratified at version 1.9 as of January 2000. TWAIN is typically used as an interface between image processing software and a scanner or digital camera.

**405.**

**A CD-RW disk can, in general, be re-written about a thousand times. In contrast, a hard disk can be written over virtually an unlimited number of times.**

**404.** A flatbed scanner is designed for scanning prints and other flat artwork. Most have a glass bed or 'platen', on which the original is placed, on the top of a box containing a light source and photo sensitive receiver, usually a CCD (Charge-Coupled Device) array or a CIS (Compact Image Sensor), a single row of photocells. Older scanners were often monochrome only, but now all are 'three colour' RGB devices using separate photocells to measure red, green and blue light.



*A flatbed scanner's important components are the light source and the photosensitive device, usually a CCD array*

**403.** George J. Laurer is considered the inventor of the UPC or Uniform Product Code, invented in 1973. The UPC symbol set for barcode recognition is still used in the USA.

## Seagate Tech Factoid

**A Seagate cleanroom is 100 times cleaner than a typical hospital operating room**

**402.** The first UPC scanner was installed at a Marsh's Supermarket in Troy, Ohio, in June 1974.

**401.** The first patent for the bar code - US Patent #2,612,994 - was issued to inventors Joseph Woodland and Bernard Silver on October 7, 1952.

**399.** Jacob Rabinow was the inventor of the 'Reading Machine', an automated scanning and sorting appliance which scanned printed material and compared each character to a set of standards in a matrix, using for the first time, the 'Best Match Principle' to determine the original message.

**398.** The simplest 3D scanners often use physical contact using hinged arms. The depth is then calculated by measuring the orientation of the ranged object at the instant of contact.

**397.** Possibly the first known example of biometrics in practice was a form of finger printing being used in China in the 14th century, as reported by explorer Joao de Barros of Portugal.

**396.** In the 1890s, an anthropologist and police desk clerk in Paris named Alphonse Bertillon sought to fix the problem of identifying convicted criminals and turned biometrics into a distinct field of study. He developed a method of multiple body measurements, which got named after him-Bertillonage.

**395.** The modern fingerprinting technique, which was developed by Richard Edward Henry of Scotland Yard, essentially reverts to the

**400.**

**A CD-RW disk can, in general, be re-written about a thousand times. In contrast, a hard disk can be written over virtually an unlimited number of times.**



*HDCC is a new digital encoding/decoding process for CD/DVD recording*

**394.**

**When the CD was being invented, it was decided that a CD should be long enough to hold Beethoven's Ninth Symphony at any tempo—precisely 72 minutes.**



same methods used by the Chinese for centuries.

- 393.** EyeIdentify, a Belgian company founded in 1976, developed The Eyedentification 7.5 personal identification unit, the first retina scan device made for commercial use, in 1984.

## OPTICAL STORAGE

- 392.** The title of 'world's largest hard disk' would go to the Wavelength Disk Drive Project by Canadian group CANARIE. The project aims at using network bandwidth to store data.

- 391.** HDCD (High Definition Compatible Digital) is a digital encoding and decoding process for CD and DVD audio recording.

- 390.** The Content Scrambling System (CSS) is a data encryption and authentication method used to protect digital versatile disk movies from being illegally viewed from other devices.

- 389.** Enhanced CD (E-CD) is a compact disk format that enables disks to be played on either a CD player or a multimedia-capable device.

- 388.** A CD-Bridge Disc is a CD format that includes extra information on a CD-ROM XA track, so that the disk can be played on either a CD-player attached to a TV or a CD-ROM XA drive attached to a PC.

- 387.** CD-ROM XA (Compact Disk-read-only memory, extended architecture) is a modification of CD-ROM that defines two new types of sectors that enable it to read and display data, graphics, video, and audio at the same time.

- 386.** The Yellow Book is the informal name for Philips and Sony's ECMA-130 standard specification for compact disk, read-only-memory (CD-ROM). It was published in 1988.

- 385.** The Red Book is the 1980 document that provides the specifications for the standard compact disk developed by Sony and Philips.

- 384.** A femtosecond is one millionth of a nanosecond, or  $10^{-15}$  of a second. It is a measurement sometimes used in laser technology.

- 383.** The first optical data storage disk, developed by Philips, had 60 times the capacity of a 5.25-inch floppy disk.

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**382.** CD-ROM XA was developed jointly by Sony, Philips, and Microsoft and its specifications were published in an extension to the Yellow Book.

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**381.** 'Overburning' is the process of writing beyond the official capacity of a CD-R or CD-RW. This is possible by using the lead-out to store data—the lead-out is used to indicate the end of the disk and contains nothing but zeroes.







# Telephony

- 380.** A soft modem is software that performs modem functions using the computer's CPU rather than in modem hardware.
- 
- 379.** A Yagi antenna, also known as a Yagi-Uda array or simply a Yagi, is a unidirectional antenna commonly used in communications when a frequency is above 10 MHz.
- 
- 378.** Bluesnarfing is the theft of information from a wireless device through a Bluetooth connection.
- 
- 377.** Bluejacking is the practice of sending messages between mobile users using a Bluetooth wireless connection.
- 
- 376.** In computer jargon, 'cocooning' is the act of hiding oneself from the normal social environment, which may be perceived as unfriendly or unwelcome.
- 
- 375.** Cloaking is the masking of the sender's name and address in an e-mail note or distribution.
- 
- 374.** Hacktivism is the act of hacking, or breaking into a computer system, for a politically or socially motivated purpose.
- 
- 373.** The popular phrase 'The quick brown fox jumps over the lazy dog' was the first message sent between the Kremlin and the White house, when testing the hotline telex. That phrase contains each of the letters of the alphabet at least once.

**372.** Hayes Corp. produced the first modem that used the common AT command set.

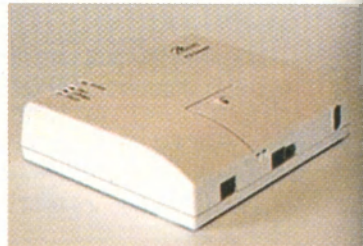
**371.** Britain implemented its '999' emergency telephone system in 1937. The first 999 call reported a burglary; the burglar was apprehended.

**370.** The '911' emergency telephone system was developed by AT&T in the US as a public service.

**369.** Touch-tone service was first introduced commercially in the US in 1963, but took almost 10 years to gain widespread use.

**368.** On June 3, 1880, Bell transmitted the first wireless telephone message on his newly-invented 'photophone'. The device allowed for the transmission of sound on a beam of light.

**367.** Bell's photophone is recognised as the precursor of modern fibre optics, which today transport over eight percent of the world's telecommunications.



*Modems were developed because of the NAAD's data transmission needs.*

**366.** In 1970, a team of researchers at Corning Glass Works in New York made fibre optic communications a reality, using fibre-optic wire which could carry 65,000 times more information than copper wire.

**365.** Nearly all of the more than 25 million kilometres of fibre-optic wire installed in the US today is based on the first "Optical Waveguide Fibers" designed by Corning Labs' Robert Maurer, Donald Keck, and Peter Schultz.

**364.** Digital modems developed from the need to transmit data for North American Air Defence during the 1950s.

**363.** The first commercial modem was AT&T's Bell 103, manufactured in 1962. It had full-duplex transmission, frequency-shift keying or FSK

**362.**

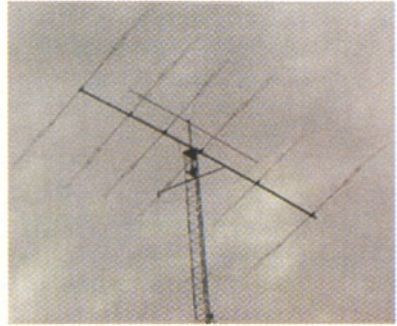
Elisha Gray and Alexander Graham Bell filed patents for the telephone within hours of each other. Bell got there first, and later won a legal battle against Gray.



and a speed of 300 bits per second or 300 bauds.

**361.** The electric telegraph was born in 1830 when an American named Joseph Henry sent an electronic current over one mile of wire to activate an electromagnet which caused a bell to strike.

**360.** Though Samuel Morse gave a public demonstration of the Morse Code in 1838, the Congress funded \$30,000 to construct an experimental 40-mile telegraph line from Washington to Baltimore, only five years later.



*The electric telegraph was born in 1830 in the United States*

**359.** The message "What hath God wrought?" was the first official message sent in Morse Code on May 24, 1844, from the old Supreme Court chamber in Washington to Baltimore. The basic concept of cellular phones began in 1947, when researchers looked at crude mobile car phones and

## Seagate Tech Factoid

Seagate must keep the "wear rate" of its drives very low to guarantee reliability. How low is very low?

