

## General Glossary

Keywords / Key Phrases: glossary

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**Note:** If the letter does not appear in the above list, send us a suggestion and we will include the term with its definition in the next article upate.

0-9:

**1394**

See [IEEE1394](#)

**640x480, 800x600, 1024x768**

See [Resolution](#)

**16-bit/32-bit Colour**

See Also: [Bit](#)

Represents the number of bits used to represent each dot (pixel) on the screen.

**802**

A family of standards created by the IEEE. The 802 standards pertain to networks which can send data in packets of variable size. The standards cover how data is transmitted and received.

**802.3**

The standard created by the IEEE known as Ethernet, stemming from the idea that data was traveling through the ether. The 802.3 standard covers networks that transmit data in packets.

**802.11**

The standard created by the IEEE to cover WLANs. This standard includes amendments represented by a letter after 802.11. The most common amendments, and their data rates, are **a** (54 Mbps), **b** (11 Mbps), and **g** (54 Mbps).

**802.15.1**

See [Bluetooth](#).

### **802.1q**

A standard allowing several networks bridged together to prevent unnecessary information from being sent between networks. 802.1q allows information to be marked as to which VLAN the information is being sent to. Data for another network can be tagged with the VLAN the information is bound for, allowing multiple VLANs to communicate using a router.

A:

### **A2DP (Advanced Audio Distribution Profile)**

A method of communication for some Bluetooth devices to send stereo streams, such as music, from the audio source to the receiving device, such as a pair of headphones.

### **A3D**

Originally developed in 1997 in collaboration NASA (National Aeronautics and Space Administration) for use in flight simulators, an audio format that was developed by Aureal in an attempt to make digital sounds more true to their analog kin. It was meant to be a wavetracer that simulated the complexity of sound paths. It was eventually replaced by Microsoft's Direct Sound 3D which was implemented in Direct X 5.

### **AC3**

Also known as Dolby Digital. This is a form of perceptual digital audio encoding that reduces the amount of data needed to produce a high-quality sound.

### **ACPI**

Advanced Configuration and Power Interface

A power management specification developed by Microsoft, Intel and Toshiba. With ACPI, the operating system can turn off peripheral devices that are not being used.

### **ACPI Multiprocessor PC**

See [Hardware Abstraction Layer \(HAL\)](#)

### **ACPI Uniprocessor PC**

See [Hardware Abstraction Layer \(HAL\)](#)

### **Ad Hoc**

A type of network in which devices connect directly to each other. Ad hoc networks are typically composed of wireless devices.

### **ADSL (Asynchronous DSL)**

A category of DSL allowing for simultaneous data transfer and phone usage over the phone wiring.

## **Advanced Configuration and Power Interface (ACPI) PC**

See [Hardware Abstraction Layer \(HAL\)](#)

### **ADC**

ADC stands for **Analog to Digital Converter**

ADC is an electronic device that allows an audio analog wave to be digitally reproduced as the same sounding file. An ADC converts the sine wave which an audio signal takes its form as and converts it into 1s and 0s which will reconstruct the sine wave digitally to cause the same sound to be played.

### **ADPCM**

ADPCM stands for **Adaptive Differential Pulse Code Modulation**.

### **AGP**

See Also: PCI, System Memory, Bit, MHZ, Texture, RAM

Accelerated Graphics Port

AGP is based on PCI, but is designed especially for the demands of 3D graphics. The AGP standard allows the graphics card to directly access System Memory. The AGP channel is 32 bits wide and runs at 66 MHz. In addition, AGP allows 3-D textures to be stored in system RAM rather than the graphics card RAM.

### **Amplified Speakers**

Amplified speakers draw mains power, i.e. they require their own power supply.

### **AM (Amplitude Modulation)**

A type of radio broadcasting which detects changes in the amplitude of a radio signal at a particular frequency. AM radio has three major frequency bands, each which have common uses. Long wave, with a frequency band of 153 kHz - 279 kHz, is often used for radio broadcasts in Europe, North Africa and portions of Asia, and in America for aeronautic broadcasts.

Medium wave has a frequency band of 530 kHz - 1,710 kHz in American and 520 kHz - 1620 kHz in other parts of the world, and is used for the radio broadcasts most are familiar with. Short wave has a frequency of 2,300 kHz - 26,100 kHz and is often used for longer distance, lower quality radio broadcasts.

### **Amplitude**

The maximum change in a wave during one occurrence of a wave.

### **Amps**

Amps is short for Amperage. The strength of an electrical current flowing through a wire or other electrical conductor is expressed as amps.

### **Analog**

A method of representing data using a continuous electrical signal. A disadvantage of analog signals is their susceptibility to noise.

### **Antenna**

A device designed to send or receive wireless radio signals through the air. Antennas can be used for wireless networking or accessing radio stations broadcasting music. An antenna can be either omni-directional (signals can be sent or received in many directions at once) or directional (signals can be sent or received only in one direction).

### **Anti Virus Software**

See Also: [Virus](#)

A program that searches the PC hard disk for viruses and removes any found. As anti virus software constantly monitors the PC, it may need to be disabled before installing or updating software.

### **API**

Application Program Interface

A set of tools for building software. An API makes it easier to write software by providing the basic building blocks which a programmer then puts together.

### **AP (Access Point)**

See [WAP \(Wireless Access Point\)](#).

### **ASCII (American Standard Code for Information Interchange)**

A set of codes for representing text, based on the English alphabet, in a computer.

### **ASIC**

Application Specific Integrated Circuit

A circuit designed for a specific application, as opposed to a general purpose circuit, such as a microprocessor. Using ASICs as components in electronic devices can improve performance, reduce power consumption, increase safety and reduce costs.

### **ASIO**

An audio transfer standard that allows software to have access to the multi-channel capabilities of sound cards.

An ASIO driver allows a MIDI application to "see" all of the inputs and outputs (I/O) available on the sound card. The user can then assign these I/O ports as needed for recording or playback when using an ASIO-compatible software program. This allows the users to record more tracks simultaneously than the previous limitation of two channels imposed by a standard sound card.

### **AT Commands**

Attention commands

These are used to communicate with your modem. These commands modify your

modem's behaviour or instruct the modem to do something specific, e.g. dialling a telephone number.

**Attenuation**

A decrease in the strength of a signal over a distance. The farther distance a signal travels, the weaker it will become.

**AutoPlay**

AutoPlay is a Windows feature that causes an application on a CD to automatically launch when the CD is inserted in the drive.

**AutoRun**

See Autoplay

B:

**Bandwidth**

The amount of data that can be transmitted in a fixed amount of time. For digital devices, the bandwidth is usually expressed in bits per second (bps) or bytes per second.

Measuring bandwidth is particularly important for Input/Output devices e.g. a fast disk drive which could be hampered by a low bandwidth bus.

**BASH® Amplification**

A digital amplifier that offers high efficiency and high output in a compact form.

**Base Station**

A fixed device connected to a wired network, such as the telephone network, which can accept wireless voice transmissions and transmit them over the wired phone network. Examples of base stations are cradles for cordless phones or cellular telephone towers.

