Active Directory	Active Directory is an implementation of LDAP directory services by Microsoft for use in Windows environments. Active Directory allows administrators to assign enterprise-wide policies, deploy programs to many computers, and apply critical updates to an entire organization. An Active Directory stores information and settings relating to an organization in a central, organized, accessible database. Active Directory networks can vary from a small installation with a few hundred objects, to a large installation with millions of objects.
Anti Virus	Anti-virus software consists of computer programs that attempt to identify, thwart and eliminate computer viruses and other malicious software (malware). Anti-virus software typically uses two different techniques to accomplish this: Examining (scanning) files to look for known viruses matching definitions in a virus dictionary Identifying suspicious behavior from any computer program which might indicate infection. Such analysis may include data captures, port monitoring and other methods. Most commercial anti-virus software uses both of these approaches, with an emphasis on the virus dictionary approach.
ATA	Advanced Technology Attachment (ATA) is a standard interface for connecting storage devices such as hard disks and CD-ROM drives inside personal computers. Many terms and synonyms for ATA exist, including abbreviations such as IDE, ATAPI, and UDMA. With the market introduction of Serial ATA in 2003, the original ATA was retroactively renamed Parallel ATA (PATA). In line with the original naming, this article only covers Parallel ATA. Parallel ATA standards only allow cable lengths up to 46 centimetres (18 inches) although cables up to 91 cm (36 inches) can be readily purchased. Because of this length limit, the technology normally appears as an internal computer storage interface. It provides the most common and the least expensive interface for this application.
ATM	Asynchronous Transfer Mode, or ATM for short, is a cell relay network protocol which encodes data traffic into small fixed-sized (53 byte; 48 bytes of data and 5 bytes of header information) cells instead of variable sized packets (sometimes known as frames) as in packet-switched networks (such as the Internet Protocol or Ethernet). It is a connection-oriented technology, in which a connection is established between the two endpoints before the actual data exchange begins.
AVI	AVI, an acronym for Audio Video Interleave, is a multimedia container format introduced by Microsoft in November 1992, as part of the Video for Windows technology. AVI files contain both audio and video data in a standard container that allows simultaneous playback. Like DVDs, AVI files support multiple audio and video streams, although these features are rarely used. Most AVI files also use the file format extensions developed by the Matrox OpenDML group in February 1996. These files are supported by Microsoft, and are known unofficially as "AVI 2.0".

	It is a special case of the Resource Interchange File Format (RIFF), which divides the file's data up into data blocks called "chunks". Each "chunk" is identified by a FourCC tag. An AVI file takes the form of a single chunk in an RIFF formatted file, which is then subdivided into two mandatory "chunks" and one optional "chunk".
	The first sub-chunk is identified by the "hdrl" tag. This chunk is the file header and contains metadata about the video such as the width, height and the number of frames. The second sub-chunk is identified by the "movi" tag. This chunk contains the actual audio/visual data that make up the AVI movie. The third optional sub-chunk is identified by the "idx1" tag and indexes the location of the data chunks within the file.
	By way of the RIFF format, the audio/visual data contained in the "movi" chunk can be encoded or decoded by a software module called a codec. The codec translates between raw data and the data format inside the chunk. An AVI file may therefore carry audio/visual data inside the chunks in almost any compression scheme, including: Full Frames (Uncompressed), Intel Real Time Video, Indeo, Cinepak, Motion JPEG, Editable MPEG, VDOWave, ClearVideo / RealVideo, QPEG, MPEG-4, XviD, DivX and others.
Bandwidth	Bandwidth is a measure of frequency range, measured in hertz, of a function of a frequency variable. Bandwidth is a central concept in many fields, including information theory, radio communications, signal processing, and spectroscopy. Bandwidth also refers to data rates when communicating over certain media or devices. According to the Shannon-Hartley theorem, the data rate of reliable communication is directly proportional to the frequency range of the signal used for the communication. In this context, the word bandwidth can refer to either the data rate or the frequency range of the communication system (or both).
	Bandwidth is a key concept in many applications. In radio communications, for example, bandwidth is the range of frequencies occupied by a modulated carrier wave, whereas in optics it is the width of an individual spectral line or the entire spectral range
	There is no single universal precise definition of bandwidth, as it is vaguely understood to be a measure of how wide a function is in the frequency domain. For different applications there are different precise definitions. For example, one definition of bandwidth could be the range of frequencies beyond which the frequency function is zero. This would correspond to the mathematical notion of the support of a function (i.e., the total "length" of values for which the function is nonzero). Another definition might not be so strict and ignore the frequencies where the frequency function is small. Small could mean less than 3 dB below (i.e., less than half of) the maximum value, or it could mean below a certain absolute value. In short, as with any definition of the width of a function, there are many definitions available, which are suitable for different applications.
BitTorrent	BitTorrent is both the name of a peer-to-peer (P2P) file distribution client