Over the typical five-year service life of a Seagate 10,000 rpm disk drive in a common server application, the sliding distance of the head over the disk is more than two million miles – that's longer than four round-trip journeys from the earth to the moon (each round trip is a mere 500,000 miles or so).

Now compare these numbers to car tyres, the best of which are made of material about 10 million times thicker than a disc's overcoat. Tyres are made of essentially the same material as the overcoat (carbon) but most mechanics would agree that tyres become not reliable after only about 100,000 miles.

What does all this mean? If the tyres on a car were as robust as the disk overcoat on a Seagate drive, they should survive  $10^{14}$  miles, that's 100,000,000,000,000, or 100 trillion miles. If you drove 10,000 miles a year with these wonder wheels on your car, they should last one billion years before having to be changed.

realized that by using small cells—range of service area—with frequency reuse they could increase the traffic capacity of mobile phones substantially. However at that time, the technology to do so was nonexistent.

**358.** Despite incredible demand, it took cellular phone service 37 years to become commercially available in the United States. Consumer demand quickly outstripped the 1982 system standards. By 1987, cellular telephone subscribers exceeded one million and the airways were crowded.

**357.** In the 1970s, the very first cordless phones were introduced.

**356.** In 1986, the Federal Communications Commission or FCC granted the frequency range of 47-49 MHz for cordless phones. In 1990, this became 900 MHz. In 1994, digital cordless phones, and in 1995, digital spread spectrum, were respectively introduced.

**355.** In 1998, the FCC granted the frequency range of 2.4 GHz for cordless phones. As of 2003, the upward range was 5.8 gigahertz.

**354.** A Regional Internet Registry (RIR) for the Asia Pacific region was originally proposed at the APCCIRN (Asia-Pacific Coordinating Committee for International Research Networking) meeting on 13 January 1993. It was the precursor of APNIC (Asia-Pacific Network Information Center). The 1st APNIC meeting was held at Cheronkon University, Bangkok, Thailand, on January 16 and 17, 1995.

**353.** On April 30, 1996, APNIC was registered in Seychelles as non-profit international organisation.

**352.** The American Registry for Internet Numbers (ARIN), whose authority it is to manage the IP address space in use in North and South America, the Caribbean and sub-saharan Africa, began operations on December 22, 1997.

**351.** In October 1998, the US Government appointed a private organisation called Internet Corporation for Assigned Names and Numbers (ICANN) to oversee the opening of the Domain Name Registration system to other competing companies.

**350.** The Domain Registry at the Information Sciences Institute of the University of Southern California administers the top-level domain '.us'.





- 349.** ADSL, the most widely-used DSL standard in the US, can download at speeds between 1.5 and 9 Mbps, and can upload at speeds between 16 and 640 Kbps.
- 348.** 3G, short for "third generation", refers to wireless technologies designed for high-speed voice and data transmission. It promises performance that's hundreds of times faster than today's technology.
- 347.** The fastest type of internet connection is the T3, which can go up to 44 Mbps. Of course, they're used mostly by ISPs.
- 346.** The first commercial modem was the Dataphone from AT&T, in 1960.





# Cellphones

- 345.** Bell Labs conceived the idea of the cellular phone in 1947.
- 344.** Citizens of Norway can submit their tax forms by SMS.
- 343.** Catholics in the Philippines are not allowed to confess their sins via text messaging because the Bishops feel that e-mail and face-to-face confessions are not secure enough.
- 342.** The Nokia 5160 series included an edition with Disney characters Mickey, Minnie, Goofy and Donald.
- 341.** CDMA technology uses multiple channels simultaneously. It does this by assigning each user a code that is used in the multiplexing of data.
- 340.** Michael Faraday's exhaustive research into whether space could conduct electricity had an incalculable effect on cellular phone development.
- 339.** Cell phones went public in 1977, when Chicago began public cell phone trials with 2000 customers. Japan began testing cellular phone services in 1979.
- 338.** Dr. Mahlon Loomis of Virginia, a dentist, may have been the first person to communicate through wireless via the atmosphere.



**337.** Nearly 45 countries, including India, have banned the use of cell phones while driving. In Ireland, you can be fined \$380 and/or face imprisonment for three months.

**336.** Code Division Multiple Access (CDMA) technology was originally developed for military use in the late 1960s.

**334.** Studies conducted by NASA show that the use of cell phones and other personal electronic devices inside and in the vicinity of aircraft is potentially dangerous.

**333.** Japanese telecom carrier NTT DoCoMo launched the world's first 3G mobile phone services in Japan in October 2001.

**332.** A large amount of the radiation emitted by a cell phone, gets absorbed by the user's head. A similar amount of radiation comes from the keypad and the mouth piece as well.

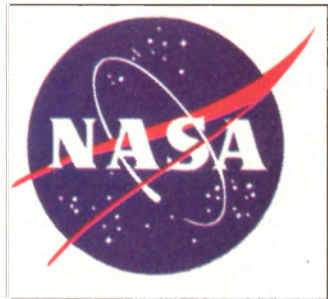
**331.** The WHO says there is still no evidence to prove that cellular phones pose any health risks, but further research is needed.

**330.** Mobile phone ringtones was the most searched-for technology term in Yahoo!'s annual survey, followed by digital cameras and mobile phones.

**329.** When cordless phones and the first analogue cellphones hit the market, anybody with a scanner that operated at the right frequency could easily listen in on calls not intended for them.

**335.**

**Dr Martin Cooper is considered the inventor of the first portable handset. As the former GM for the Systems division at Motorola, he was the first person to make a call on a portable cellular phone.**



*Studies by NASA show that cell-phone usage in the vicinity of aircraft is potentially dangerous*

**328.** **Multiple independent tests have confirmed that the radiation from the earpiece of a cellphone is up to four times that from the antenna.**

**327.** The Chameleon Card is a programmable card in development at Chameleon Network that can represent each of the owner's credit, debit, and customer cards as required, so that one doesn't carry all of the aforementioned.

**326.** Cellphones are more popular in European and Asian countries than they are in the United States—more than 90 percent of Europeans own a cell phone, compared to about 50 percent of Americans.

**324.** Cellphones operate in the 900 MHz, 1800 MHz and 1900 MHz bands; Bluetooth uses the 2.4 GHz band; and Wi-Fi and WiMax operate on the 2.4 GHz and 5.8 GHz frequency bands.

**323.** The 2.4 GHz band is generally a delicensed band, which means that you do not have to apply for a license for using devices on this band.

**322.** The 2.4 GHz band comes under the so-called ISM band, which stands for Instrumentation, Scientific and Medical (usage), specified as the 902-928 MHz band, the 2400-2483 MHz band and the 5725-5780 MHz band.

**325.**

On December 3, 1992, an engineer named Neil Papworth sent the first SMS—"MERRY CHRISTMAS"—to his colleagues at Vodafone in Britain.



*The WHO is researching the risks posed by cellphone usage*





# Entertainment

- 321.** The Bose Wave radio, which is 14" wide, houses a one-metre long waveguide.
- 320.** Nintendo's release in 1983 of the Famicom, in Japan, marked the second age of home video games and the start of Nintendo's dominance in the gaming world.
- 319.** The Coleco Colecovision console, released in 1982, was as powerful as the most powerful PCs at that time.
- 318.** Nolan Bushnell originally named his company 'Syzygy'. Today, this company is known as Atari—publishers of the famous Unreal game series.
- 317.** In 1970, the first all-computer championship was held in New York and won by CHESS 3.0 (CDC 6400), a program written by Slate, Atkin and Gorlen at Northwestern University.
- 316.** On November 22, 1966, a USSR chess programme began a correspondence match with the Kotok-McCarthy MIT chess program. The match lasted 9 months and was won by the Soviet computer.

**315.** Did you know that Sega released Sonic the Hedgehog in 1991 as a direct response to Nintendo's Super NES gaming system?

**314.** In 1962, Alan Kotok wrote the first MIT chess program for his B.S. thesis project. He was assisted by John McCarthy of Stanford.

**313.** Alex Bernstein wrote a chess program in 1957 for an IBM 704, which could do 42,000 instructions per second and used 70K of memory. It was the first 'proper' chess playing program.

**311.** The Sega Genesis, released as MegaDrive in Japan in 1988, marked Sega's entry into the video game market.

**312.**

**In 1950, mathematician Alan Turing wrote the first chess program.**

**310.** In 1952, Alick Glennie, who wrote the first compiler, defeated Alan Turing's chess program, TurboChamp. He was the first person to beat a computer program at chess.