**Binary**

A number system utilizing only ones and zeroes. A string of binary numbers can be used to represent another number, based on the positioning of the ones and the positioning of the zeroes.

**BIOS**

The BIOS is a built-in software that determines what a computer can do before the Operating System (Windows) is loaded.

The BIOS contains the code required to control the keyboard, display screen, disk drives and a number of other functions.

**Bit****Binary Digit**

This is the smallest unit of information in a PC. A single bit can hold only one of two values: 0 or 1. Bits are combined to hold more significant information. For example, a byte is composed of 8 consecutive bits.

Graphics are also often described by the number of bits used to represent each dot. A 1-bit image is monochrome; an 8-bit image supports 256 colours or greyscales; and a 24- or 32-bit graphic supports true colour.

**Bit rate**

The rate at which data passes or is processed. Measured commonly as bits per second (bps) or millions of bits per second (Mbps).

**Bit Resolution**

The number of bits (or data pieces) used to measure an audio file and turn it from an audible sine wave to a digital format for later reproduction.

**Bits**

See Bit

**Bluetooth**

Bluetooth is an open wireless protocol for exchanging data over short distances (using short length radio waves) from fixed and mobile devices, creating personal area networks (PANs)

**Bps**

bits per second

A standard measure of data transmission speeds

**Bridge**

A device that connects two network segments together. A bridge modem passes traffic directly from the modem to a PC. This differs from a router in that all network traffic is passed directly onward whereas a router acts as a gatekeeper to send traffic to the proper PC connected to it. Another difference between a bridge and a router is that, without additional hardware and/or software, only one device can be connected to a bridge modem.

**Broadband**

A method of transmission in which two or more signals are sent over a medium or two or more pieces of data are sent at the same time. Sending data in this manner increases the transmission speed, allowing for faster communication. Broadband is often associated with faster Internet access methods such as DSL or cable Internet.

**Bus**

A collection of wires through which data is transmitted from one part of a computer to another.

### **Bus Mastering**

Bus Mastering allows a device connected to the bus to communicate directly with other devices on the bus without going through the CPU, improving system performance.

### **Byte**

See [Bit](#).

C:

### **Call Waiting**

See Also: V.92, Modem on Hold

Call waiting is a telephone service that allows you to answer an incoming call during another call. Some telephone providers may charge for this service.

This service is essential for the V.92 feature Modem On Hold to operate.

### **Cat 5 (Category 5)**

A specification for cables made up of four pairs of twisted wires. Cat 5 cable is commonly used for Ethernet networks. This specification has been replaced by the Cat 5e specification, which is an enhancement to the Cat 5 specification.

### **CD**

Compact Disc

A digital medium formed of a 12cm polycarbonate substrate, a reflective metalized layer, and a protective lacquer coating. The physical format of CDs is described by the ISO9660 industry standard. CD-Recordable discs also have an organic dye data layer between the substrate and the metal reflective layer.

### **CDDB**

CDDB is an Internet-based database (CD DataBase), which displays artist, title, and other music-related information in music playback applications. For example, when you playback a CD using Playcenter, it will identify the CD using CDDB and display the related information.

### **Channel**

A frequency or band of frequencies allocated together for wireless communication. A channel is also a path information can travel over during communication. In cable TV, a channel is a specific frequency band audio and video information is typically carried over. Cable providers block out certain channels and use that space for high speed Internet access.

### **Chipset**

A number of integrated circuits designed to perform one or more related functions. For example, one chipset may provide the basic functions of a modem while another provides the CPU functions for a computer. The term is often used to refer to the core functionality of a motherboard.

### **CMSS**

Creative Multi Speaker Surround. CMSS Music mode creates a convincing 5.1 channel surround soundfield with typical stereo sources, whether they are Dolby Surround-encoded or not. In essence, CMSS Music mode puts you "on the stage" for the music's performance, surrounding you with the performers. In a similar manner, CMSS Movie mode provides the sonic impression of being front and center at a movie screening.

### **Coax (Coaxial)**

A type of cabling with a solid wire down the center and a conductive sheath used for transmitting and receiving information. Coaxial cable is often used for cable TV and cable Internet access.

### **Codec**

See Also: MP3

Short for compressor/decompressor, a codec is any technology for compressing and decompressing information. Codecs can be implemented in software, hardware, or a combination of both.

### **COM Port**

The name of a serial communications port.

### **COM1/COM2**

See COM Port

### **Command Prompt**

A symbol (e.g. C:\) that appears on the PC screen to indicate that the PC is ready to receive instructions (commands).

### **Cookie**

A "cookie" is a small piece of information which an Internet site can store temporarily on your hard disk. This is useful for having your Internet browser remember some specific information which the Internet site can later retrieve e.g. your name or city.

### **CPU**

Central Processing Unit

The CPU is the brain of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.



## **Cryptography**

A combination of mathematics and computer science, cryptography is concerned with encrypting information and methods of authentication for communication. Cryptography has grown as the need for secure communication and safe information storage has grown.

D:

## **DAC**

Digital to analog converter

A device for converting digital signals into continuous analog signals. (See ADC)

## **DAE**

See Digital Audio Extraction

## **Data**

Raw facts used to represent what is known. Data is usually processed into information.

## **Data Rate**

See **Bit Rate**.

## **DDNS (Dynamic DNS)**

A method allowing a host name to be associated with a PC with a varying IP address. It allows a host name to be used with a device that is assigned its IP address via DHCP.

## **DECT (Digital Enhanced Cordless Telecommunications)**

A standard created by ETSI for cordless digital devices capable of transmitting voice and data information.

## **Device Manager**

Device Manager is a Windows program that lets you view and change the settings of all devices attached to your computer. Some device settings are managed by the OS and cannot be changed.

## **DHCP (Dynamic Host Control Protocol)**

A networking protocol for automatically assigning IP addresses to devices in a network. A pool of IP addresses is assigned to a DHCP server which distributes an IP address to a device when requested. When an IP address is no longer in use, the address is reused for a future request. DHCP allows for systems to obtain an IP address automatically rather than being manually assigned to each device.

## **Dial-up**

A type of Internet access requiring an analog telephone connection and a modem

connected to a PC. The modem dials the number of an ISP then sends a series of sounds back and forth to create a connection to the Internet.

## **Digital**

A method of representing data using binary numbers. Digital systems use a signal that is either on or off or is high or low to transmit binary numbers, which are later converted to data.

## **Digital Audio Extraction**

Digital Audio Extraction (DAE) is a process of direct reading audio data from an audio CD. The advantage of DAE in file recording, using your sound card, is that there is no loss of music quality. DAE is also much faster than the alternative of analog extraction.

## **Digital Signature**

A digital signature is additional information embedded in a file or driver which is used to confirm the source is genuine e.g. a signed Microsoft driver.

## **Direct Sound®**

A software buffering system that was developed by Microsoft which uses a circular buffer that has a read position and a write position. After an encoded sound file is passed over the read position for decoding, it then passes through the write position to get the next segment of encoded sound added into the buffer for continuous sound decoding.

## **Direct Stream Digital**

The modulation coding method used in the Super Audio Compact Disc (SACD) format, using improved sigma-delta and noise shaping techniques to code an audio waveform as a 1-bit signal.

