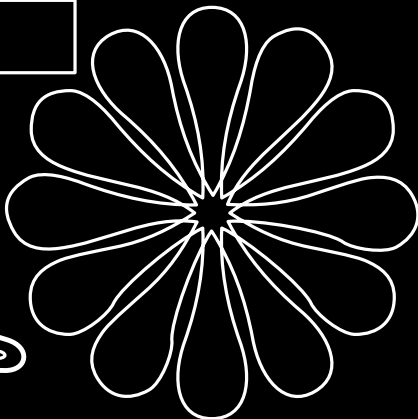
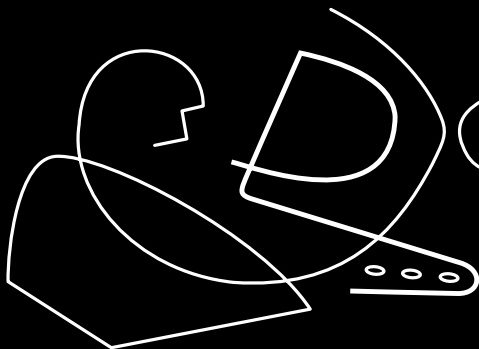


**PCADVISOR** GLOSSARY



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

## A

**access time** Amount of time it takes for a hard drive to find and retrieve a piece of information. Also known as seek time.

**ACPI** advanced configuration and power interface. The latest standard that specifies how PC or laptop power can be efficiently managed. Features include activating devices only when required and reducing clock speed when full processing power is not needed.

**ActiveX** Unlike **Java**, ActiveX is not a programming language, but a set of instructions on how an object should be used. ActiveX controls can be downloaded from the internet, and run just like Java applets. However, Java will only interact with your web browser, while ActiveX controls can access your Windows operating system.

**ADSL** asymmetric digital subscriber line. A permanently on, broadband connection to the internet using conventional phonelines. Data is downloaded to the PC faster than it is uploaded from the PC – hence the term ‘asymmetric’ is used to describe the connection.

**AGP** accelerated graphics port. An expansion slot linked directly to the motherboard’s system bus, enabling high-performance graphics. AGP graphics cards can access system memory

directly, as well as using their own video memory. AGP 2X has a peak transfer rate of 512MBps (megabytes per second), while AGP 4X runs at 1.1GBps (gigabytes per second).

**Ansi lumens** Refers to the brightness of a projector. The higher this figure, the brighter the image will be. Anything in excess of 800 Ansi lumens should be viewable in daylight.

**anti-aliasing** Technique used to adjust jagged diagonal lines and curves in images caused by false frequencies (aliases) to make them look smoother. This process is commonly used to improve the appearance of fonts.

**API** application program interface. A common interface that allows programs to make use of services provided by the operating system or other applications. **Winsock**, for example, is an API that allows Windows and other programs to talk to TCP/IP for internet access.

**applet** Program designed to be executed from within another program. Applets cannot be activated from an operating system.

**application** Software program, such as a word processor, spreadsheet or game, that is designed for a specific purpose.

**Ascii** american standard code for information interchange. Ascii is the most common format for text files in computers and on the internet.

**Atapi** attachment packet interface. This is an extension to the **EIDE** interface specification that additionally supports CD-ROM and tape drives.

**Athlon XP** AMD's processor, the Athlon XP, has a slower clock speed than its predecessors, but thanks to some clever tweaks of the architecture it is outperforming all the competition.

**AVI** audio video interleave. Designed by Microsoft to combine audio and video in a single track or frame to keep them synchronised. Files can be compressed using various audio and video coders (coder/decoder).

## B

**baseband** The most common type of network. Data is transmitted digitally, each wire carrying one signal at a time.

**Basic** beginner's all-purpose symbolic instruction code. A popular and simple programming language, which uses easy-to-understand statements. Microsoft's Visual Basic provides a graphical interface for writing programs.

**Bios** basic input/output system. Software stored in ROM (read-only memory) and used to start a PC when it is switched on. It checks that all required hardware components such as memory, disk drives and keyboard are present, loads

key parts of the operating system and tells it what hardware is available.