**309.** According to a survey in May 2000, one out of every four households in the United States had a PlayStation.

**308.** The first VCR (Video Cassette Recorder) was made in 1956 and was the size of a piano.



*The first VCR didn't look like this—it was the size of a piano!*

**307.** In 1977, Atari released its VCS (Video Computer System), also called the 2600. It was the first Atari 8-bit video console and revolutionised the home video game market.

**306.** In 1986, Steve Jobs purchased the computer graphics division of Lucas Films Ltd for \$10 million, and established it as an independent company christened 'Pixar'.

**305.** In 1951, Charles Ginsburg, known as the father of the video cassette recorder, led a research team at Ampex Corporation in developing the first practical videotape recorder.

**304.** The still video or digital camera was first demonstrated in 1981. It

used a fast-rotating magnetic disc two inches in diameter, and recorded on it up to 50 images formed in a solid-state device in the camera.

**303.** The first videotaped material on a TV show was "Douglas Edwards and the News", broadcast on CBS on November 30, 1956.

**301.** The first commercial blank videotape was offered by 3M Corp. in 1957. It was priced at \$307 per reel.

**300.** In 1963, Philips demonstrated its first 'Compact Audio Cassette' using BASF 1/8-inch tape.

**299.** The mass production of compact audio cassettes began in 1965 in Hanover, Germany, as did commercial sales of pre-recorded music cassettes, known as musicassettes.

**298.** Akio Morita, Masaru Ibuka and Kozo Ohsonoe invented the portable 'Sony Walkman' audio cassette player. It was released in 1979.

**297.** Akio Morita along with Masaru Ibuka founded the Tokyo Telecommunications Engineering Corporation in 1946. This was later renamed Sony. Sony's name takes from the Latin word 'sonus', meaning sound, and the English word 'sunny'.

**296.** Sony's first foray into the gaming market was in 1988, when it embarked on a deal with Nintendo to develop a CD-ROM drive for the Super NES.

**295.** Sony acquired Psygnosis, a relatively unknown European developer, for \$48 million. It was renamed Sony Interactive Entertainment, and is responsible for some of the PlayStation's best games, including WipeOut and Destruction Derby.

**294.** When Hewlett Packard's computer division exhibits at trade shows, they always play the same tune at the end of the

**302.**

'Walkman', 'Pressman', 'Watchman', and 'Discman' are Sony trademarks.



*The mass production of compact audio cassettes began in 1965*

show in their booth—the popular hymn Amazing Grace.

**293.** In 1985, Sony and Philips produced the standard for CD-ROM disks, which would use the same laser technology as the audio CD.

**292.** In 1988, CD sales surpassed LP sales for the first time, leaving the CD and the audio cassette as the two dominant consumer formats.

**291.** On August 6, 1998, the first HDTV set went on sale for \$5,499 to the public in San Diego. It was a 56-inch Panasonic set that was developed at the company's research and development centre in San Diego, and manufactured in Tijuana.

**290.** The IMAX system has its roots in the EXPO '67 in Montreal. A small group of Canadian filmmakers and entrepreneurs—Graeme Ferguson, Roman Kroitor and Robert Kerr—decided to design a new system using a single, powerful projector, rather than the cumbersome multiple projectors used at the time.

**289.** The IMAX dome, then called the Omnimax, debuted at the Reuben H FleetSpace Theatre in San Diego, California, in 1973.



*The first HD car radio was sold on January 5, 2004.*

**288.** Disney released *Fantasia 2000* in the IMAX film format with 6-channel digital sound on January 1, 2000.

**287.** The first HD car radio was sold on January 5, 2004 in Cedar Rapids, Iowa.

**286.** From March 6, 1999, HBO began HDTV satellite movie broadcasts, starting with "US Marshals" at 8 pm.

**285.** In 1998, *The Last Broadcast*, a film by Stefan Avalos and Lance Weiler, premiered as "the first desktop feature film", produced and exhibited digitally, co-sponsored by Texas Instruments using its DLP digital cinema projector.

**284.** In November 1997, San Diego's MP3.com was founded by Michael Robertson with 3,000 songs available for free download. In the next 12 months, it became the #1 music site on the Internet with 3 million hits monthly.





**283.** DVD players were introduced in Japan in 1996 and later in the US in 1997.

**282.** By 2003, in the US, DVD rentals increased 51.2% and VHS rentals dropped 29% from the previous year; DVD sales increased 42.2% to \$12.1 billion, and VHS sales dropped 34.8% to \$2.4 billion, according to Video Store Magazine.

**280.** Dick Tracy, released June 15, 1990 was the first 35mm feature film distributed with a digital soundtrack by Cinema Digital Sound (CDS), developed by East man Kodak and Optical Radiation Corp.

**279.** In the stop-motion kind of animation, one must move each joint of each character for every frame, which means you need to stop the camera and move anything that is moving for every frame. The biggest drawback of this kind of animation is that it is very time consuming.

**278.** The longest example of stop-motion animation was The Nightmare Before Christmas, directed by Henry Selick. This movie lasted for 74 minutes, which required a total of 106,560 frames! Each of these had to be filmed individually. The characters in the movie were puppets made of foam rubber. Producing the entire movie required a total of 300 puppets for the 74 roles.

**277.** In 1993, Jurassic Park released on May 30 as the first film with DTS sound, developed by Terry Beard, founder of Digital Theatre Systems in Westlake Village, CA, partly owned by Steven Spielberg and Universal Pictures. This digital sound film format records six tracks on separate CD-ROM disks, synchronised by an optical time code track recorded on the film, co-existing with a backup optical soundtrack similar to Dolby Stereo.

**281.**

In 1982, the use of computer-generated graphics in movies took a step forward with Disney's release of 'Tron'.



Disney's Tron was released in 1982.

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**276.** MPEG (Moving Picture Experts Group) develops standards for digital video and digital audio compression. It operates under the auspices of the International Organisation for Standardization (ISO).

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**275.** In 1995, amidst great fanfare, Pixar Animation Studios and Disney released the first full-length computer-generated film, *Toy Story*.

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**274.** *Toy Story* director John Lasseter had won an academy award for a previous computer-generated short film, *Tin Toy*.

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**273.** The sci-fi flick *Gog* (1954), in which a nuclear 'brain' takes over a secret laboratory, was the first film to feature a computer as the main character in a movie.

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**272.** The first true digital camera for the consumer was introduced to the world in 1990. It was the Dycam Model I, and it produced black and white photos at a resolution of 320 x 240 pixels. The camera was capable of storing 32 compressed images on 1MB of built-in RAM. The images could be downloaded, using a cable, to a PC or a Mac.

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**271.** The world's first portable video recording system, the DV-2400 Video Rover, was launched by Sony in 1967. It filmed in B&W only, and required a separate unit for playback.

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*Toy Story was the first full-length computer-generated film.*

**270.** In the late 1980s, Sony introduced their professional ProMavica MVC-5000. Mavica was short for "magnetic video cam", and that's really what it was. It was a professional level digital camcorder that had the ability to take freeze-frame pictures, and not a still digital camera.

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**269.** In 1992, Sharp, in its quest to make filming easier, introduced the first colour LCD screen, so videographers could see the display on a screen, without having to squint through a viewfinder. Today, this is a standard feature on all camcorders.

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**268.** Phillips developed the first wearable CD player. It was manufactured attached to a jacket, in 2003.

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- 267.** Tetris has sold over 40 million copies worldwide, since it began in 1982. That comes to \$800 million in revenues!
- 
- 266.** The first all-computer championship was held in New York in 1970, and was won by CHESS 3.0—a program written by Slate, Atkin and Gorlen at Northwestern University, Illinois.
- 
- 265.** In Spring 1967, MacHACK VI became the first chess program to beat a human, at the Massachusetts State Chess Championship.
- 
- 264.** The Sega Dreamcast, released in 1999, was the first console game machine to sport a 128-bit architecture.
- 
- 263.** On 22<sup>nd</sup> November, 1966, a USSR chess programme began a correspondence match with the Kotok-McCarthy MIT chess program. The match lasted 9 months and was won by the Soviet computer, with 3 wins and 1 loss.
- 
- 262.** Sega released Sonic the Hedgehog in 1991 as a direct response to Nintendo's Super NES gaming system.
- 
- 261.** In 1968, International Master David Levy made a \$3,000 bet with John McCarthy, researcher in Artificial Intelligence at Stanford University, that no chess computer would beat him in 10 years. He won his bet!