## **DirectX**

See Also: API, Multimedia.

DirectX is a Microsoft API that enhances Windows with advanced multimedia capabilities.

## **DMA**

Short for Direct Memory Access, a technique for transferring data from main memory to a device without passing it through the CPU. Computers that use DMA transfer can move data to and from devices much more quickly than computers that do not support this feature.

## **DMZ (DeMilitarized Zone)**

A portion of a network completely exposed to users outside the network. Many home routers give option to set a DMZ Host. Setting a DMZ Host will send all requests to that device by default.

**DNS (Domain Name System / Domain Name Service / Domain Name Server)**

A method by which an IP address is translated to a name, such as creative.com.

**DNS Server**

Also called a Name Server. DNS servers store databases of IP address to domain name pairs and send this information to client systems when requested. When a PC tries to access a domain name, a request is sent to a DNS server which returns the IP address associated with the host name.

**Dolby®**

The name of a manufacturer (and a trademark) of noise reduction systems and other audio systems, to improve performance and fidelity of audio recording, playback, and transmission.

**Dolby Digital®**

The first process used to encode a 5.1 signal into a single digital format so that it could be added to a game or DVD movie to allow for high quality sound without having to resort to a large file size.

Dolby Digital Surround EX introduced the features of audio panning around or over the listener.

**Domain Name**

A name often given to an entire network to allow devices to be given a hostname. Often in the form of **hostname**.domainname.tld.

**DOS**

See Also: MS-DOS

Disk Operating System.

Although DOS can refer to any operating system, it is most often used for MS-DOS.

**Download Accelerator Software**

A program to improve the speed of Internet downloads, either by locating the fastest server or by splitting one download into several pieces and managing each separately for improved performance. The download accelerator software then assembles the file when all downloads have been completed.

**DREAM**

DREAM (Dynamic Repositioning of Enhanced Audio Music) is one of the new features stemming from the Advanced HD system on the Sound Blaster Audigy range of cards. This is a movement effects program that provides three-dimensional movement to your audio files. It works with any mono or stereo Wave, MP3 or WMA file played through the PlayCenter 3.x player. It allows you to control the speed and direction of the Low (Bass), Mid (Vocal) and High ranges of the audio as they cycle around the listener providing a dance club like atmosphere. The bass, vocals and high range can move

clockwise or counter clockwise independently of each other or each can be muted individually.

### **Drive Bay**

The area in a PC where hard (5.25 inch drive bay) or floppy (3.5 inch drive bay) disk drives can be installed.

### **DSL (Digital Subscriber Line)**

Technology providing high-speed data transfer through existing copper wires used by the analog phone system.

### **DTS**

An audio format similar to Dolby Digital 5.1, Digital Theater Systems Digital Surround (DTS) was developed to use a lower compression level for the greatest possible fidelity to the separate audio channels of a DVD. A decoder is required either externally or in the player. Some DVDs include both DTS and Dolby Digital 5.1 tracks, allowing the consumers to choose for themselves. Discs only produced in DTS will play on any regular DVD players but will not play back the DTS signal unless a decoder is present.

### **Duplex**

A method of communication in which a signal can be sent both directions down a communications medium. Half duplex systems can only handle a signal in one direction at a time. Full-duplex systems can handle simultaneous communication in both directions.

### **DVD Audio**

(DVD-A)- due to the increased size of the DVD media, a new format called MLP was developed which utilized 24-bit/96 kHz audio files for up to six channels, including one discrete subwoofer channel. This allowed for high quality surround sound to be introduced into home theaters and personal computers.

### **Dynamic Range**

A ratio (expressed in dBs) of the difference between the softest and the loudest sound that can be produced, reproduced or captured by a musical instrument or audio device.

E:

### **E-mail (Electronic MAIL)**

A system for sending and receiving messages electronically between people. Email can be plain text or can have files attached with the e-mail.

### **E-mail Server**

A computer connected to a network running special software that allows it to receive

requests from another computer and respond with e-mail messages destined for the user on the requesting computer.

## **EAX**

Environmental Audio Extensions

A reverb API developed by Creative Labs to create environmental audio in games and other audio applications.

## **EAX Advanced HD**

Environmental Audio Extensions Advanced High Definition

The next generation of EAX, offers dramatically increased 3D audio performance and functionality.

## **EHF (Extremely High Frequency)**

A RF band with a frequency of 30 GHz - 300 GHz and a wavelength of 10 mm - 1 mm. EHF is often used in radio astronomy.

## **EIA-232**

See [RS232](#)

## **Encoding**

Encoding is a term used to describe the conversion of one file format to another.

MP3 encoding, for example, refers to the process of compressing .WAV files into the much smaller MP3 format.

## **ETSI (European Telecommunications Standards Institute)**

An independent organization involved with telecommunications standards in Europe.

## **Electro Static Discharge (ESD)**

Current produced by two objects having a static charge when they are brought close enough together to produce an arc or discharge, as static electricity.

F:

## **Firewall**

A system designed to prevent unauthorized access to or from a private network or PC.

Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet.

## **Firewire**

See [IEEE1394](#)

## **Firmware**

See Also: ROM

Firmware is a combination of software and hardware, i.e. software that has been written onto Read-Only Memory (ROM).

## **FLAC**

FLAC stands for Free Lossless Audio Codec, an audio format similar to MP3, but lossless, meaning that audio is compressed in FLAC without any loss in quality. FLAC is an open source format which is non-proprietary and has an open-source reference implementation with well documented format and API, and has several other independent implementations.

## **FM (Frequency Modulation)**

A type of radio broadcasting using frequency modulation to transmit audio.

## **FPGA**

Field Programmable Gate Array.

This is a programmable logic chip device that allows highly complex problems to be solved.

## **Fps**

See Also: Frame

Stands for frames per second, a measure of how much information is used to store and display motion video.

## **Frame**

A single image in a sequence of images.

## **Frequency**

A measuring of the number of times a signal is repeated. Hertz (Hz) is used to one cycle occurring in one second.

## **Frequency Response**

How the different frequencies are reproduced in a system. The human ear, at its best, has a frequency response of about 20 Hz to about 20 KHz (20,000 cycles per second). Good electronic audio equipment may have a response of 20 Hz to 20 KHz plus or minus 1 dB.

## **FTP (File Transfer Protocol)**

A common protocol used for exchanging files over a network. One PC must be running an FTP server while the other computer runs an FTP client.

## **Full-duplex**

See [Duplex](#).

G:

### **Gbps**

Gigabits per second

A data transfer speed measurement for high-speed connections.

### **Giga**

A prefix denoting either 1,000,000,000 or 1,073,741,824 units. When referencing an amount of storage or memory, giga refers to 1,073,741,824 units. When referencing frequencies or bit rates, giga refers to 1,000,000,000 units.

### **Gigabyte (GB)**

A measure of computer memory or disk space consisting of about one thousand million bytes (a thousand megabytes). The actual value is 1,073,741,824 bytes (1,024 megabytes).