**bit** The smallest unit of data, which has a value of 1 or 0 and is stored by a capacitor in a memory chip using different electrical currents. Abbreviated b in data transfer rates – for example, 10Kbps (10,000 bits per second).

**Bluetooth** Specification for linking devices such as mobile phones, computers and PDAs (personal digital assistants) over a short-range wireless connection. The maximum range over which it can operate is currently 10 metres, with data transfer rates of up to 721Kbps (kilobits per second) supported.

**broadband** Describes transmissions over a wire that can carry multiple signals at once. Cable TV uses broadband transmissions.

**buffer underrun** Recording data to CD-R is a real-time process and cannot be interrupted, so most drives come with a buffer of memory to store information to cover times when the PC is not supplying information. Buffer underrun occurs when this buffer is exhausted and the PC has not resumed sending information to the drive.

**bus** The data path on the computer's motherboard that interconnects the microprocessor and other components in expansion slots.

**bus master** An intelligent device such as a **PCI** adapter card that can gain control of the bus and use it to transfer data without involving the processor.

**bus network** A network configuration in which a single cable, laid out as one long branch, connects all the networked PCs.

**byte** Group of eight **bits** used to represent a character or number with four bytes representing a word. The binary system is used, so a kilobyte is 1,024 bytes while a megabyte is 1,048,576 bytes (not 1,000,000 bytes). Abbreviated B in data transfer rates, for example, 33MBps (33,000,000 bytes per second).

## C

**cache** Temporary storage area used to speed up different processes. A web browser keeps recently used web pages on hard disk cache, so it doesn't have to download the same page again. A processor stores recent or frequently used instructions in chunks of very fast memory called level 1 and 2 caches.

**CCD** charge-coupled device. A CCD is used by digital cameras and scanners. It is a grid of light-sensitive cells that store an electrical charge proportional to the amount of light falling on them. The charge value in each cell is converted from analogue to digital and is used to build up a complete image.

**CDMA** code division multiple access. CDMA is a digital cellular technology. Unlike **GSM**, CDMA does not assign a specific frequency to each user. Instead, every channel uses the full available spectrum and the frequency is divided using codes.

**chipset** A number of integrated circuits which carry out related tasks. This is the name often given to the core functionality of a motherboard, or to the chip that powers a graphics card.

**client/server** A network where all services and facilities such as email or file and printer sharing are provided to networked, or client PCs and controlled by separate, purpose-built systems called servers.

**Cmos** complementary metal oxide semiconductor. A process used to make chips, but in a PC is shorthand for a battery-powered chip on the motherboard, which stores basic system configurations and clock settings.

**compiler** Special program that takes the instructions written in a programming language and turns them into machine code that a PC processor can understand.

**composite cable** A video cable with yellow connectors on the end used to view digital cameras on a television.

**cookie** Message sent by a web server to a browser and stored in a text file, usually called cookie.txt. The message is sent back

to the browser every time a new request is made at the website. Cookies are mostly used to identify users and create site visit statistics on types of browser, operating systems and popular pages.

**CPU** central processing unit. A microprocessor chip that is the 'brains' of a computer. Its many functions include fetching and carrying out instructions for programs.

**CRT** cathode ray tube. A monitor technology that works by moving an electron beam back and forth across the back of the screen. Each time it passes across the screen it lights up red, green and blue phosphor dots on the inside of the screen to make up the images you see.

**CMYK** cyan, magenta, yellow, keystone black. These are the four basic colours used by inkjet and laser colour printers. A huge range of colours are created by a combination of overlaying and dithering.

## D

**DDR RAM** double data rate RAM. A kind of memory that can handle data at twice the speed of **SDRAM** (static dynamic RAM).

**device driver** A program that controls a device which is attached to a PC, such as a printer, modem, monitor, graphics card or

CD-ROM drive, and enables your PC to interact with it. Windows comes with many popular device drivers already included.