**260.** In 1988, Sega entered the video game market with Genesis, which was called MegaDrive in Japan. The console, with its 16-bit processor, was the first to challenge Nintendo's monopoly.

**258.** The Mattel Intellivision was released in 1980, and was the first 16-bit home game console.

**257.** In 1978, Atari Football became the first arcade game to use a track ball.

**256.** The first computer book to sell one million copies was *101 BASIC Computer Games*. It was published in the US by Creative Computing in 1978.

**255.** The first 32-bit home video game system was the Panasonic 3DO released in 1993.

**254.** Sony released a matte black version of its PlayStation in 1997, which enabled programmers to create their own video games in the C programming language. It was called Net Yaroze.

**253.** In 1972, the first commercial home game system was launched the Magnavox Odyssey, by Magnavox, in the US.

**252.** The first software to be imported from the Soviet Union to the US was Tetris, developed in 1985 by Alexey Pazhitnov.

**259.**

The first arcade video game that used vector graphics instead of a raster display was *Space Wars*. The game was released in 1977.



A matte black version of the Sony PlayStation

**251.**

In 2003, a 14-year-old Romanian boy collapsed and was hospitalised because he'd been playing a computer game—*Counter Strike*—for nine days in a row.



**250.** Mario, one of the best known video game characters, was named after Nintendo's landlord.

**249.** Playstation 2 hit the shelves in Japan on March 4, 2000, and sold 98,000 units in four hours.

**248.** In 1988, Deep Thought and Grandmaster Tony Miles shared first place in the US Open chess championship.

**247.** Deep Blue's chess playing program is written in C and runs under the AIX operating system. It is capable of evaluating 10 crore positions per second.

**246.** Did you know that an estimated 1 lakh copies of the PlayStation game Tiger Woods 99 were recalled after *The Spirit of Christmas*, a clip in which Jesus Christ and Santa Claus get into fistfight over the true meaning of Christmas, was discovered in a hidden file on the CD-ROM? The recall was necessitated due to the fact that the clip was unauthorised and was full of expletives.

**245.** The year 1984, made famous by George Orwell, is also the year the great crash of the video game market occurred.



Mario, one of the most beloved game characters

**244.** William Higginbotham created what might have been the first video game, in 1958. His game, called 'Tennis for Two', was created and played on a Brookhaven National Laboratory oscilloscope.

**243.** Designed by Ralph Baer, the first commercial video game console that could be used in the home, the Odyssey, was released by Magnavox in 1972.

**242.** On June 17, 1980, Atari's 'Asteroids' and 'Lunar Lander' were the first two video games to ever be registered in the Copyright Office.

**241.** Microsoft's Flight Simulator became the best-selling PC game of all time after its release in 1983.

**240.** Nintendo started its enterprise in 1889, when the great-grandfather of the current Nintendo president, Fusajiro Yamauchi, founded Nintendo Koppai, which made special playing cards called Hanafunda ("flower cards").

**239.** In 1981, Shigeru Miyamoto, guided by Gunpei Yokoi, made the first game for Nintendo starring Mario, which was previously the arcade game Donkey Kong.



*Microsoft's Flight Simulator was the bestselling PC game of all time*

**238.** In 1952, A S Douglas created the first graphical computer game. It was a version of Tic-Tac-Toe, programmed on the EDSAC vacuum-tube computer, which had a cathode ray tube display.

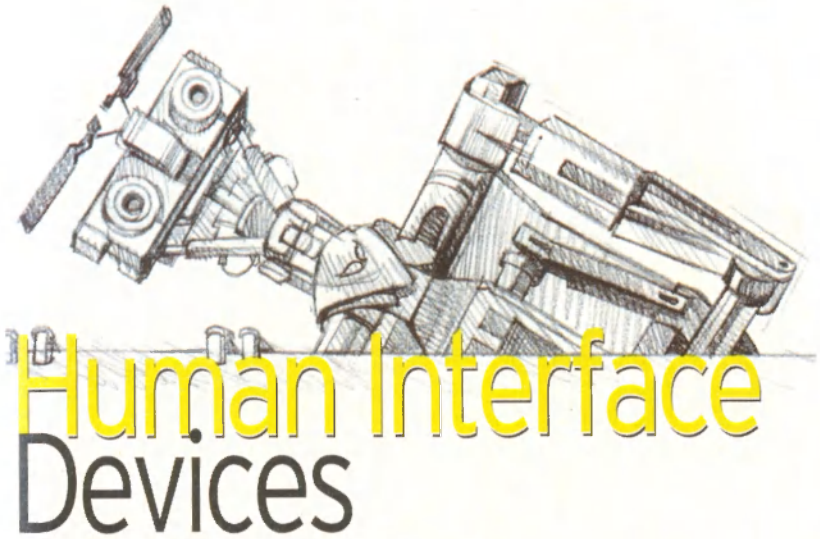
**237.** Gunpei Yokoi was the creator of the Game Boy and Virtual Boy. He worked on Famicom, the Metroid series, Game Boy Pocket, and did extensive work on the system we know today as the Nintendo Entertainment System.

**236.** PacMan got its name from the Japanese word "pacu", meaning "to munch". Since "pacu" is pronounced the same as "f--- you", only with a 'p' sound, its name was changed to "PacMan".

**235.** The word Nintendo is composed of three Japanese Kanji characters, Nin-ten-do. These characters can be translated into "Heaven blesses hard work".

**234.** The most expensive game ever developed was ShenMue for Sega Dreamcast. It cost \$20 million.





# Human Interface Devices

- 233.** The QWERTY keyboard was present on the very first typewriter called the 'Sholes & Glidden Type Writer', produced by gunmakers E Remington & Sons in Illinois, New York.
- 
- 232.** Mice first broke onto the public stage with the introduction of the Apple Macintosh in 1984.
- 
- 231.** Everytime a mouse moves or the user clicks a button, the mouse sends three bytes of data to the computer it's attached to.
- 
- 230.** The first infrared wireless keyboard for Microsoft's WebTV set-top box was manufactured by Sejin Electron Inc in Korea.
- 
- 229.** The QWERTY keyboard layout is 129 years old!
- 
- 228.** Dvorak keyboards, named after Dr August Dvorak, have nine of the most used letters in the middle row of the keyboard. This allows you to write over 3,000 words without the fingers reaching out to the other rows. In contrast, only about 50 words can be typed on a QWERTY keyboard without reaching out to the middle or home row.
- 
- 227.** In September of 1940, G. R. Stibitz demonstrated the Model 1

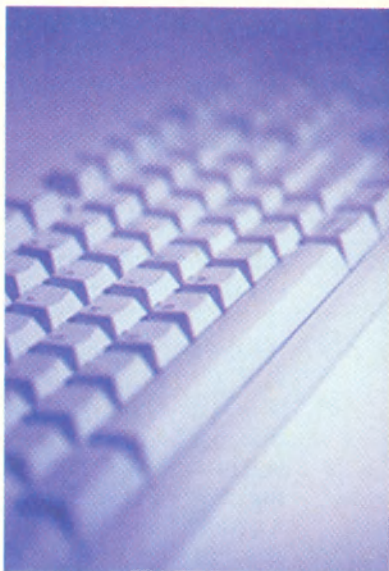
computing device, which, for the first time, utilised input from a teletype keyboard or paper tape and presented output on them as well. This demonstration was additionally unique in that it was accomplished in remote fashion over telephone lines, some thing that would not be duplicated for another decade.



*The mouse became popular when Apple Macintosh was launched in 1984*

- 226.** Research oriented towards Automatic Speech Recognition and Transcription technologies began in 1936 at AT&T's Bell Labs. At that time, most research was funded and performed by Universities and the U.S. Government, primarily by the Military and DARPA. It wasn't until the early 1980s that the technology reached the commercial market.

- 225.** The now ubiquitous direct manipulation interface, where visible objects on the screen are directly manipulated with a pointing device—like with a mouse or a light pen—was first demonstrated by Ivan Sutherland in SketchPad, which was his 1963 MIT PhD thesis. SketchPad supported the manipulation of objects using a light pen, including grabbing objects, moving them, changing size, and using constraints. The system was built at Lincoln Labs with support from the Air Force and NSF.



*The QWERTY keyboard layout is 129 years old*

- 224.** The first pen-based input device, the RAND tablet, was funded by ARPA. Later, Amit Teitelman, in 1964, developed the first trainable gesture recogniser. A very early demonstration of gesture





recognition was Tom Ellis' GRAIL system on the RAND tablet.