### **GSM (Global System for Mobile communications)**

A standard for cellular telephones used worldwide. GSM allows for international roaming, which permits a user to use the same phone in most areas around the world. GSM also offers higher quality for digital voice calls, and offers additional features such as text messaging.

H:

### **HAL**

See Hardware Abstraction Layer

### **Half-duplex**

See [Duplex](#).

### **Hardware Abstraction Layer**

The hardware abstraction layer (HAL) interprets the commands the Operating System gives to a device e.g. hard disk or sound card. Examples of hardware abstraction layers include Advanced Configuration and Power Interface (ACPI) PC, Standard PC and ACPI Uniprocessor PC.

### **HF (High Frequency)**

A RF band with a frequency of 3 - 30 MHz and a wavelength of 10 m - 1 m. HF is often used for short wave broadcasts and with amateur radios.

### **Hi-Speed USB**

See USB 2.0

**Hostname**

A name given to a device, often a PC, for connecting to through the network without having to memorize the IP address. A hostname also allows a device to be moved into a different network with a different IP address and still be accessible. Hostnames also allow more than one server to be run within a domain name. Often in the form of **hostname.domainname.tld**.

**Hot Plugging**

This refers to connecting a device while the computer is running and have the operating system automatically recognize the change. USB and IEEE 1394 support hot plugging. Hot plugging is also called hot swapping.

**Hot Swapping**

See Hot Plugging

**Hotspot**

An area of WLAN coverage with an Internet connection. Hotspots are commonly found in public areas such as cafes, libraries and airports.

**HRTF**

Head Related Transfer Function.

This is created to use the listener's body to help create the surround sound effect that is real to life sounds, but simulated in digital sounds. It utilizes the unique shape of the human ear to modify audio signals as they are processed by the ear to make the audio source sound real.

**HTML (HyperText Markup Language)**

A language used to layout the manner in which information is displayed in a web page. HTML allows a web page to contain different fonts, colors, images and URLs.

**HTTP (HyperText Transfer Protocol)**

A standard for transferring web pages over a network and the Internet.

**(Network) Hub**

A network device allowing several devices to be connected to a network. A hub works by transmitting data to all devices connected, including the connection to the rest of the network.

**(USB) Hub**

A USB hub can be thought of as an extension of USB ports. Normally, the PC provides only one or two USB ports. To connect additional USB devices, you need a USB hub.

**Hz**



The name given to the basic measure of radio frequency characteristics. An electromagnetic wave completes a full oscillation from its positive to its negative pole and back again in what is known as a cycle. A single Hertz is thus equal to one cycle per second.

I:

## **I2S**

I2S, or Inter-IC Sound, is an electrical interface standard used for connecting digital audio devices together. It is most commonly used to carry PCM information between the CD transport and the DAC in a CD player. The I2S bus separates clock and data signals, resulting in a very low jitter connection. The bus consists of three lines, a clock line, a word select line, and a multiplexed data line.

## **IANA (Internet Assigned Numbers Authority)**

An organization responsible for the distribution of IP addresses. IANA also is in charge of the management of DNS root zones and assignment of other Internet protocols. IANA is run by ICANN.

## **ICANN (Internet Corporation for Assigned Names and Numbers)**

A non-profit corporation responsible for the allocation of IP address space, assignment of protocol identifiers, managing the TLD name system, and running the root DNS servers.

## **IDE (Interface)**

Integrated Drive Electronics

An IDE interface is an interface for storage devices e.g. hard disks or CD-ROM drives.

## **IEEE 1394**

High performance Serial Bus, more commonly known as 1394 or FireWire, is a versatile and high-speed way of connecting external devices.

## **IM (Instant Messaging)**

A system of sending a message over the Internet to another user in real time. Many IM programs can store a list of people commonly communicated with. Some popular IM programs are AOL Instant Messenger, ICQ, MSN Messenger and Yahoo! Messenger.

## **IMA ADPCM**

IMA ADPCM stands for **International Multimedia Association Adaptive Differential Pulse Code Modulation**. ADPCM is a lossy compression mechanism. It compresses data recorded at various sampling rates. IMA ADPCM is similar to Intel's DVI audio format. It is directly supported on most Windows implementations as a native format.

**Infrastructure**

A type of network in which PCs and other devices connect to a central device, which then connects to a larger network or to the Internet. WLANs are often infrastructure networks, with all PCs connecting to an AP.

**Integrated Peripherals**

See Peripheral Device

**Internet**

A worldwide network made up of smaller networks. The Internet is used to transfer data such as webpages, e-mail, and chat. The Internet allows for sharing of information publicly or directly between people all over the world.

**Interrupt Request Line**

Interrupt Request Lines are the connections through which devices can send interrupt signals to the CPU.

**IP (Internet Protocol)**

A protocol for communicating data over a network. IP does not guarantee delivery, concerning itself primarily with data addressing and routing (sending the data to the proper device and finding the best path to deliver it by).

**IP Address**

A unique number given to a device connected to a network. An IP address is much like a full street address, and is used to deliver data between devices on a network. An IP address is made up of four groups of numbers separated by periods. Internal IP address can be re-used over and over and are designed for private networks, or networks not designed to be accessible from outside the network, but able to access resources outside of that network. Public IP addresses are limited in that only one can be used at a time. Public IP addresses are given to devices reachable from outside of that network.

**IR**

Infra Red, typically used to transmit remote control signals.

**IRQ**

See Also: Interrupt Request Line

Abbreviation of Interrupt Request Line.

**IRQ Conflict**

See Also: Interrupt Request Line

Two devices use of the same IRQ line simultaneously. Please note that this does not always cause problems with the device(s).

**ISP**

Short for Internet Service Provider, a company that provides access to the Internet.

**ITU**

International Telecommunication Union

An international organisation through which public and private telecommunications are developed. The ITU was founded in 1865 and became a United Nations agency in 1947.

K:

**Kbps**

kilobits per second

A measure of data transfer speed. Modems, for example, are measured in Kbps. One Kbps is 1,000 bits per second.

**Key**

A piece of information used to control how a cryptographic algorithm works. The key is responsible for the actual modification of content from plain text into an encrypted message.

**kHz**

Kilohertz.

A unit of frequency measurement. One thousand cycles (repetitions) per second or 1000 hertz.

**Kilo**

A prefix denoting either 1,000 or 1,024 units. When referencing an amount of storage or memory, kilo refers to 1,024 units. When referencing frequencies or bit rates, kilo refers to 1,000 units.

L:

**LAN**

Local Area Network.

A computer network that covers a relatively small area. Most LANs span no more than a single building.

**LED**

Light Emitting Diode

An electronic device that lights up when an electric current is passed through it.

**LF (Low Frequency)**

A RF band with a frequency of 30 kHz - 300 kHz and a wavelength of 10 km - 1 km. LF is often used for AM radio long wave broadcasts.

### **Li-Ion**

A type of battery made from Lithium ions from chemicals. Because of its lightness and high energy density, Lithium-Ion batteries are ideal for portable devices, such as notebook computers.

Lithium-ion batteries prefers a partial rather than a full discharge. Frequent full discharges should be avoided when possible. Instead, charge the battery more often. Although full discharge is discouraged, a deliberate full discharge and recharge every 30 charges is recommended. A lithium-ion battery typically provides 300-500 discharge/charge cycles.

