

from the common language runtime. *See also* managed code.

unmoderated *adj.* Of, pertaining to, or characteristic of a newsgroup or mailing list in which all articles or messages received by the server are automatically available or distributed to all subscribers. *Compare* moderated.

unmount *vb.* To remove a disk or tape from active use. *Compare* mount.

unpack *vb.* To restore packed data to its original format. *Compare* pack.

unpopulated board *n.* A circuit board whose sockets are empty. *Compare* fully populated board.

unread *adj.* **1.** Of, pertaining to, or being an article in a newsgroup that a user has not yet received. Newsreader client programs distinguish between “read” and “unread” articles for each user and download only unread articles from the server. **2.** Of, pertaining to, or being an e-mail message that a user has received but has not yet opened in an e-mail program.

unrecoverable error *n.* A fatal error—one that a program is unable to recover from without the use of external recovery techniques. *Compare* recoverable error.

unreliable protocol *n.* A communications protocol that makes a “best effort” attempt to deliver a transmission but does not provide for verifying that the transmission arrives without error.

unroll *adj.* *See* inline (definition 1).

unset *vb.* To make the value of a bit position equal to 0. *Compare* set (definition 1).

unshielded cable *n.* Cable that is not surrounded with a metal shield. If the wires in an unshielded cable are not at least twisted around each other in pairs, the signals they carry have no protection from interference by external electromagnetic fields. Consequently, unshielded cable should be used only over very short distances. *Compare* coaxial cable, ribbon cable, twisted-pair cable, UTP.

unshielded twisted pair *n.* *See* UTP.

unshielded twisted-pair wiring *n.* *See* UTP.

unsolicited commercial e-mail *n.* *See* spam.

unsubscribe *vb.* **1.** In a newsreader client program, to remove a newsgroup from the list of newsgroups to which

one subscribes. *See also* newsgroup. **2.** To remove oneself as a recipient on a mailing list. *See also* mailing list.

untar¹ *n.* A utility, available for systems in addition to UNIX, for separating the individual files out of an archive assembled using the UNIX *tar* program. *Compare* tar¹.

untar² *vb.* To separate the individual files out of an archive assembled with the UNIX *tar* program. *Compare* tar².

unzip *vb.* To uncompress an archive file that has been compressed by a program such as compress, gzip, or PKZIP.

up *adj.* Functioning and available for use; used in describing computers, printers, communications lines on networks, and other such hardware.

UPC *n.* Acronym for **Universal Product Code**. A system of numbering commercial products using bar codes. A UPC consists of 12 digits: a number system character, a five-digit number assigned to the manufacturer, a five-digit product code assigned by the manufacturer, and a modulo 10 check digit. *See also* bar code.

update¹ *n.* A new release of an existing software product. A software update usually adds relatively minor new features to a product or corrects errors (bugs) found after the program was released. Updates are generally indicated by small changes in software version numbers, such as 4.0b from 4.0. *See also* version number. *Compare* release¹.

update² *vb.* To change a system or a data file to make it more current.

update query *n.* A database query that changes a set of records according to search conditions or criteria.

upflow *n.* In the data warehousing process, the stage during which stored information is checked for completeness, summarized, and readied for distribution. *See also* data warehouse². *Compare* downflow, inflow, metaflow.

upgrade¹ *n.* The new or enhanced version of a product.

upgrade² *vb.* To change to a newer, usually more powerful or sophisticated version.

uplink *n.* The transmission link from an earth station to a communications satellite.

upload¹ *n.* **1.** In communications, the process of transferring a copy of a file from a local computer to a remote computer by means of a modem or network. **2.** The copy of the file that is being or has been transferred.



the merchant's server and allows the user to authorize the appropriate debit to a credit card.

wallpaper *n.* In a graphical user interface such as Windows, a pattern or picture in the screen background that can be chosen by the user. *See also* graphical user interface.

WAN *n.* Acronym for **w**ide **a**rea **n**etwork. A geographically widespread network, one that relies on communications capabilities to link the various network segments. A WAN can be one large network, or it can consist of a number of linked LANs (local area networks).

wand *n.* Any pen-shaped device used for data entry, such as a graphics tablet's stylus or, most commonly, the scanning instrument used with many bar code readers. *See also* optical scanner, scan head. *Compare* stylus.

wanderer *n.* A person who frequently uses the World Wide Web. Many of these people make indexes of what they find.