- 223.** The first 3-D system was probably Timothy Johnson's 3-D CAD system, in 1963.
- 222.** The 'Lincoln Wand' by Larry Roberts was an ultrasonic 3D location sensing system, developed at Lincoln Labs in 1966. An early use was for molecular modelling.
- 221.** David Canfield Smith coined the term 'icon' in his 1975 Stanford PhD thesis on Pygmalion, funded by ARPA and NIMH. Smith later popularised icons, as one of the chief designers of the Xerox Star.





- 220.** Titanium is the name of a popular laptop computer from Apple. It's called so because it's encased in titanium.
- 219.** In graphic design, to 'feather' is to soften an edge of an image by making the edge gradually fade out until it becomes transparent.
- 218.** To 'quiesce' is to put a computer, a program, a thread, or some other computer resource into a temporarily inactive or inhibited state.
- 217.** QXGA (Quantum Extended Graphics Array) is a display specification capable of supporting a resolution of 2048 x 1536.
- 216.** The 'Quiet zone' is the blank margin on either side of a bar code that is used to tell the barcode reader where a barcode's symbology starts and stops.
- 215.** 'Project Banjara' was the codename given by Microsoft to its development of JUMP (Java User Migration Path). The project was executed at Hyderabad.
- 214.** The first Indian software enterprise to create a video that went on to win a Grammy was Bangalore-based 'Thinking Pictures', for the video *Deep Forest*.

**213.** Mobile service provider Orange had bought Ananova, the virtual newscaster, for 95 million pounds, from Digital Animations Group based in Bellshill near Glasgow.

**211.** PERL, the programming language, was created by Larry Wall with the intention of re-humanising computing technology.

**210.** It was once feared that on September 9, 1999, computers would shut down because programmers often use a series of nines as a code to shut down systems.

**209.** In the IT world, a 'PnP recruit' means an employee, who, like a Plug and Play device, can immediately be productive to the company because of his skills and knowledge.

**208.** Fiat claimed that it had made one of the most powerful engines, but not for cars. They had developed the programmable pacemaker for the human heart.

**207.** A car named Fingo was in the news when it went around the world, because it was remote controlled and had no steering wheel. It was developed by Fernando Lopez and Osvaldo Malvestitti of Argentina.

**206.** A special parallel-processing computer called 'Beowulf' was used for the special effects in the multi-Oscar-winning movie *Titanic*.

**205.** Despite having radios and e-mail, the Orissa state police force uses 700 'pigeon police' to shuttle messages between distant stations.

**212.**

'Nerd' was coined in 1950 by Dr Seuss in the book 'If I Ran the Zoo'. 'Worm' was coined by writer John Brunner in 1975 for self-replicating malicious programs.



Orange bought Ananova for 95 million pounds

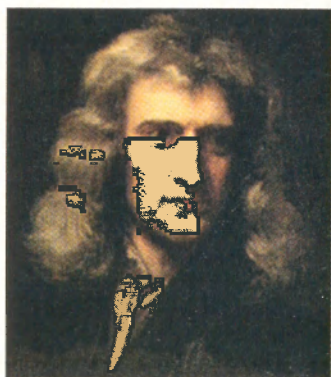
**204.**

Adobe Pagemaker 7, one of Adobe's flagship products, was made at a development centre in New Delhi.

- 203.** The NEC Turbografx-16, released in Japan in 1988 as the PC-Engine, was the first system to have a CD player attachment.
- 201.** The original Apple Computer logo pictured Sir Isaac Newton.
- 200.** Atari's computer, called the 520ST, was dubbed 'Jackintosh' after Atari owner Jack Tramiel.
- 199.** In July 1995, Bob Massey of CompuServe, Steve Case of AOL, and Edward Bennett of Prodigy wrote and signed a letter to Microsoft CEO Bill Gates, urging him to un-bundle the Microsoft Network (MSN) from Windows 95.
- 198.** In 1899, Valdemar Poulsen invented the first magnetic recordings, using magnetised steel tape as the recording medium. Loudspeakers were also invented the same year.
- 197.** In 1994, the 'Annie' awards, given each year for the best animated commercials, went for the first time to a computer-generated animated commercial done for Coca Cola. It featured animated Polar Bears.
- 196.** In 1977, the creators of the RSA-129 encryption scheme encrypted a message with a 430-bit public key and offered \$100 to anyone who could decrypt the message. The message was decrypted in 1994, using parallel computing resources.

202.

**Apple had once planned to shorten the name of the Macintosh computer to simply 'Mac', to stand for 'Mouse-Activated Computer'.**



*Newton was pictured on the original Apple Computer logo*

195.

**In 1902, Guglielmo Marconi transmitted radio signals from Cornwall to Newfoundland—the first radio signal across the Atlantic.**





**194.** In the 1997 book 'Techno-Stress', by Michelle Weil and Larry Rosen, it's mentioned that some people become so immersed in technology that they risk losing their own identity, a syndrome called 'technosis'.

**193.**

**Using virtual reality headsets is known to result in a health disorder called binocular dysphoria.**

**192.** The number one use for home computers is word processing. Number two is gaming.

**191.** SWF/LFM-926 was the first computer virus to use Macromedia's Shockwave Flash files to transmit itself when a victim ran the Flash movie.

**190.** From the smallest microprocessor to the largest of mainframes, the average American depends on more than 250 computers per day.

**189.** Did you know the first product to have a bar code on its package was Wrigleys chewing gum?



*The first product to use a bar-code was Wrigleys chewing gum*

**188.** More than 300 technical staffers gathered at Microsoft's head quarters on New Year's Eve of 2000, expecting something to go wrong as the new millennium dawned. Nothing happened.

**187.** Puma (Programmable Universal Machine for Assembly) was designed by Vic Schienman in the 1970s, and was built by Swiss company Staubli Unimation. It is the most commonly used robot for assembly lines and university laboratories.

**186.** MetaCreations' Fractal Design Painter, a graphics software, is packaged in a paint can!

**185.**

**South Korea's SK Telecom offers an inaudible ring tone to its customers which, it claims, can repel mosquitoes.**

**184.** 'Booting' your computer means starting it up, but did you know that the word comes from 'pulling yourself up by your bootstraps'?

**183.** In 1986, Honda commenced the humanoid research program. It was in September 1997 that a robot, weighing 130 kg, was designed. It was named 'Humanoid P3'.

**181.** AT&T Bell Labs was the first company to transmit human voice across the Atlantic on 25<sup>th</sup> January, 1915.

**180.** Ken Thompson designed the 'B' language for computers that were switched to C in the early 1970s by Dennis Ritchie.

**179.** The Biztalk Server is a Microsoft product. It unites enterprise application integration (EAI) and business-to-business (B2B) integration in a single product.

**178.** Dr. Seymour Papert, in 1968, created the Logo language, aimed at teaching programming to school-children.

**177.** Adobe, or Adobe Systems Incorporated, is the second-largest PC software company in the world, after Microsoft.

**176.** 'Convergence' refers to how sharply an individual color pixel on a monitor appears. Each pixel is composed of three dots—a red, a blue, and a green one.

**182.**

**Corning Glass invented the Optical Fibre in 1970. It revolutionised the communications industry, as GE and AT&T began testing the transference of sound and image data through these fibres.**



*Humanoid P3, designed in September 1997*

**175.**

**In 1971, the first speech recognition software, Hearsay, was developed in India.**



**174.** Project Chicago was the code name for Windows 95.

**173.** In December 2003, Little GLORIAD (Global Ring Network for Advanced Application Development) started operations, consisting of a networked ring with connections in Chicago, Amsterdam, Moscow, Beijing and Hong Kong.

**172.** Garret Gruener, co-founder of AskJeeves.com, was a Democratic candidate in the famous recall election of California involving Arnold Schwarzenegger, who is a Republican.



*Graham Bell giving a demonstration of his invention*

**171.** The Bell Telephone Company set up by Alexander Graham Bell in 1877 has morphed over the years into today's AT&T.

**170.** The ring, the bus and the star are ways in which computers are arranged in a LAN. In a ring, for example, the computers are connected in a ring-like fashion, with each one connected to two others.

**169.** "To get amazonned" means that one has lost a significant portion of one's business to a dotcom enterprise.

**167.** In 2003, flash mobs, organised over the 'Net, started in New York and quickly formed in cities worldwide.

**166.** "Audio mining" is the term used to refer to extracting data from audio recordings. The process uses speech recognition techniques.

**168.**

The '@' symbol has no particular designation, although it is often referred to as the 'commercial a'.

**165.**

As of the year 2000, 96 per cent of all e-commerce websites were in English, while half of all Internet users were native English speakers.