### **Long Wave**

See [AM \(Amplitude Modulation\)](#).

M:

### **MBO**

Max Burst Output

### **Main Memory**

See System RAM

### **MAN (Metropolitan Area Network)**

A network of devices which spans over a city or a campus. A MAN is not a very common type of network.

### **Mbps**

Megabits Per Second

A measure of data transfer speed (a megabit is equal to one million bits).

### **MB**

Megabyte

An amount of computer memory consisting of about one million bytes: The actual value is 1,048,576 bytes.

### **Medium Wave**

See [AM \(Amplitude Modulation\)](#).

### **Mega**

A prefix denoting either 1,000,000 or 1,048,576 units. When referencing an amount of storage or memory, mega is referring to 1,048,576 units. When referencing frequencies

or bit rates, mega refers to 1,000,000 units.

### **Megahertz**

One megahertz (MHz) represents one million cycles per second.

CPU speed, called the clock speed, is measured in megahertz. For example, a CPU that runs at 200 MHz executes 200 million cycles per second. Each computer instruction requires a fixed number of cycles, so the clock speed determines how many instructions per second the microprocessor can execute.

### **MF (Medium Frequency)**

A RF band with a frequency of 300 kHz - 3,000 kHz and a wavelength of 1 km - 100 m. MF is often used for medium wave AM radio broadcasts.

### **MHz**

See Megahertz

### **MIDI**

Musical Instrument Digital Interface, a standard adopted by the electronic music industry for controlling devices, such as synthesizers (electronic musical instruments) and sound cards, that emit music.

### **MIME (Multipurpose Internet Mail Extensions)**

An e-mail standard responsible for defining the format of e-mail messages.

### **Modem (MOdulator DEModulator)**

A device responsible for encoding data for transmission over a communications line.

Modems are often used to transmit data over analog telephone lines, though the term is also associated with the devices used for high speed Internet connections such as DSL or Cable.

### **Modem-On-Hold**

See Also: V.92

Modem-on-Hold is a feature of the V.92 Modem Standard, which allows you to receive incoming calls and make outgoing calls by putting the modem on hold. Once the call is finished you can continue browsing without having to dial up again.

### **Modulation**

The process of modifying a wave to carry information to a destination. Modulation and demodulation (gathering the information from the wave) is often done by a modem.

### **Motherboard**

The main circuit board of a computer. Typically, the motherboard contains the CPU, BIOS, RAM, storage device interfaces, serial and parallel ports, AGP and PCI expansion slots, and all the controllers required to control standard peripheral devices,

such as the display screen, keyboard, and disk drive.

### **MP3**

MP3 (MPEG-1 Audio Layer-3) is a codec for compressing audio into a very small file (about one-twelfth the size of the original file) while preserving the perceived original level of sound quality when it is played.

### **MSCONFIG**

See System Configuration Utility

### **MS-DOS**

Microsoft Disk Operating System

Originally developed by Microsoft for IBM, MS-DOS was the standard operating system for IBM-compatible personal computers.

### **MS-DOS Mode**

See also: DOS

MS-DOS mode is an operating environment created by Windows 98 for DOS applications, utilities, and games.

### **MTP**

Media Transfer Protocol

A protocol being instituted by Microsoft, of which PTP is a subset. This will regulate the drivers and interfacing software for all media players, whether they are audio media players or video. This will allow higher levels of security to be placed on media files for transfer to comply with copyright laws.

### **MTU (Maximum Transmission Unit)**

The largest size of data a device's connection can send. If a piece of data is larger than the MTU, the device must break apart the data into smaller pieces before sending and the receiving device must then re-assemble the data.

N:

### **NAT (Network Address Translation)**

A method allowing multiple computers to use one public IP address at a time. NAT, usually done in a router or other similar device, accepts data from a device with a private IP address, modifies the request, and sends the request on from a public IP address. Data that is sent back is received by the device, analyzed, then sent on to the device waiting to receive the data. NAT is often used when multiple computers are sharing one Internet connection with only one public IP address available for that connection. A device outside of a private network cannot communicate with devices using a private IP address on another network.

**Network**

A group of two or more computer systems linked together.

**NiCad**

NiCad stands for nickel-cadmium, the materials used in the battery packs for many notebook computers.

**NiMH**

NiMH stands for Nickel-Metal Hydride, the materials used in some battery packs. Unlike NiCad batteries, NiMH batteries do not use heavy metals that may have toxic effects. In addition, they can store up to 50% more power than NiCad batteries.

**Noise**

A disturbance or sound added to a signal during transmission causing the signal to be altered and thus altering the data being communicated. Noise is often caused by electrical devices operating within the vicinity of the signal being communicated.

O:

**OpenGL**

See Also: API

OpenGL (Graphics Library) and Glide are 3D graphics APIs. An API-- Application Program Interface-- gives programmers a standardized way to create applications for software or hardware.

**Operating System**

The most important program that runs on a computer. Every general-purpose computer must have an operating system to run other programs. Operating systems perform basic tasks, such as recognising input from the keyboard, sending output to the display screen, keeping track of files and directories on the disk, and controlling peripheral devices such as disk drives and printers.

**Optical Fiber**

A type of cabling made up of thin glass down the center. Fiber cabling uses light as its transmission source and is used to carry data over great distances. Over a great distance, an electrical signal will attenuate to the point that it is no longer able to be understood by the receiving device whereas optical cabling has a much lower attenuation, allowing the optical signal to travel much farther with less signal loss or distortion. Optical fiber also offers several benefits in that it is difficult to capture data being transmitted over the medium and the cabling is much less susceptible to noise.

**OS**

See Operating System

## **OSR 2.x**

Short for OEM Service Release 2, a new version of Windows 95 released at the end of 1996. Also called Windows 95b, OSR 2 provides a number of new features and bug fixes.

## **Overclocking**

To run a processor faster than the speed for which it has been tested and approved. Overclocking is a popular technique for eking out a little more performance from a system. In many cases, you can force your CPU to run faster than it was intended simply by setting a jumper on the motherboard. Overclocking does come with some risks, however, such as voiding your warranty, over-heating and permanent damage to system components, so you should become familiar with all the pros and cons before you attempt it.

P:

## **Packet**

A unit of data sent over a computer network. Packets are comprised of a header which contains data to help the packet arrive at the proper location, a data section containing the information being communicated, and a footer containing information to verify that the data has arrived intact.

## **PAN (Personal Area Network)**

A network of devices within the personal space of a person. A PAN usually extends for just a few meters and allows devices such as cellular telephones and wireless headsets or an MP3 player and a PC.

## **Parallel**

A method of communication in which data is transmitted into or out from a device several bits at a time using several wires.

## **PC (Personal Computer)**

A device commonly used to play games, write documents, view information from the Internet and communicate and share information with Internet users around the world. A PC now includes desktop and laptop computers as well as tablet computers and PDAs.

## **PCI**

See Also: PCI-X

Acronym for Peripheral Component Interconnect, a local bus standard developed by Intel Corporation. PCI is a 64-bit bus, though it is usually implemented as a 32-bit bus. It can run at clock speeds of 33 or 66 MHz.