**Dimm** dual inline memory module. A memory board that is effectively a double **Simm** (the preceding standard of memory board, that had to be installed in pairs). It uses a 168-pin connector, and its 64bit-wide bus allows single modules to be installed in Pentium systems.

**dithering** A printing process that involves simulating additional colours or shades by mixing available colours and varying dot sizes and spacing.

**DLL** dynamic link library. A program module that contains instructions common to different applications. Instead of including all these instructions in each program, the DLL can be called as required, loaded into memory and run. As the link is dynamic, the majority of DLLs can be unloaded when no longer needed, saving memory resources.

**DMA** direct memory access. A process for data retrieval from a device such as a hard disk that writes information into main memory without involving the processor, thus freeing it up for other tasks.

**dot pitch** A measurement, usually in millimetres, that indicates the diagonal distance between like-coloured phosphor dots on a monitor. The lower the number the higher the image intensity.

**dpi** dots per inch. A measurement of image intensity. Higher-intensity graphics and images will be smoother and better defined.

**DPOF** digital print order format. A format used for recording information from a digital camera to storage media. It allows the user to specify what shots they want and in what order.

**DRAM** The most common and cheapest form of computer memory, which uses one capacitor and transistor to store one bit of information. It is 'volatile' memory, so if you turn off the power you will lose any stored data.

**dualhead** A graphics card capability that allows you to connect two monitors to the same PC and double the amount of workspace.

**DVI** digital visual interface. A kind of interface between PCs and flat-panel monitors. Digital means that the monitor and PC communicate in digital signals, rather than having to translate between analogue and digital, providing steadier images.

**DVD** digital versatile disc. A high-capacity CD-ROM disc that can store up to 17GB of data. The latest discs have two layers and DVD drives use a laser with two focal points to read each one. Each layer holds 4.7GB, so a dual-layer, dual-sided disc will store 17GB of data.

**DVD-RAM** Commonly houses its discs in protective caddies like a large floppy. Your PC treats DVD-RAM drives as both optical and removable drives. It's therefore possible for users running Windows XP to drag files on and off a DVD-RAM in Windows Explorer as if it were a huge Zip disk.

**DVD-R** Essentially a higher capacity version of CD-R, its blank discs can store up to 4.7GB each. Like CD-R you can only use one side and record on them once, but the big bonus is that thanks to higher reflectivity, they appear to work in virtually all DVD-ROM drives.

**DVD-RW** and **DVD+RW** The former is pronounced 'minus RW'. Both use bare discs that can store up to 4.7GB on one side only, and require writing software – just like a higher-capacity version of CD-RW.

## E

**EDO** extended data out. To read a word of PC memory it must be pre-charged first. EDO memory speeds up this sequence by precharging the next word while still reading the current word.

**EIDE** enhanced integrated drive electronics. An enhanced version of **IDE** that supports large hard disks, faster access speeds and **DMA**.

**Emoticon** Set of keyboard characters used in emails to denote joking, sarcasm, boredom and so on. For instance, :) indicates a joke; :( unhappiness.

**EPP/ECP** enhanced parallel port/extended capabilities port. Improved parallel port which provides transfer rates of over 2MBps (megabytes per second) and bidirectional operation. The latter is mainly used by printer monitoring software as it can receive status information from the printer while sending it data. ECP mode is designed for other devices such as Zip drives.

**ECP** error correction protocol. Technique used in modems to cancel out extraneous electrical noise and repeat unsuccessful online transmissions.

**ethernet** The original form of the most popular type of network today that connects PCs together over shared cabling. It was called ethernet in remembrance of the ether from which electromagnetic radiation was once thought to flow.

## F

**FAT** file allocation table. A table held on a floppy or hard disk that tells the operating system the location of data and what order it is stored in. Using 16bit addresses, it supports disk sizes of 2GB, whereas FAT32 uses 32bit addresses and supports disk sizes up to 2TB (terabytes).

**fatal exception error** Windows error message generated by the operating system when it detects invalid code, invalid data or illegal instructions being accessed by a program. It frequently results in the infamous 'blue screen of death'. Generally requires restarting your PC to clear it.