**164.** In 1994, Jeff Hawkins invented Graffiti, the handwriting recognition system used in some PDAs.

**162.** Leonardo Chiariglione and others developed the MP3 format in 1988 at the University of Erlangen, Germany. MP3 stands for 'MPEG Layer3'.

**161.** In CDs, bumps and flat areas on the disk's surface represent 1s and 0s. The bumps and flats are arranged in a continuous spiral track that is five kilometres in length.

**160.** The vi editor was the de facto Unix standard editor until about 1984 when Emacs took over. The acronym stands for Visual Interface.

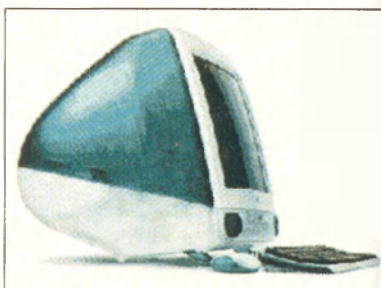
**159.** The Economist magazine reported that Lee Stein opened the first truly electronic bank on the Internet in 1994 called 'First Virtual Holdings'.

**158.** Apple named the first release of its Mac OS X 10.0. The second version was called Jaguar.

**157.** According to the book 'The Cuckoo's Egg' by Clifford Stoll, an accounting discrepancy of 75 cents on a computer at Lawrence Berkeley Labs, led the author to uncover a German hacker ring. This happened in the late 1980s.

**163.**

**Metcalf's Law, propounded by the designer of the Ethernet protocol, states that the utility of a network is proportional to the square of the number of users.**



*Apple has come a long way since its first release*

**156.** In 1993, a fire destroyed a Sumitomo Chemical Company plant in Japan and memory prices skyrocketed, since the plant supplied 60 percent of the world's supply of Cresol, used in memory chip casings.

**155.**

**"Treeware" is slang for any paper-based material. Techies use it to refer to documentation manuals.**





**154.** In the 1980s, a stir was created in the Unix community when a publicly distributed implementation of Unix for PCs was released. It was called Minix.

**153.** Thriller writer Robert Harris wrote a semi-fictional account, in 1996, of the breaking of the German codes at Bletchely park, England, during World War II, in his book *Enigma*.

**152.**

**In 1980, there was only one country in the world with no telephones—Bhutan.**

**151.** The US Congress passed laws in 1999 to discourage the practice—known as cybersquatting—of registering trademark domain names for the sole purpose of resale and profit.

**150.** One of the earliest forms of mechanical information storage was an ancient Peruvian device consisting of a cord with knotted strings of various colours attached. The device was called the Quipu. The Chinese had a similar device with beads, called the abacus.

**149.** The FBI recruited three 14-year-old girls in June 2003 to teach agents how to communicate like young girls on the 'Net. The operation aims at tracking down paedophiles.

**148.** In 1990, famed computer educator Donald Knuth gave something up and is now, as he asserts, 'a happy man'. He was referring to e-mail.

**147.** The first computer that was operated with a mouse was the Xerox Alto.



*The Matrix DVD was the first to reach a million in sales*

**146.** GNU software is copyrighted. Software created under the GNU Public License is free to reproduce but carries certain

**145.**

**Brian Eno, musician, artist, producer and cultural theorist, created the Windows 95 startup sound.**

restrictions. This concept is called 'copyleft'.

**144.** The DVD of the movie 'Matrix' was the first to reach one million in sales.

**142.** Did you know Compaq Computer was formed in 1982, and their first product, announced in November 1982, was the Compaq Portable?

**141.** Did you know that Bill Gates and Paul Allen started a company called Traf-O-Data to monitor traffic flow?

**140.** HP's first product to hit the market, in 1938, was the HP 200A—a resistance capacity audio oscillator, which was used to test sound equipment.

**139.** The first 'technology' corporation to move into California's Silicon Valley was Hewlett-Packard, in 1938.

**138.** The first web browser written in Java was by James Gosling. Initially called 'WebRunner', it was later renamed 'HotJava'.

**137.** The servers are in Denmark. The software is from Estonia. The domain is registered in Australia, and the corporation is on a South Pacific island. That's Kazaa—the world's favourite P2P software.

**136.** 'Stewardesses' is the longest word you can type with your left hand using the usual two-handed typing method.

**135.** American cartoon artist Paul Kinsella has set up a Web site called 'Afterlife telegrams', where the living can send telegrams to the dead.

**143.**

**Did you know that the world's first transistor is located at Murray Hill, New Jersey?**



*To counter paedophiles, the FBI recruited teenage girls this year to teach officers to behave like girls on the Net*

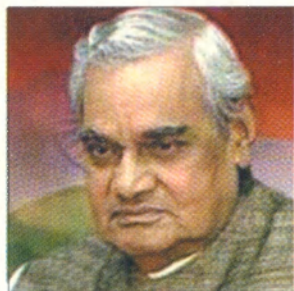
**134.** **Did you know that the first glossary of computer technology came out in 1954? It was edited by Rear Admiral Grace Hopper of the US Navy.**



- 133.** Messages were left by 5.8 lakh people on the official Web site of the British monarchy in September 1997, following the death of Princess Diana.
- 132.** An average of 40 million Hotmail e-mails are sent each day, and MSN has estimated that their service saves 500 trees—about 72,720 Kg of paper per day.
- 131.** The lobby of Cyrix Corporation's corporate headquarters has a mausoleum with the inscription "Intel Inside."
- 129.** Toonz Animation India, an animation company based in Thiruvananthapuram, produced the film Stone Crusher, free of charge, for UNICEF.
- 128.** The Apple 'Think Different' campaign used Mahatma Gandhi's philosophy in one of its ads.
- 127.** Before co-founding Apple, Steve Jobs worked for Atari, the computer and video game maker.
- 126.** Sending e-mails with CCs marked to famous personalities are called mail droppings in the IT world.
- 125.** 'Bloatware' is software that's too large for its utility.
- 124.** Former Prime Minister Atal Bihari Vajpayee was the first subscriber to India's first private Internet Service Provider, Satyam Infoway.
- 123.** In computer slang, an ordinary, postal mail is called snail mail.
- 122.** HP came up with an alternative to Java, called Chai, in 2001.

130.

**Scott McNealy of Sun Microsystems has a dog called Network.**



*Vajpayee was Satyam Infoway's first subscriber*

121.

**Did you know that Seagate was the first company to manufacture hard disks for microcomputers?**

**120.** In tech parlance, 'chip jewellery' is an outdated computer.

**119.** Windows 1.0 was released in 1985. Bill Gates and Apple CEO John Sculley signed confidential agreements that allowed Microsoft to use elements of the Apple GUI in its software.

**117.** Infosys was the first Indian company to release its annual report in CD-ROM format.

**118.**

**Steve Wozniak, co-founder of Apple, worked for Hewlett-Packard as a summer trainee.**

**116.** The Turing Award, given by the Association for Computing Machinery, based in New York, is awarded to people who have made significant contributions of a technical nature to the computing community. It is referred to as 'the Nobel Prize of computing', and is named after Alan Turing, the well-known British mathematician and computer scientist.

**115.** A 'Turing machine' defines our notion today of what a computer is. It consists of a tape head, a tape with 1s and 0s on it which can scroll in either direction, and something to interpret what the sequence of 1s and 0s mean.



*A demonstration of the Univac in action*

**114.** Fly-by-wire is a technology where a computer controls the flight of an aircraft and where the pilot's responses are relayed to a computer, which then gives the appropriate response to the aircraft's hydraulic systems.

**113.** The first fly-by-wire test flight was held in 1972 on a NASA F-8 test plane. The first passenger aircraft to get fly-by-wire tech-

**112.**

**Hewlett Packard started at a garage in Palo Alto in 1939.**





nology was the Airbus A320, launched in 1988.

- 110.** The origin of the term 'taped out' comes from the process of creating an optical mask for a semiconductor device. It was done by laying out pieces of tape representing the various parts of the chip on large tables.
- 109.** In 1952, a complaint was filed against IBM, alleging monopolistic practices in its computer business, in violation of the Sherman Act.
- 108.** BASIC, the name of the popular beginners' programming language, is an acronym for Beginners' All-purpose Symbolic Instruction Code.
- 107.** Vietnam War protesters attacked university computer centres in 1970. At the University of Wisconsin, the toll was one human and four machines.
- 106.** On election night, November 4, 1952, CBS News borrowed a UNIVAC to make a scientific prediction of the outcome of the race for the presidency between Dwight D. Eisenhower and Adlai Stevenson.
- 105.** The US Navy spent \$375,000 on an 'aerodynamic analysis of the self-suspended flare'. The research proved that the frisbee was not feasible as military hardware.
- 104.** Google recently added linear local search capabilities to its existing services.