## **PCI-X**

Short for PCI extended, an enhanced PCI bus. PCI-X is backward-compatible with



existing PCI cards. It improves upon the speed of PCI from 133 MBps to as much as 1 GBps.

### **PCM (Pulse Code Modulation)**

A way of representing analog data in a digital signal. PCM takes regular samples of the magnitude of the signal and represents the magnitude in a digital manner.

### **PDA (Personal Digital Assistant)**

Handheld portable organizers. PDAs offer features such as date books, address books, and wireless Internet access capabilities.

### **Perceptual Coding**

This is an audio feature which simulates the effect of volume differences or environmental noise which would obscure or reduce the amount of volume from the audio source. For example, if two audio sources were playing at once, one on high volume and the other just barely audible, then the low source would not be heard unless the high one was silent. Therefore, perceptual coding removes the quiet source unless the “obstructing” signal is removed, then it is brought back in.

### **Peripheral Device**

A computer device, such as a CD-ROM drive or printer, that is not part of the essential computer, i.e., the memory and CPU. Peripheral devices can be external -- such as a mouse, keyboard, printer, monitor, external Zip drive or scanner -- or internal, such as a CD-ROM drive, CD-R drive or internal modem. Internal peripheral devices are often referred to as integrated peripherals.

### **Peripherals**

See Peripheral Device

### **PIO**

See Also: DMA

Short for Programmed Input/Output, a method of transferring data between two devices that uses the computer's main processor as part of the data path.

### **PKE (Public Key Encryption)**

A method of cryptography allowing two users to communicate back and forth securely. PKE uses two keys, one labeled as public and the other labeled as private. This allows the users to communicate without having had access to a shared key. The message is usually encrypted using the public key (known to anyone), and can only be decrypted using the private key (known only to the receiver of the content).

### **POP3 (Post Office Protocol 3)**

An e-mail standard allowing a user to connect to an e-mail server. POP3 allows a user to download e-mail messages to their PC to read later without requiring a constant

connection to the Internet.

### **Plug and Play**

Refers to the ability of a computer system to automatically configure expansion boards and other devices. You should be able to plug in a device and play with it, without worrying about setting DIP switches, jumpers, and other configuration elements.

### **PMPO**

Peak Momentary Power Output. The maximum power output of a speaker under perfect conditions and 100% efficiency. These conditions are impossible to obtain. RMS is a much better indication of the loudness of a speaker.

### **PnP**

See Also: Plug and Play

Abbreviation for Plug and Play

### **Port Forwarding**

Port Forwarding is a method by which a port is opened on a router to allow remote access to a specific service or applications running on a LAN.

### **Portable Media Center/Player**

A new standard of hardware being instituted which is compatible with Windows Media Center operating systems as well as Windows XP and Media Player 10. This hardware is plug and play based off MTP drivers and is often capable of storing and playing back audio files, picture files, and video files.

### **PPP (Point-to-Point Protocol)**

A protocol used to create a connection directly between two devices.

### **Processor**

See CPU

### **Profile**

A method of defining the ways in which a particular Bluetooth device can communicate. Profiles define how a Bluetooth device can interact with other devices. In order to properly communicate, both Bluetooth devices must be operating the same profiles.

### **Proxy Server**

See Also: Server

A server that sits between a client application, such as a Web browser, and a real server. It intercepts all requests to the real server to see if it can fulfill the requests itself. If not, it forwards the request to the real server.

Proxy servers have two main purposes, to improve the system performance and to filter server requests (e.g. to block access to specific web sites).

**PSK (Pre-Shared Key)**

A method of cryptography utilizing a known passphrase. The passphrase is stored on one device and entered into another device to secure transmission between the two. PSK is often used in WLANs where the passphrase is stored on the AP and is entered into the devices communicating with the AP.

**PTP**

Picture Transfer Protocol.

A new protocol that is being instituted by Microsoft that will allow for generic drivers to be built into the Windows operating system that will let all digital image devices (web cams, digital cameras, portable media centers, etc.) to be plug and play with the system. This will eliminate the need to have drivers installed for a piece of hardware as well as proprietary software. This will help allow all transfers to be equal in quality among different devices.

R:

**RAM**

for random access memory, a type of computer memory that can be accessed randomly; that is, any byte of memory can be accessed without touching the preceding bytes. RAM is the most common type of memory found in computers and other devices, such as printers.

**Receiver**

A device responsible for accepting a signal and retrieving the data from the signal. A receiver is often used to accept a wireless signal via an antenna.

**Recycle Bin**

An icon on the Windows desktop that represents a folder where deleted files are temporarily stored. This enables you to retrieve files that you may have accidentally deleted.

**Registry**

A database used by the Windows operating system (Windows 95 and NT ) to store configuration information e.g. all the current user information for each user of the system and settings for hardware, operating system, and installed applications.

**Resolution**

Refers to the sharpness and clarity of an image. For PC Monitors screen resolution signifies the number of dots on the entire screen. For example, a 640-by-480-pixel screen is capable of displaying 640 distinct dots on each of 480 lines, or about 300,000 pixels.

## **Resource**

Generally, any item that can be used. Devices such as printers and disk drives are resources, as is memory.

With regards to Windows, the term resource refers specifically to data or routines that are available to programs. These are also called system resources.

## **Resource Conflict**

See Also: Resource

This occurs when a system resource is being shared by multiple devices.

## **RF (Radio Frequency)**

The part of the electromagnetic spectrum where electromagnetic waves can be generated through an antenna and be used to transmit data. The RF includes several bands, each with a different frequency and wavelength. The RF bands, in order, are ELF, SLF, ULF, VLF, LF, MF, HF, VHF, UHF, SHF and EHF.

## **Ripping**

Ripping is the process of copying the audio and/or video data from one media form, such as Digital Versatile Disc (DVD) or Compact Disc (CD), to a hard disk. While the original media is typically digital, the extraction of analog media such as VHS video or vinyl records to a digital format can also be referred to as "ripping" by extension. The copied data, called "rips", are usually encoded in a compressed format such as MP3, WMA or Ogg Vorbis for audio or MPEG-2, MPEG-4 or DivX for video in order.

## **RJ11**

Registered Jack 11

A four- or six-wire connector used to connect telephone equipment.

## **ROM**

for read-only memory, computer memory on which data has been prerecorded. Once data has been written onto a ROM chip, it cannot be removed and can only be read.

## **RMS Power**

Root mean square power. The square root of the sum of the squares of a set of quantities divided by the total number of those quantities. This is the amount of continuous power, measured in watts, that an amplifier produces. The higher the RMS figure, the louder your music sounds.

Power supplies, output an ac (Alternating Current) signal. This needs to be converted to a DC (Direct current) signal for PC's and other electrical products.

A DC signal is produced proportional to the rms of the amplitude of the input signal. If you are measuring a sinusoidal waveform, you could simply multiply the peak voltage by .707 to determine RMS. RMS is the most common parameter to measure the power of a speaker or a speaker set.