**FAQ** frequently asked question. This term generally refers to a document posted on the internet or elsewhere for the specific purpose of assisting new users.

**fibre channel** A serial data transfer architecture that uses optical fibre to connect devices. It is designed for mass storage devices that need high bandwidth.

**file system** A means by which an operating system can manage files on a disk.

**FireWire** Very fast serial interface for connecting external devices. Also known as IEEE 1394 or iLink, it supports up to 63 devices and speeds of 400Mbps (megabits per second). First implemented on the Mac, it is more expensive than USB and suited to devices that require high-speed transfer rates, such as digital cameras.

**firewall** A system or software utility designed to stop unauthorised access to a private network. Can also be used by a company to control what resources outside the network employees can access.

**firmware** Software that is permanently stored on ROM (read-only memory). It provides many devices such as printers, modems and tape drives with basic instructions and, where flash ROM is used, the code can be changed by downloading a new set of instructions.

**FTP** file transfer protocol. A means of transferring files from one computer to another across the internet, and one of the principal tools that is available on the web (the three other key functions are email, newsgroups and the web).

## G

**gigabit ethernet** An extension of the 10 and 100Mbps (megabits per second) ethernet standards that describes 1,000Mbps transmission speeds. Originally required fibre optics, the specification now supports these speeds over copper cable.

**GPF** general protection fault. Caused by a program trying to access an area of memory being used either by another program or the operating system. If it were allowed to write to this area it would overwrite another program's data or instructions, so Windows stops it and requests that the errant program be closed down.

**GPRS** general packet radio service. A service that provides packet switched data radio technology for **GSM** networks. Being

always-on, GPRS connections offer mobile users network availability comparable to that of a corporate network.

**Graffiti** The handwriting recognition system used by Palm OS-based handhelds. Using a special alphabet, all characters are reduced to single strokes. Pocket PC offers an input method similar to Graffiti.

**graphics chip** The central chip used by the graphics card for graphic processing – such as the nVidia GeForce3, which may be used on many brands of chip.

**GSM** global support for mobiles. Currently GSM systems operate at 800MHz, 900MHz, 1,800MHz or 1,900MHz.

## H

**Hayes command set** Set of instructions for controlling basic modem functions, such as dialling and hanging up, devised by the modem manufacturer Hayes. You probably won't have to know anything about them; your comms program will let you select a plain-English option like 'dial now' and will then translate that into the relevant Hayes command code for you.

**HSCSD** high-speed circuit-switched data. HSCSD allows wireless data to be sent at a rate of 38.4Kbps (kilobits per second) or more, as opposed to a current **GSM** speed of 9.6Kbps. This is



comparable to the transmission rates of usual modems via fixed telephone networks today.

**HTML** hypertext markup language. HTML is the set of markup symbols or codes inserted in a file intended for display on a web browser page. The markup tells the web browser how to display a web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

**HTTP** hypertext transfer protocol. The communications protocol for the web. HTTP defines how information is transmitted across the internet.

**hub** A device used on a star network to connect all PCs together. When it receives a signal it refreshes and strengthens it before passing it on.

**hypertext** Method of presenting information so users can jump around a document by clicking on a highlighted word or an icon, rather than being forced to navigate it in a linear fashion.

## I

**IDE** integrated drive electronics. Also known as ATA, this is the most common interface for connecting hard disks and other storage devices to a PC. As all the controller electronics are built into the device, it can be connected directly to the motherboard so you don't need a separate adapter card (as you do with **SCSI**).

**i-mode** A service currently enjoying widespread popularity in Japan. It is provided by Japanese ISP NTT DoCoMo and is based on packet switched overlay over circuit-switched digital communications. Unlike most European or US WAP services, it is based on **TCP/IP** and is always on.

**intranet** A network maintained by a company that is only available to its staff or authorised users. Like the internet, it uses HTML pages and web browsers.

**invalid page fault** Caused when a page of data or program code in the swap file cannot, for various reasons, be loaded into the main memory.