WAP *n.* *See* Wireless Application Protocol.

war dialer *n.* A computer program that calls a range of phone numbers to identify those numbers that make a connection to a computer modem. War dialers are typically used by hackers to search for vulnerable computers and, once a connection is made, the war dialers may automatically probe the computer for potential weaknesses. Early war dialer programs called demon dialers were used to crack telephone systems in the 1970s and 1980s.

warez *n.* Illegal copies of computer software distributed through the Internet and other online channels, such as bulletin boards and FTP servers. The spelling is part of the tendency among some online groups to use odd symbols and intentional misspellings. *Compare* freeware, shareware.

warm boot *n.* The restarting of a running computer without first turning off the power. *Also called:* soft boot, three-finger salute, vulcan death grip, warm start.

warm start *n.* *See* warm boot.

warp *vb.* Sometimes used by computer game developers to describe the need to completely redraw a screen within a game. For example, moving through a door or advancing to a higher level would require a complete screen overhaul. *See also* computer game.

watchdog *n.* A hardware device (usually a timer or driver) used to monitor continuing system health and functionality through communications with the system software using a dedicated device driver.

watermark *n.* A semitransparent image often used for letters and business cards. In currency, a watermark is visible when you hold a bill up to the light.

watt *n.* The unit of power equal to the expenditure of 1 joule of energy in 1 second. The power of an electrical circuit is a function of the potential across the circuit and the current flowing through the circuit. If E = potential, I = current, and R = resistance, power in watts can be calculated as $I \times E$, $I^2 \times R$, or E^2/R .

.wav *n.* The file extension that identifies sound files stored in waveform (WAV) audio format. *See also* WAV.

WAV *n.* A file format in which Windows stores sounds as waveforms. Such files have the extension .wav. Depending on the sampling frequency, on whether the sound is monaural or stereo, and on whether 8 or 16 bits are used for each sample, one minute of sound can occupy as little as 644 kilobytes or as much as 27 megabytes of storage. *See also* sampling, waveform.

wave *n.* **1.** Any disturbance or change that has an oscillatory, periodic nature, for example, a light or sound wave. *See also* waveform. **2.** In electronics, the time-amplitude profile of an electrical signal.

wave division multiplexing *n.* *See* dense wavelength division multiplexing.

waveform *n.* The manner in which a wave's amplitude changes over time. *See also* period, phase, wavelength.

wavelength *n.* The distance between successive peaks or troughs in a periodic signal that is propagated through space. Wavelength is symbolized by the Greek letter lambda and can be calculated as speed divided by frequency.

wavelet *n.* A mathematical function that varies over a limited extent of time. Wavelets are coming into increasing use for analyzing signals (such as sound). They have limited duration and sudden changes in frequency and amplitude rather than the infinite duration and constant amplitude and frequency of the sine and cosine functions. *Compare* Fourier transform.

wave table synthesis or **wavetable synthesis** *n.* A method of producing sound, especially music, through a PC. Wave table synthesis is based on use of a wave table, which is a collection of digitized sound samples taken from recordings of actual instruments. These samples are typically stored on a sound card and are edited and mixed together to produce music. Wave table synthesis produces

whiteboard *n.* Software that allows multiple users across a network to work together on a document that is simultaneously displayed on all the users' screens, as though they are all gathered around a physical whiteboard.

Whiteboard *n.* Microsoft NetMeeting feature that opens a separate window in which multiple users can simultaneously review, create, and update graphic information. The Whiteboard is object-oriented, not pixel-oriented, allowing participants to manipulate the contents by clicking and dragging with the mouse. In addition, they can use a remote pointer or highlighting tool to point out specific contents or sections of shared pages. The NetMeeting Whiteboard is T.126 compliant and is interoperable with other T.126-compatible whiteboards.

white box *n.* A nonbranded PC assembled by a reseller, potentially including components from a number of manufacturers. The name refers to the typical color of the shipping carton, a box unadorned by brand name or logo.

white box testing *n.* A method of testing software that is based on knowledge of how the software is intended to function. Unlike black box testing, which focuses on how the software functions without reference to how it is designed, white box testing relies on detailed knowledge of the program code itself and is intended to find flaws and/or errors in its design and specification. *Also called:* glass box testing. *Compare* black box testing.

white hat *n.* A hacker who operates without malicious intent. A white hat will not break into a system with the intention of doing damage. White hats may be employed to provide security against other hackers. *See also* hacker. *Compare* black hat.

white noise *n.* Noise that contains components at all frequencies, at least within the frequency band of interest. It is called "white" by analogy to white light, which contains light at all the visible frequencies. In the audible spectrum, white noise is a hiss or a roar, such as that produced when a television set is tuned to a channel over which no station is broadcasting.

white pages *n.* *See* DIB (definition 2).

white space *n.* The areas of blank space on a page that can be used in a design for balance, contrast, and visual appeal.

whois *n.* **1.** An Internet service, provided by some domains, that enables a user to find e-mail addresses and other information for users listed in a database at that domain. **2.** A UNIX command to access the whois service. **3.** A command that displays a list of all users logged onto a Novell network.

whois client *n.* A program (such as the UNIX whois command) that enables a user to access databases of usernames, e-mail addresses, and other information. *See also* whois (definition 1).

whois server *n.* Software that provides the usernames and e-mail addresses from a database (often listing people who have accounts at an Internet domain) to users who request the information using whois clients. *See also* whois (definition 1).