**Router**

A router forwards data packets from one network segment to another, and these devices are commonly used to segment networks for load-balancing or security and to connect multiple networks. Routers only use routable protocols (IP/IPX/etc.) and function by locating the next hop, or next device, along the communication path.

**RS232**

See RS232-C

**RS232-C**

Recommended Standard-232C

A standard for connecting modems to PCs. Superseded by EIA-232, still widely referred to as RS-232C, or just RS-232.

S:

**SACD**

Super Audio CompactDisc

A high-resolution digital audio format developed by Sony and Philips. Instead of using PCM audio encoding like standard CDs, SACDs use Direct Stream Digital™ (DSD) encoding. DSD is a 1-bit technology that samples music at the rate of 2.82 million times per second, compared to standard CD's rate of 44,100 times per second. SACDs sound more detailed than standard CDs, with greater dynamic range. All SACDs contain a high-resolution stereo mix; many also contain a high-resolution surround mix, with up to 6 independent channels.

**Sample Rate**

The frequency at which samples of an audio file are taken per second and converted into digital form. It is measured in hertz (Hz) and the number of hertz is the number of samples that are taken each second (e.g. 100 Hz would be 100 samples per second).

**Sampling Frequency**

See Sample Rate

**SB 16 Emulation**

This feature allows Creative PCI cards to emulate a Soundblaster 16 card for backwards-compatibility with DOS applications. This feature is only available in Windows 98.

**SDSL (Symmetric DSL)**

A category of DSL which allows for high upload speeds. SDSL is restricted in that it allows for the telephone line to be used for a voice call or for data transfer, not both simultaneously.

**Sequencer**

A sequencer is a recorder used to record or store MIDI data. Instead of recording music, you record MIDI messages. For each specific function of a MIDI instrument there is a specific message.

**Serial**

A method of communication in which data is transmitted into or out from a device over a wire one bit at a time. Serial communication is often used for connecting with a modem.

**Server**

A computer or device on a network that manages network resources. For example, a file server is a computer and storage device dedicated to storing files and a print server is a computer that manages one or more printers.

**Service Pack**

A service pack is a software update that fixes an existing Windows problem or provides enhancements to the OS.

**SHF (Super High Frequency)**

A RF band with a frequency of 3 GHz - 30 GHz and a wavelength of 100 mm - 1 mm. SHF is often used for W-CDMA cellular telephones, WLANs and radar systems.

**Short wave**

See [AM \(Amplitude Modulation\)](#).

**Signal-to-Noise Ratio**

(SNR)

The distance in decibels of the maximum output of an audio device and the noise floor generated by the surrounding electrical devices. A larger decibel rating for SNR is better.

**Simplex**

A method of communication in which a signal can be sent in only one direction down a communications medium.

**SLF (Super Low Frequency)**

A RF band with a frequency of 30 Hz - 300 Hz and a wavelength of 10,000 km - 1,000 km. SLF is often used for submarine communications.

**SmartFit**

SmartFit helps you "squeeze" more tracks into your NOMAD MuVo by converting the tracks to Windows Media Audio (WMA) format during the transfer process. The

WMA format delivers the same audio quality as the MP3 format, but at half the file size. SmartFit will analyze the available space in your NOMAD MuVo and the size of the selected tracks to determine how many tracks requires WMA conversion and at which bit rates.

## **SMP**

Storage Media Protocol.

This is a protocol that is being instituted by Microsoft to offer generic native drivers for all storage devices (mainly USB thumbdrives or hard drives). It will allow any device that is compatible with the SMP to be plug and play so that the user can then just drag and drop information onto the drive without needing to install any proprietary drivers or software.

## **SMTP (Simple Mail Transfer Protocol)**

A standard for e-mail transmission. SMTP is used to push an e-mail message being sent to an e-mail server.

## **SoundFont**

See Also: MIDI, Sequencer

A Soundfont is a sound sample, in the form of a wav file, which has been manipulated and transformed by a Soundfont editor into a MIDI controllable instrument. This is loaded into your soundcard and can then be played in your sequencer.

## **Spam**

Unwanted or unsolicited bulk e-mail, often sent to advertise a product or service.

## **SPDIF**

Sony Philips Digital Interface

A standard for digital connections between audio devices

## **SSH (Secure SHell)**

A protocol and an application for sending command line sessions over the Internet. SSH allows for a secure connection between two computers.

## **SSID (Service Set IDentifier)**

A name or code used in wireless networking to identify packets as belonging to a specific network. An SSID can be used to restrict access to a wireless network by requiring that the SSID be known by attached devices while preventing the SSID from being openly broadcast.

## **SSL (Secure Sockets Layer)**

A protocol for encrypting data sent over the Internet.

## **Standard PC**

See Hardware Abstraction Layer

### **Surround Sound**

This refers to the rear and sometimes side or center audio that can be either encoded into a signal or simulated off a standard stereo signal in order to provide a more realistic audio experience for the listener.

### **Switch**

A networking device that forwards data packets between another segment on a network to a specific connected device. Several devices can be connected to a switch. Unlike a hub, a switch sends the data only to the port the destination device is connected to.

### **System Configuration Utility**

A Windows troubleshooting tool which allows you to stop software/drivers etc. from loading on system start-up, this can help in troubleshooting problems and also if you are trying to enhance performance. The System Configuration Utility is commonly referred to as MSCONFIG.

### **System RAM**

The memory installed on the motherboard of your PC.

### **SVGA**

See Also: Resolution, VGA

Super VGA

A graphics standard which offers greater resolution than VGA. SVGA supports 800 x 600 resolution, or 480,000 pixels. The SVGA standard supports 16 million colours in total, but the number of colours that can be displayed simultaneously is limited by the amount of video memory installed in a system.

T:

### **TAD**

Telephone Answering Device.

This is a common feature to many modems that allows an internal connection to go from a modem to a sound card so that the sound card can help function as an answering machine for an internet phone line hosted through the computer.

### **TCP (Transmission Control Protocol)**

A protocol for communicating data over a network. TCP is responsible for creating connections between network devices to exchange data.

### **TCP/IP**

The suite of protocols used for network communications where delivery needs to be



assured. Examples of service that use TCP/IP are web servers when pages are loaded or e-mail transfer from system to system.

### **Telnet (TELEphone NETwork)**

A protocol for sending command line sessions over the Internet. The name was also given to the utility that serves as the interface for the protocol. Data sent over a TELNET connection is not encrypted or secured.

### **Texture**

Texture, in 3D graphics, describes the surface of an object. In addition to two-dimensional qualities, such as colour and brightness, a texture is also encoded with three-dimensional properties, such as the transparency of the object. This defined texture can then be wrapped around any 3-dimensional object in a process called texture mapping.

### **Texture Mapping**

See Texture

### **THD**

Total Harmonic Distortion.

Audio signals become distortion as they pass through electronic circuits. The amount of distortion is expressed as a percentage. Lower numbers are better, but in general the human ear cannot detect distortion less than 2%.

### **THD+N**

Total Harmonic Distortion + Noise.

The same audio interference as THD reflects, but also any system noise (white or otherwise) that is factored in because of the same ambient factors.