**111.**

**In 2003, software companies lost \$5.5 billion due to piracy in Asia.**



*Windows Magazine was originally called OS/2 magazine*

**103.**

**Macquariums are aquariums made from old Macintosh computers.**

**102.** Content Protection for Removable Media (CPRM) is a hardware-based technology designed to enforce copy protection restrictions.

**100.** The publication 'Windows Magazine', on since February 1992, was launched in 1990 under the name 'OS/2 Magazine'.

**99.** The first Comdex was held in 1979 with 150 companies and 4,000 visitors.

**98.** In Silicon Valley slang, 'meatloaf' means unsolicited personal mass mailings.

**97.** The Sony VAIO, a cool and affordable line of consumer PCs and laptops, is a popular brand. 'VAIO' stands for 'Video Audio Integrated Operation'.

**96.** "10.22.38" was the first ever Xerox taken, on October 22, 1938, at a place called Astoria, by Xerox Machine founder Chester Carlson.

**95.** Dropping a computer one foot onto a flat surface was an Apple-endorsed procedure for the Apple III to ensure that the machine's integrated circuits were securely in their sockets.

**94.** By the early 1980s, MS Word had become the most popular word processing program.

**101.**

**There are more than 200 satellites orbiting earth just for private communications services—including the pager, telephone, and Internet services.**



*HDTV made its debut a long time ago, but still hasn't gotten to the masses*

**93.**

**Half a byte is called a nibble.**



**92.** 2001 was the serial number of the first Apple that rolled out of the assembly line.

**91.** Taxes made headlines in 2003, as US Internet retailers collected taxes on all purchases. Some US states taxed Internet bandwidth and the EU required all Internet companies to collect Value Added Tax (VAT) on digital downloads.

**840**

When the Original Mac was introduced, priced at \$666, many Christians were against it because 666 is 'Satan's number'.

**90.** A NUKE InterNETWORK poll in 2001 found that 52 per cent of Internet users had cut back on watching TV in order to spend more time online; 12 per cent had cut back on seeing their friends.

**89.** In 1989, HDTV made its debut in Japan.

**88.** Air conditioning was invented by Willis Carrier to help a Brooklyn, New York, printer to get decent colour during hot, humid weather. Air conditioning wasn't used for cooling people until 1924 when it made its debut at the J L Hudson Department Store in Detroit, Michigan.



*One of the first Apple Macs*

**87.** The word robot comes from the Czech word 'robota' meaning 'drudgery', 'servitude', or 'forced labour'. The word came into English in the early 1920s from a play, R.U.R (Rossum's Universal Robots), by Karel Capek. Capek's brother suggested the word.

**86.** 1975 saw the emergence of the first word processing software, the Electric Pencil. WordStar was released in 1978.

**85.**

**The technology contained in a single Game Boy unit in 2000 exceeds all the computing power that was used to put the first man on the Moon in 1969.**

**84.** The recording industry lost money as a result of the 'Napster Revolution', but some people did make money off it: from 1999 to 2001, sales of CD burners and blank CDs skyrocketed.

**82.** 1975 saw the emergence of the first word processing software, the Electric Pencil. WordStar was released in 1978.

**81.** SGI machines, hailed as high performance graphics workstations, use a custom developed UNIX-like OS, IRIX, and used to use CPUs from a company called MIPS.

**80.** In 1990, Microsoft shipped Windows 3.0 on May 22. Compatible with all DOS programs, it was the first successful version of Windows that finally offered satisfactory performance to PC users.

**79.** DEC (merged with Compaq, which has since merged with HP) used to assemble Apple Macs in India.

**78.** IBM developed an early memory technology known as Bubble Memory; as a part of a deal with Intel to manufacture and use the 8086 processors in their Display Write Intelligent Typewriter, IBM exchanged the IPR for Bubble Memory with Intel.

**77.** Steve Jobs and Steve Wozniak founded Apple Computer in 1976. Microsoft was later officially founded in 1977.

**76.** Apple's MacOS X utilises elements from BSD Unix, OpenStep, and MacOS9. The Unix base of OS X is Darwin, which is open source.

**83.**

It was only on the 3rd of July, 1978, that the New York Times began using computerised word processing.



Alan Turing

**75.**

In the late 80s and early 90s, the Union Budget was made on Apple computers gifted to the Finance Ministry.





- 74.** An interesting historical aspect of the classic Mac OS was a relatively unknown secret prototype Apple started work on in 1992, code-named Project Star Trek. The goal of this project was to create a version of Mac OS that would run on Intel-compatible x86 PCs. It was short lived, being cancelled only one year later in 1993, due to political infighting, with the goal not having been met. Although a direct port was never released, it did eventually become possible to run the classic Mac OS on x86 PCs by using third-party Macintosh emulators, such as vMac and Basilisk II.

**73.**

One of India's first parallel processing computers, an early PARAM, used Transputer CPUs from a British company called INMOS.

- 72.** The StrongARM microprocessor is a faster version of the Advanced RISC Machines ARM design. It was created by Digital Equipment Corporation, but later sold to Intel, who continues to produce it today as the XScale.

- 71.** The Turing Test determines whether AI has been reached. The setup is of a computer in one room, a human in the other, and an interrogator in the third. If the interrogator cannot make out the human from the computer, the latter is declared intelligent.



*The Loebner Award, for a machine passing the Turing Test*

- 70.** The Loebner Award is a prize consisting of a solid 24-karat gold medal to one who makes a machine pass the Turing Test.
- 69.** Intel produced the i860, a RISC microprocessor, which was released in 1989. The processor found limited markets in workstations as a graphics accelerator.
- 68.** Magnetic tape was first used to record data in 1951. The recording medium was a thin band of solid steel.

**67.**

**Did you know Apple and Sun came very close to a merger in 1996?**

66. Cornell University researchers have made a guitar no bigger than a blood cell, using nanotechnological techniques. The 'nanoguitar', 10 micrometers long, actually has six strummable strings.

64. Quantum cryptography is the ultimate form of cryptography. The chances of an eavesdrop per being undetected are one in trillions or quadrillions, which means for all practical purposes in the universe, nil.

63. Under Hong Kong laws, the term "computer" is defined as "any device for storing, processing or retrieving information". According to this definition, a slide rule and a pocket calculator are computers.

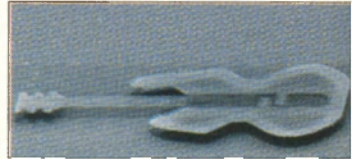
62. On 30th April 2004, Peter Burke and his team at the University of California at Irvine built a high-speed, carbon nanotube transistor. This is the latest in a string of devices that can be made with nanotubes, and according to the researchers, is the next step towards replacing silicon in a variety of electronic applications.

61. Apple was the first mass-market computer manufacturer to eschew the floppy altogether, with the release of the iMac in 1998. The first iMac had no floppy disk drive.

60. How the 5.25 inch floppy is that large is interesting. In 1976, Jim Adkisson, was approached by An Wang of Wang Laboratories, who felt that the 8" format of the time was too large for the desktop word processing machines he was developing at the time. After meeting in a bar in Boston, Adkisson asked Wang what size he thought the disks should be, and Wang pointed to a napkin and said "about that size". Adkisson took the napkin back to California, found it to be 5.25 inches wide, and developed a new drive of this size storing 110 KB.

65.

Xerox was the first company to develop technology to protect digital intellectual property rights.



The 'nanoguitar'—a guitar on the nanoscale with actual strings

59.

Marvin Camras invented the magnetic tape-recording method.

**58.** Apple selected the Sony 3 1/2" format for their Macintosh computers, thereby forcing the 3 1/2" to become the standard format for floppy drives in the US.

**57.** According to an IDSA estimate, worldwide piracy cost the US entertainment software industry \$3.2 billion in 1998.

**56.** Programming languages are commonly divided into four groups—imperative, declarative, logical, and object-oriented. Respective examples are C, Lisp, Prolog, and Java.

**55.** 128-bit SSL encryption is so strong that it would take much, much longer than the age of the universe to crack a message encrypted using it. Even 20 years from now, if computers are a million times faster, it would still take longer than the age of the universe to crack it.



*2002: 1 billion PCs sold so far*

**54.** An expert system is a computer system that answers questions that would take a human expert to be answered properly. They are used, for example, in medical diagnosis. Mycin, one of the oldest expert systems, is more accurate than a human doctor at answering questions about diagnosis.