	application and also the name of the file sharing protocol itself, both of which were created by programmer Bram Cohen. BitTorrent is designed to widely distribute large amounts of data without incurring the corresponding consumption in costly server and bandwidth resources. According to CacheLogic, BitTorrent traffic accounts for ~35% of all traffic on the internet.[1] The original BitTorrent application was written in Python and its source code has been released under the BitTorrent Open Source License (a modified version of the Jabber Open Source License), as of version 4.0. There are numerous compatible clients, written in a variety of languages and running on a variety of computing platforms.
Blog	A blog (or weblog) is a website in which messages are posted and displayed with the newest at the top. Like other media, blogs often focus on a particular subject, such as food, politics, or local news. Some blogs function as online diaries. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic. Since its appearance in 1995, blogging has emerged as a popular means of communication, affecting public opinion and mass media around the world. [1] Blogs can be hosted by dedicated blog hosting services, or they can be run using blog software on regular web hosting services.
Blue Screen	The Blue Screen of Death (BSoD) is a popular name for the screen displayed by Microsoft's Windows operating system when it cannot or is in danger of being unable to recover from a system error. There are two Windows error screens that are both referred to as the blue screen of death, with one (Windows NT 4/2000/XP) being significantly more serious than the other (Windows 9x.). The blue screen of death in one form or another has been present in all Windows operating systems since Windows version 3.1. It is related to the black screen of death in OS/2. In early builds of Windows Vista it was complemented with the red screen of death, used for boot loader errors.
BMP	Windows bitmap. .BMP or .DIB (device-independent bitmap) is a bitmapped graphics format used internally by the Microsoft Windows graphics subsystem (GDI), and used commonly as a simple graphics file format on that platform. Images are generally stored with a color depth of 2 (1-bit), 16 (4-bit), 256 (8-bit), 65,536 (16-bit), or 16.7 million (24-bit) colors(the bits represent the bits per pixel). 8-bit images can also be greyscale instead of indexed color. An alpha channel (for transparency) may be stored in a separate file, where it is similar to a greyscale image. A 32-bit version with integrated alpha channel has been introduced with Windows XP and is used within its logon and theme system; it has yet to gain wide support in image editing software. BMP files are usually not compressed, so they are typically much larger than compressed image file formats for the same image. The typical true-color bitmap size in bytes can be calculated as: (width in pixels)×(height in pixels)×3+54, though

	it will be slightly more if the width is not a multiple of 4. So an 800×600 image will occupy almost 1.4 megabytes. As such they are generally unsuitable for transferring images on the Internet or other slow or capacity-limited media. Nevertheless, the simplicity of BMP and its widespread familiarity in MS Windows and elsewhere, as well as the fact that this format is well-documented and free of patents, makes it a very common format that image processing programs from many operating systems can read and write. The X Window System uses a similar .XBM format for true single-bit black and white images, and .XPM (pixelmap) for color images. There is also a .RAW format, which saves raw data with no other information. The Portable Pixmap file format (.PPM) and Truevision TGA (.TGA) formats also exist, but are rarely used - or only for special purposes. Yet other formats store as "bitmaps" (as opposed to vector graphics), but use compression or color indexes, and thus are not strictly considered true bitmaps. Most BMP files compress very well with lossless data compression algorithms such as ZIP because they contain redundant data.
CD-R	A CD-R (Compact Disc-Recordable) is a variation of the Compact Disc digital audio disc invented by Philips and Sony. The CD-R retains all the abilities of the CD standard but adds the functionality of being able to store either music or data.
Centrex	Centrex is a contraction of central exchange, a kind of telephone exchange.
Codec	A Codec is a device or program capable of performing Encoding and Decoding on a data stream or signal. The word "codec" is a portmanteau of any of the following: 'Compressor-Decompressor', 'Coder-Decoder', or 'Compression/Decompression algorithm'. Codecs encode a stream or signal for transmission, storage or encryption and decode it for viewing or editing. Codecs are often used in videoconferencing and streaming media solutions. A video camera's ADC converts its analog signals into digital signals, which are then passed through a video compressor for digital transmission. A receiving device then runs the signal through a video decompressor, then a DAC for analog display. An audio compressor converts analog audio signals into digital signals for transmission. A receiving device then converts the digital signals back to analog using an audio decompressor, for playback. The raw encoded form of audio and video data is often called essence, to distinguish it from the metadata information that together make up the information content of the stream and any "wrapper" data that is then added to aid access to or improve the robustness of the stream. Most codecs are lossy, in order to get a reasonably small file size. There are lossless codecs as well, but for most purposes the almost imperceptible increase in quality is not worth the considerable increase in data size. The main exception is if the data

	will undergo more processing in the future, in which case the repeated lossy encoding could damage the eventual quality too much.

Many multimedia data streams need to contain both audio and video data, and often some form of metadata that permits synchronization of the audio and video. Each of these three streams may be handled by different programs, processes, or hardware; but for the multimedia data stream to be useful in stored or transmitted form, they must be encapsulated together in a container format.

An endec is a similar (but not identical) concept for hardware.