**IRQ** Interrupt request signals used by devices to 'interrupt' the processor in order to gain its attention. For example, every key pressed on a keyboard generates an interrupt signal indicating that an event has occurred that requires an action. PCs support

15 hardware interrupts. Each device must have its own IRQ or conflicts will occur that can cause a PC to hang or crash, although plug and play devices have alleviated this problem.

**ISDN** integrated services digital network. A service that allows digital communications over standard phone lines and offers two 64Kbps (kilobits per second) bearer, or B-channels. It requires a special TA (terminal adapter) on the PC although these can cost as little as £30.

## J

**Java** An object-oriented programming language that enables software developers to create interactive elements that work across operating systems. Java is an ideal language for adding interactive elements to web pages.

**JavaScript** A scripting language, similar to Java, which allows web programmers to create dynamic content.

**JetSend** A technology developed by HP, which allows its printers to communicate directly with other compatible devices.

## M

**mail server** Software that enables a server to transfer email between its network and the internet.

**Memory Stick** An expansion format favoured by Sony, used to provide storage to devices such as digital and DV (digital video) cameras and PDAs (personal digital assistants).

**Midi** musical instrument digital interface. The industry standard for connecting a musical instrument, such as a keyboard, to a PC.

**Mpeg** motion picture experts group. A committee that defines the standards for digital video and audio compression techniques. Mpeg-1 compression allows video CDs to be played on computers at 30fps (frames per second) while Mpeg-2 is used for digital TV broadcasts and DVD movies.

**MP3** Mpeg-1 audio layer 3. A standard for compressing and storing audio sequences in very small files while maintaining high-quality sound. MP3 encoders use a mathematical model of the human ear and remove frequencies that would not normally be detected.

**MO** magneto-optical. A type of drive that combines magnetic disc technologies with those of a CD-ROM. Commonly used to

back up data, MO discs can be read, written to and removed. They are a high-capacity medium and offer fast access times.

**modem modulator/demodulator** The device which allows a computer to communicate and exchange information with other modem-equipped computers via normal phonelines.

**motherboard** The main circuit board of a PC, containing the connectors on to which are attached the components, such as the processor, memory and graphics cards.

**motherboard chipset** Two chips which form the circuitry that enables and controls the communication between the different components on the motherboard.

## N

**NIC** network interface card. A PCI or ISA adapter card installed in a PC in order to allow it to connect to a network. Some motherboards have an integrated network chip.

**nit** Unit of visible-light intensity, commonly used to specify the brightness of a CRT (cathode ray tube) or LCD (liquid crystal display) monitor. One nit is equivalent to one candela per square metre. The candela, formerly called candlepower, is approximately the amount of light emitted by a common wax candle. The nit is a comparatively small unit of brightness –

for example, a typical flat-panel has an output between 200 and 300 nit.

**NOS** network operating system. Software designed to run on a server that controls access from client PCs to services such as email or printer sharing. Windows NT Server and Novell NetWare are the two most common NOSs.

## O

**OCR** optical character recognition. Software that analyses scanned images and translates the letters and numbers it recognises into editable text for use in applications such as word processors.

**OLE** object linking and embedding. Allows files or data created by one application to be linked or embedded in another. Excel spreadsheets can be placed in Word documents, for example, and any further changes to the original will be reflected in the linked version.

## P

**packet** This is a unit of data, which is typically a part of a file, that has been prepared for transmission across a network, usually the internet.

**parallel port** A 25-pin port on a PC that uses eight wires to transfer one byte of data at a time at speeds up to 100KBps (kilobytes per second) and is used mainly for connecting printers.

**PCI** peripheral component interconnect. The most common bus design for motherboards and expansion slots.

**PCL** printer control language. A language developed by HP to control its LaserJet printers and supported by virtually all printer manufacturers. It consists of commands called 'escape sequences' that programs use to tell the printer about the number of copies to print, the resolution and page formatting.

**peer-to-peer** A small network of PCs that do not use a central server. Each user can decide what resources on their PC they wish to share.