Whole Earth 'Lectronic Link *n.* *See* WELL.

whole number *n.* A number without a fractional component—for example, 1 or 173; an integer.

WID *n.* Acronym for **Wireless Information Device**. Smart phone or other handheld wireless device capable of multiple communications functions, including e-mail and Internet access.

Wide Area Information Server *n.* *See* WAIS.

wide area network *n.* *See* WAN.

wideband transmission *n.* *See* broadband network.

Wide SCSI *n.* A form of the SCSI-2 interface that can transfer data 16 bits at a time at up to 20 megabytes per second. The Wide SCSI connector has 68 pins. *Also called:* Wide SCSI-2. *See also* SCSI, SCSI-2. *Compare* Fast SCSI, Fast/Wide SCSI.

Wide SCSI-2 *n.* *See* Wide SCSI.

widow *n.* A last line of a paragraph, shorter than a full line, appearing at the top of a page. A widow is considered visually undesirable on the printed page. *Compare* orphan.

wildcard character *n.* A keyboard character that can be used to represent one or many characters. The asterisk (*), for example, typically represents one or more characters, and the question mark (?) typically represents a single character. Wildcard characters are often used in operating systems as a means of specifying more than one file by name.

high-end scanners and allows retrieving of still images from IEEE 1394-based DV camcorders and USB-based Web cams. *Acronym:* WIA.

Windows IP Configuration *n.* See Winipcfg.

Windows Management Instrumentation *n.* A management infrastructure in Windows that supports monitoring and controlling system resources through a common set of interfaces and provides a logically organized, consistent model of Windows operation, configuration, and status. *Acronym:* WMI. *See also* resource.

Windows Me *n.* Released in 2000, the Windows Millennium Edition (Windows Me) operating system designed for home users as an upgrade from Windows 95 or Windows 98. Windows Me offers an improved home user experience including making it easier for users to share and manipulate digital photos, music, and videos, enhanced home networking capabilities, a rich Internet experience with support for broadband connections, different Internet communication tools, and online gaming.

Windows Media Audio *n.* A digital audio coding scheme developed by Microsoft that is used in distributing recorded music, usually over the Internet. Windows Media Audio shrinks the size of the audio file by a factor of 20 to 24 without seriously degrading the quality (CD-recording level) of the sound. Windows Media Audio files are given the file extension .wma and can be created with Windows Media Tools and played with the Windows Media Player. *Acronym:* WMA. *See also* Windows Media Technologies. *Compare* MP3, RealAudio, Secure Digital Music Initiative.

Windows Media Encoder *n.* A Windows Media technology that compresses live or prerecorded audio and video into a Windows Media stream, which can either be distributed immediately or saved as a Windows Media file for later distribution. The technology allows content developers to convert both live and prerecorded audio, video, and computer screen images to Windows Media Format for live and on-demand delivery. Windows Media Encoder also can save a stream as a Windows Media file and convert a file into Windows Media Format. Windows Media Encoder can distribute a stream via HTTP protocol. *Also called:* (if context is clear) Encoder, the encoder, the encoder engine.

Windows Media Player *n.* A client/control that receives a stream from a Windows Media server or local content for playback. It can run as a stand-alone client executable program. Windows Media Player can also be embedded in

a Web page, a C++ program, or a Microsoft Visual Basic program that uses the client ActiveX control.

Windows Media server *n.* A server on which Windows Media Services has been installed.

Windows Media Services *n.* A digital media platform that runs on a server, such as Windows 2000, to support streaming media, such as video and audio.

Windows Media Technologies *n.* Microsoft technologies for the creation, delivery, and playing of streaming audio and video over a network, including both intranets and the Internet. Windows Media Technologies, downloadable from the Microsoft Web site, support both live and on-demand (delivered from storage) content and are based on files delivered in Advanced Streaming Format (ASF). Three major components—Windows Media Tools, Windows Media Services, and Windows Media Player—comprise Windows Media Technologies. *See the table.* *See also* Advanced Streaming Format. *Compare* Real-System G2.

Table W.2 ATA Specifications.

<i>Component</i>	<i>Purpose</i>	<i>Features</i>
Windows Media Tools	Content creation	ASF authoring and editing tools, including tools for converting files from other formats (WAV, AVI, MPEG, and MP3) to ASF.
Windows Media Services	Content delivery	Tools for real-time and on-demand content delivery, administration tools, and Windows Media Rights Manager for piracy control.
Windows Media Player for PC platforms, Windows Media Player for Macintosh, Windows Media Player for UNIX	Content playback	ASF player for audio, audio plus still images, and full-motion video. Also supports other multimedia data, including RealAudio.