**53.** In 2002, the one billion mark for number of PCs sold was reached. The 2 billion mark, it is estimated, will be reached in 2008.

**52.** The field of Artificial Life aims at creating complex, life-like behaviours in computer programs. Artificial Life can evolve, and produce results, or behaviours, not envisioned by the programmers, or, beyond what the programmers defined in the first place.

**51.** Xerox and TDA research are working on projects that could ultimately lead to the replacement of silicon in chips by plastic polymers. One polymer, Pedot, shows special promise.

**50.** The Cyc project, pioneered by Doug Lenat, aims at creating a database of common-sense, which all computers can use so that they become "automatically" more intelligent.

- 
- 49.** According to a November 2003 estimate, Google receives a 200 million hits a day.
- 
- 48.** There are approximately 25 million .com domain names registered worldwide.
- 
- 47.** Urban India stands at position 11 in the world in terms of Internet penetration, with a rate of 19%.
- 
- 46.** It was in 1972 that Ray Tomlinson developed the first networked-based e-mail program. He introduced the '@' sign in addresses.
- 
- 45.** ICQ was the first instant messaging program, and that's notable because it's still running, although it's been bought by AOL.
- 
- 44.** The JPEG sub-committee was set up by the ISO in the late 1980s to recommend a file format for the storage of high quality still images. The committee delivered, instead, an image compression standard. JPEG stands for Joint Photographic Experts Group.
- 
- 43.** Claude Shannon is arguably the father of Information Technology. In 1948, he published "A Mathematical Theory of Communication" in the Bell System Technical Journal. This paper founded the subject of information theory.
- 
- 42.** The first high-level programming language was Fortran. It was developed in 1956 by an IBM team headed by John Backus. Fortran became commercially available in 1957.
- 
- 41.** The first object-oriented language was Simula, although it was not completely object-oriented. It was developed by Kristen Nygaard and Ole-Johan Dahl in the mid 1960s.
- 
- 40.** ELIZA was the first well-known example of a "talking" AI program. It mimicked a psychiatrist talking to one of her patients, and was reasonably realistic for the time.
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- 39.** The term 'bandwidth' is commonly used to refer to how fast data can travel over a connection. Actually, bandwidth refers to the range of frequencies that the data is transmitted over.
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*Claude Shannon*





**38.** Three MIT scientists, Ronald Rivest, Adi Shamir, and Leonard Adleman invented the RSA cipher in 1978. The RSA public-key encryption algorithm remains the most widely-used encryption standard by secure Web sites etc.

**37.** DVD-18 is a standard that increased DVD capacities to 17 GB. The standard provides for 2 layers of data on either side of the disk, that is, dual-sided dual-layered. The first commercial DVD-18 title, *The Stand*, was released in October 1999.

**36.** Among Unix users, a bang is an exclamation point.

**35.** Nieman-Marcus offered a Honeywell H316 computer in 1969 for \$10,600. That was the first time a home computer was offered for sale by mail order.



*Rivest, Shamir and Adleman, the men behind RSA encryption*

**34.** In 1995, Iomega Corp. went from \$3.5 a share to \$48.63, for a gain of 1396%. This made it the company to have the greatest percentage gain of all NASDAQ high-tech stocks ever.

**33.** The network 'ping' program get its name from the sound of a sonar. The creator, Mike Muuss, says he named it after the sound that a sonar makes, inspired by the principle of echo-location.

**32.** Bridgeville in Northern California, the first town to be auctioned on eBay, was purchased recently for \$700,000, by a Southern California financial adviser.

**31.** The term 'silver bullet', which applies to any new technology or practice that will easily cure a major prevailing problem, originates from the myth that only a silver bullet could kill a werewolf.

**30.** Cryptography, the study of ways to convert information from its normal, comprehensible form into an obscured and unreadable guise, originates from the from Greek words 'kryptos' ("hidden") and 'graphein', ("to write").

**29.** The technique of compressing text or images into microdots to prevent their viewing by unintended recipients was invented by the Germans during World War II. It was later used by several countries to pass messages through insecure channels.

**28.** Smart cards, tiny secure computers for carrying out cryptographic operations embedded within a credit card-sized or smaller cards were invented and patented in France by Roland Moreno in the 1970s.

**27.** The IKONOS satellite, used for commercial satellite photography, can capture satellite images upto a resolution of 1m. The Quick bird satellite can go upto a resolution of 0.7m—which means cars can be identified using photos from these satellites!

**26.** George Philbrick was a pioneer in analogue computing. During the 930s, he developed the operational amplifier, which was key to the development of analogue computers.



*Smart cards were first patented and used in France*

**25.** *The Last Starfighter*, released in 1984 and directed by Nick Castle, was the first movie to do all special effects (except makeup) on a computer. All shots of spaceships and space were generated on a Cray computer. All of the special effects shots took just eight hours to generate.

**24.** Some regard Alan Turing as the father of AI, some say it is John McCarthy. McCarthy also invented the LISP language. Alan Turing is well-known for cracking German codes during WWII, and some say it's due to him that we Indians speak English now instead of German.

**23.** LISP is a programming language written in LISP itself. When you define functions in LISP, the entire language gets modified.

**22.** Under Hong Kong laws, the term "computer" is defined as "any device for storing, processing or retrieving information". According to this definition, a slide rule and a pocket calculator are computers.

**21.** In the Deep Web, the part of the Web not currently catalogued by search engines, public information is 500 times larger than on the WWW. The Deep Web contains 7,500 terabytes, compared to 19 terabytes on the surface Web. It contains nearly 550 billion individual documents compared to the 1 billion of the surface Web.

**20.** Many researchers and surfers consider that the first search engine

was Archie, created in 1990 by Alan Emtage, a student at McGill University in Montreal.

19. PL-I is a computer language developed by IBM that never reached wide usage. That was because it tried to be something of everything, something usable in business, mathematics, and other disciplines. Business users, for example, began using COBOL, and scientific users migrated to Fortran.

18. The first high-level programming language was Fortran. It was developed in 1956 by an IBM team headed by John Backus. Fortran became commercially available in 1957.

17. The first object-oriented language was Simula, although it was not completely object-oriented. It was developed by Kristen Nygaard and Ole-Johan Dahl in the mid 1960s.

16. The BIOS, or Basic Input/Output System, will be superseded by technologies such as Phoenix's CME (Content Management Engine) and the EFI (Extensible Firmware Interface).

15. To author and produce digital video technology when it first appeared on the scene averaged \$20,000. Today, a school district can utilise digital video at a very low cost and can produce digital video technologies for as little as \$2,000.

14. In 1992, working with digital video technology required at least \$6,000 at start up. Today, you can increase the price of a G3 by \$130 for it to have audio-visual capabilities. This is a 97% decrease in 5 years time.

13. When QuickTime was developed, it played 5 frames per second. Today, you can achieve broadcast-quality frame rate and speed with some digital video and streaming technologies.

12. It was in the early 1990s that digital video was introduced onto the technology front, with no compression.

11. In 1992, QuickTime 1.0 arrived on the scene as the primary codec program. Only a few months after QuickTime's release, Video for Windows was released as an AVI format.



10. MPEG1/Motion JPEG arrived on the scene as the latest codecs in 1995.
9. 1,525,000,000 , or 152 crore, miles of telephone wire is strung across the U.S.
8. The first device with an in-build hard drive for image recording was the Kodak DCS 200, in 1992.
7. In 1994, the Apple Quick Take 100 was the first mass-market colour digital camera. It had a 640 x 480 pixel CCD. Up to eight 640 x 480 resolution images could be stored in internal memory. It had a fixed-focus 50mm lens, and an in-built flash.
6. The RDC-1 was the first digital camera to offer both still and moving image and sound recording/reproduction. Its recording capacity on a 24MB PC card was 246 still pictures in standard mode, or 492 in economy mode, or four video scenes of five seconds each with sound. This was in 1995.
5. The first mass usage of 'smart cards' was payment in French payphones, beginning in 1983. They were called 'Telecartes'.
4. In 1952, Alick Glennie, who wrote the first computer compiler, defeated British mathematician Alan Turing's chess program, TurboChamp. He was the first person to beat a computer program at chess.
3. In 1957, Nobel laureate Herbert Simon said that within 10 years, a digital computer would be the world's chess champion.
2. Artificial Intelligence was listed by Wired Magazine in 2003 as one of ten 'ideas that failed'.
1. It is said that in the late 1800s, the US patent office said that it might as well close, because everything that could be invented had already been invented. This is similar to what physicist Lord Kelvin said in 1900: "There is nothing new to be discovered in physics now."