**pixel pitch.** On flat-panel displays it's the pixel pitch that determines how many dots can be displayed on the screen. The lower the pixel pitch, the more dots will be used to build up an image.

**platters** Circular discs within a hard drive on which data is stored. Typically 3.5in diameter.

**plug and play** Sometimes shortened to PnP, this is a standard which allows a PC to automatically recognise when compatible

devices, such as printers or monitors, are connected to it. Previously, it was necessary for the user to inform the PC that new hardware had been attached in order to get the device in question working.

**POP** point of presence. The location of the nearest node for an ISP, this is the number you dial to connect to the internet. A POP necessarily has a unique internet protocol address.

**Post power-on self test.** The first process a PC runs when it is switched on that checks the memory, processor, graphics and so forth are all functioning. A series of beeps indicate if errors are found – one beep usually means that all is well.

**PostScript Page** description language developed by Adobe Systems that describes each element as a vector pair, rather than telling the printer where to place each dot of ink or toner. It is more suited to graphics printing and has wider application than **PCL** as it can produce better output quality at higher print resolutions.

**proxy server** A server that sits between your browser and a web server. The proxy server intercepts all requests by your web server and checks that it doesn't have the requested web page stored on its hard disk. If it has, the proxy server returns the requested web page from its hard disk. Proxy servers help to speed up internet access and can also be used to filter out requests for unsuitable web pages.

## R

**Raid** redundant array of independent disks. A disk drive that has two or more drives so it can provide a constant backup in case of failure, or produce higher performance rates.

**RAM** random access memory. The main memory of a PC, measured in megabytes, holding frequently used data. The more you have, the faster your PC can work, though there are different kinds that operate at different speeds (see also **SDRAM**, **Rambus** and **DDR RAM**).

**Rambus** A kind of memory technology, used exclusively by Intel, suitable for demanding applications. Its higher bandwidth makes it more efficient than **SDRAM** and very slightly faster than **DDR (double data rate) RAM**.

**RDRAM** see **Rimm**.

**redundancy** The doubling-up of components, such as power supply or network cards on a server, so that if one fails, the other can take over.

**refresh rate** The number of times a monitor's screen information is updated every second. The higher the rate, the smoother the display will be and the less flicker you'll see. It is measured in hertz.

**Rimm** Rambus inline memory module. Also known as RDRAM, this type of memory has the potential to run at speeds up to 800MHz as opposed to **SDRAM's** maximum of 133MHz. Speed is also increased by processing instructions 16bits at a time rather than 8bit.

**Risc** reduced instruction set computer. A microprocessor designed to perform a smaller number of types of computer instructions. It can operate at a higher speed so it is therefore cheaper and faster than standard processors.

**router** A device used to link multiple networks together. More effective when multiple paths are available as it can read the destination address of each packet of data and determine the best path for it to take.

**rpm** revolutions per minute. A measurement of how fast a disc spins, for example, the platter in a hard drive.

## S

**SCSI** small computer systems interface. Pronounced 'skuzzy', this interface connects hard disks and other compatible devices to a PC. It is more expensive than **EIDE**, but faster and more versatile. The latest Ultra3 SCSI supports up to 16 devices (including the SCSI adapter card or chip), with transfer rates of 160MBps (megabytes per second).

**SD** secure digital. An expansion format, about the size of a postage stamp, favoured by handheld PC maker Palm. It provides increased storage for small devices such as PDAs (personal digital assistants) and digital cameras.

**SDRAM** synchronous dynamic RAM. A type of memory that synchronises itself with the speed of the PC's bus and can run at speeds up to 133MHz, about twice as fast as EDO RAM.

**SDR RAM** A type of RAM mostly used in graphics cards to cut costs.

**seek time** See **access time**.

**Simm** single inline memory module. A type of RAM that holds a row of memory chips, has a 72-pin connector and uses a 32bit-wide bus. As Pentium processors have a 64bit bus, Simms must be installed in pairs.

**single-pass technology** Printer technology in which the page passes over the printer drum once, rather than four times, during full-colour printing.