### **THX**

An audio standard which strove to bring the surround effects and realism of sound from theaters into homes. It does not offer individual features as DTS does, but instead is a set of rules which compliancy to by a company allows for more realistic sounds.

### **TLD (Top Level Domain)**

An identifier at the end of a URL denoting what type of organization is responsible for the device. Some common TLDs are **.com**, **.edu**, **.gov**, **.net** **.org**. Countries also have TLDs, such as **.sg** (Singapore), **.uk** (United Kingdom), **.us** (United States), etc.

### **Transmitter**

A device responsible for sending out a signal containing data. A transmitter often sends out a wireless signal via an antenna.

U:

**UART (Universal Asynchronous Receiver Transmitter)**

A device used to translate between parallel and serial data bits. A UART allows a parallel device to be connected to a PC with only an available serial connection, or vice versa.

**UHF (Ultra High Frequency)**

A RF band with a frequency of 300 MHz - 3,000 MHz and a wavelength of 1 m - 100 mm. UHF is often used for television broadcasts, cellular telephones, and WLANs.

**ULF (Ultra Low Frequency)**

A RF band with a frequency of 300 Hz - 3,000 Hz and a wavelength of 1,000 km - 100 km. ULF is often used for communicating while inside a mine.

**Unicode**

A method of allowing computers to properly represent text and symbols from all languages.

**URL (Uniform Resource Locator)**

A name made up of a hostname, domain name and top level domain, each separated by a period. A URL is used for connecting to a particular device without having to memorize an IP address. Often in the form of **hostname.domainname.tld**.

**USB**

See Also: Mbps

Universal Serial Bus (USB 1.1 or simply USB) is an external connector that supports data transfer of 12Mbps for adding external components to a PC (e.g. mice, modems, and keyboards). The main advantages of USB are: speed, power, and convenience. USB also supports Plug-and-Play installation and hot plugging.

**USB 2.0**

See Also: Mbps

Also referred to as Hi-Speed USB, USB 2.0 is an external bus (port) that supports data transfer up to 480Mbps.

**UVC**

UVC or USB Video Class is a USB device class that describes devices that are capable of streaming videos, much like webcams, digital camcorders, transcoders, analog video converters, television tuners and still-image cameras.

V:

**V.90**

A standard for 56k modems. The V.90 standard resolved problem of two competing 56k technologies -- X2 from 3COM and K56flex from Rockwell Semiconductor.

### **V.90/K56flex**

See V.90

### **V.92**

See Also: Modem On Hold.

A new standard for 56k modems. There is no improvement in terms of download speed to V.90 but the new standard offers a reduced initial connection (handshaking) time and an on-hold feature.

### **VDC**

Volts Direct Current.

A unit of power measured by devices which require getting power from an outside source. Direct current refers to the way the current is sent to the device.

### **VGA**

See Also: Resolution

Video Graphics Array

A widely accepted graphics standard for PCs developed by IBM. In graphics mode, the resolution is either 640 by 480 (with 16 colours) or 320 by 200 (with 256 colours).

### **VGA Output**

The connector on a graphics card for a PC monitor.

### **VHF (Very High Frequency)**

A RF band with a frequency of 30 MHz - 300 MHz and a wavelength of 10 m - 1 m. VHF is often used for FM radio and television broadcasts.

### **Video-conferencing**

This term is used to describe a connection between two or more PCs which transmit audio and video data to each other. This enables "virtual meetings", regardless of location.

### **Virus**

See Also: [Anti-Virus Software](#)

A virus is a piece of program, usually disguised as something else, that causes some unexpected and usually undesirable event. A virus is often designed so that it is automatically spread to other computer users. Viruses can be transmitted as email attachments, downloads, or be present on a disk or CD.

### **VLAN (Virtual LAN)**

A way of logically dividing a network into several networks. The devices on one VLAN

act as though they are all connected to one switch together, even though they may be spread out over a network. 802.1q tagging is utilized to allow for multiple VLANs to communicate with each other.

**VLF (Very Low Frequency)**

A RF band with a frequency of 3 kHz - 30 kHz and a wavelength of 100 km - 10 km. VLF is often used for submarine communications and wireless monitors for heart rates.

**VoIP (Voice over IP)**

A standard for transmitting voice data over networks and the Internet. VoIP allows conversations to be carried on without requiring a dedicated telephone line. Some popular VoIP applications are Skype and Vonage.

**VPN (Virtual Private Network)**

A network of computers, sometimes in different locations and connected together over the Internet. A VPN connection is made when a client connects to a VPN device and authenticates to it, proving it is permitted to use resources within the VPN. A VPN allows resources not publicly available to be accessed remotely and used without exposing that resource to the Internet.

**VCI (Virtual Circuit Identifier)**

A setting denoting the channel over which will travel.

**VPI (Virtual Path Identifier)**

A setting denoting the pipe used by a virtual circuit.

W:

**WAN (Wide Area Network)**

A network of devices covering an area larger than a city. WANs are typically composed of several interconnected MANs or LANs. One example of a WAN is the Internet.

**WAP (Wireless Access Point)**

A device used to connect wireless devices together and to a wired network or the Internet.

**Wave**

A change in a material moving through space. A wave can transfer energy between two points without permanently affecting the medium the wave is traveling through. Waves can often be seen in the ocean, or can be invisible and carry sound through air.

**Wavelength**

The distance between repeated points of a wave signal. Wavelength is the wave's speed

divided by the wave's frequency.

### **WDM**

Short for Windows Driver Model, a driver technology developed by Microsoft to create drivers that are source-code compatible for Windows 98, 2000, Me and XP. The WDM device driver contains less programming code and works at greater efficiency.

### **Web Server**

A computer connected to a network running special software that allows it to receive requests from other computers and respond to the request with a web page.

### **WEP (Wired Equivalent Privacy)**

A method of securing WLANs. Because wireless transmissions can be received by anyone, WEP is used to encrypt transmissions enough that the transmission is as secure as on a wired network.

### **Wi-Fi (Wireless Fidelity)**

A brand used by the Wi-Fi Alliance on products which have passed standards compatibility testing. Wi-Fi is also sometimes used to refer to a wireless networking device.

### **WLAN (Wireless LAN)**

A network type of network using radio waves to communicate back and forth. A WLAN is either composed of a number of devices communicating directly with each other, called an Ad-Hoc network, or a number of devices communicating with each other through an AP, which is often connected to the Internet.

### **Windows Logo Testing**

A Microsoft hardware and software certification scheme to improve compatibility with the Windows operating system.

### **WMA**

Short for Windows Media Audio, a Microsoft file format for encoding digital audio files.

### **WPA (Wi-Fi Protect Access)**

A method of securing WLANs designed to be more secure than WEP can offer. Some implementations of WPA require a specific server for key distribution, while other implementations allow a passphrase longer than standard passwords is used to verify a user's identity.

### **WWW (World Wide Web)**

A collection of information in the form of webpages on the Internet. The WWW allows people to view information from one of many Internet connected devices. The WWW

operates over the Internet, rather than offering the same function.

X:

**XML (eXtensible Markup Language)**

A language used to describe data. The data being described can also be contained in a file with an XML file extension.

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