**Smart** self monitoring analysis and reporting technology. A feature of **EIDE** (on motherboards that support it), where the **Bios** can receive data about hard disk performance and warn a user if it predicts a failure is likely to occur.

**Slip/PPP** serial line interface protocol/point-to-point protocol. These are both standards for connecting directly to the internet, as opposed to having to log on via a host computer.

**star network** A network configuration in which each networked PC is connected to a central controller, or hub, with its own piece of cable.

**stuck pixel** A minor malfunction of flat-panel monitors, where some pixels show up as black dots.

**swap file** Also called virtual memory, this is a file on your hard disk used as a main memory supplement to make programs think that there is more memory than is actually installed. Program code and data are written to it in chunks called pages and these are swapped into main memory when required.

**switch** An intelligent hub that reads the destination addresses of incoming data packets and only sends them to a port the recipient's PC is physically attached to.

## T

**TCP/IP** transmission control protocol/internet protocol. The standard governing communication between all computers on the internet. TCP/IP works by sending packets of information across multiple networks.

**TFT** thin-film transistor. A high-quality liquid crystal display screen that uses between one and four transistors per pixel to control illumination. Each transistor requires little power and has a fast response to changes as it can be switched on or off very quickly.

**Titanium** An advanced model of nVidia's GeForce family of graphics cards, providing good performance at a lower price.

**toner** Instead of ink, laser printers use a powdery substance called toner. It is electronically charged by the printer so it will stick to a drum, plate or page of the opposite polarity.

**transparency adapter** An optional fitting on a scanner that allows it to read transparencies.

**TV card** A card that allows a PC to receive and display TV images and record and manipulate video images.

**Twain** A program that sits between a scanner and graphics software, enabling an image to be scanned directly into a graphics application. Reputedly stands for 'technology without an interesting name', an acronym possibly derived from the saying 'Ne'er the twain shall meet'.

**twisted pair** Standard phone cable.

## U

**UDMA** Ultra DMA. Data transfer system for drives. Supports transfer rates of 33MBps (megabytes per second), 66MBps and 100MBps – hence the terms UDMA33, UDMA66 and UDMA106.

**universal plug and play** Often shortened to UPnP, this is an extension of the PnP (plug and play) standard which uses internet protocols to make a PC recognise when new devices have been attached to it.

**URL** unique resource locator. The address of a web page, such as <http://www.pcadvisor.co.uk>.

**USB** universal serial bus. A plug and play interface on a PC allowing devices to be connected and used without any need for configuration by the user. USB supports up to 127 devices and speeds of 12Mbps (megabits per second) and allows devices to be removed or added without switching off the PC first.

## V

**vapourware** Name given to software that is announced far in advance of any release and either never materialises or appears much later than originally advertised.

**virus** Written by sad and lonely individuals, viruses are small programs designed to reproduce themselves on your PC and cause havoc. They insert themselves into other programs or on to disks and can destroy data or crash PCs. They can be picked up easily over the internet, which is why antivirus software is an essential purchase.

**VRAM** video random access memory. Special type of memory used on video adapters to speed up image display rates. Can be accessed simultaneously by two devices, so the digital-to-analogue converter (Ramdac) can provide screen updates while the video processor is supplying data.

**VxD** virtual device driver. A special type of device driver that has access to the core of the operating system for supervising hardware operations directly. A mouse, serial port and parallel port use VxDs.

## W

**WAN** wide area network. This acronym refers to a group of LANs (local area networks) connected over a large geographical area. The internet is probably the largest WAN in the world.

**Winsock** A program that provides Windows with a standard way to communicate with the internet. Any Windows-based computer needs one. If you don't already possess a Winsock, you will

probably be provided with a copy by your ISP. However, it may come as part of your connection software.

**Wysiwyg** what you see is what you get. Pronounced 'wizzywig', this term refers to an application that shows on the screen exactly what will appear on the document when it is printed. This includes colours, fonts and graphics as well as text.

**Wysiwyg editor** A software package which makes website creation easy. Design-wise, what you see is what you get, while the HTML code the computer uses is automatically generated by the program.