It must be noted that while many people explain that AVI is a codec, they are incorrect - AVI (nowadays) is a container format, that many codecs might use (although not to ISO). There are other well known alternative containers such as ASF, MOV, RM, MP4, and MPG. |
| Computer | A computer is a machine designed for manipulating data according to a list of instructions known as a program. |
| Database | A database is an organized collection of data. The term originated within the computer industry, but its meaning has been broadened by popular use, to the extent that the European Database Directive (which creates intellectual property rights for databases) includes non-electronic databases within its definition. This article is confined to a more technical use of the term; though even amongst computing professionals, some attach a much wider meaning to the word than others.

One possible definition is that a database is a collection of records stored in a computer in a systematic way, so that a computer program can consult it to answer questions. For better retrieval and sorting, each record is usually organized as a set of data elements (facts). The items retrieved in answer to queries become information that can be used to make decisions. The computer program used to manage and query a database is known as a database management system (DBMS). The properties and design of database systems are included in the study of information science.

The central concept of a database is that of a collection of records, or pieces of knowledge. Typically, for a given database, there is a structural description of the type of facts held in that database: this description is known as a schema. The schema describes the objects that are represented in the database, and the relationships among them. There are a number of different ways of organizing a schema, that is, of modeling the database structure: these are known as database models (or data models). The model in most common use today is the relational model, which in layman's terms represents all information in the form of multiple related tables each consisting of rows and columns (the true definition uses mathematical terminology). This model represents relationships by the use of values common to more than one table. Other models such as the hierarchical model and the network model use a more explicit representation of relationships. |

	Strictly speaking, the term database refers to the collection of related records, and the software should be referred to as the database management system or DBMS. When the context is unambiguous, however, many database administrators and programmers use the term database to cover both meanings.

Many professionals would consider a collection of data to constitute a database only if it has certain properties: for example, if the data is managed to ensure its integrity and quality, if it allows shared access by a community of users, if it has a schema, or if it supports a query language. However, there is no agreed definition of these properties.

Database management systems are usually categorized according to the data model that they support: relational, object-relational, network, and so on. The data model will tend to determine the query languages that are available to access the database. A great deal of the internal engineering of a DBMS, however, is independent of the data model, and is concerned with managing factors such as performance, concurrency, integrity, and recovery from hardware failures. In these areas there are large differences between products. |
| Debian Linux | Debian, organized by the Debian Project, is a widely used distribution of free software developed through the collaboration of volunteers from around the world. Since its inception, the released system, Debian GNU/Linux, has been based on the Linux kernel, with many basic tools of the operating system from the GNU project.

Debian is known for its adherence to the Unix and free software philosophies, and for its abundance of options —the current release includes over fifteen thousand software packages for eleven computer architectures, ranging from the ARM architecture commonly found in embedded systems and the IBM s390 mainframe architecture to the more common x86 and PowerPC architectures found in modern personal computers. Debian GNU/Linux is the basis for several other distributions, including Knoppix and Ubuntu.

Debian is also known for its package management system, especially APT, the Advanced Packaging Tool, for its strict policies regarding the quality of its packages and releases, and for its open development and testing process. These practices afford easy upgrades between releases without rebooting and easy automated installation and removal of packages.

Debian is supported by donations through Software in the Public Interest, a non-profit umbrella organization for free software projects. |
| Dial-Up | Dial-up access is an inexpensive but slow form of Internet access in which the client uses a modem connected to the computer and a telephone line to dial the Internet service provider's (ISP) node, a dial-up server type such as the Point-to-Point Protocol and TCP/IP protocols to establish a modem-to-modem link, which is then routed to the Internet. It is currently regarded as legacy technology given the advent of widely available broadband Internet access in the Western world, though many people worldwide still use it simply because they do not have access to a |

	faster connection technology or cannot afford high-speed Internet access.
Digital Subscriber Line (DSL)	Digital Subscriber Line, or DSL, is a family of technologies that provide digital data transmission over the wires used in the "last mile" of a local telephone network. Typically, the download speed of DSL ranges from 128 kilobits per second (kbit/s) to 24,000 kbit/s depending on DSL technology and service level implemented. Upload speed is lower than download speed for Asymmetric Digital Subscriber Line (ADSL) and equal to download speed for Symmetric Digital Subscriber Line (SDSL).
DivX	DivX is a video codec created by DivX, Inc. (formerly DivXNetworks, Inc.), which has become popular due to its ability to compress lengthy video segments into small sizes while maintaining relatively high visual quality. DivX uses lossy MPEG-4 Part 2 compression, where quality is balanced against file size for utility. It is one of several codecs commonly associated with ripping, where audio and video multimedia are transferred to a hard disk and transcoded. As a result, DivX has been a center of controversy because of its use in the replication and distribution of copyrighted DVDs. Many newer "DivX Certified" DVD players are able to play DivX encoded movies, however, "DivX" is not to be confused with "DIVX", an unrelated attempt at a new DVD rental system employed by the US retailer Circuit City. Early versions of DivX included only a codec, and were named "DivX ;-)", where the winking emoticon was a tongue-in-cheek reference to the failed DIVX system.
DNS	The Domain Name System or Domain Name Server (DNS) is a system that stores information associated with domain names in a Distributed database on networks, such as the Internet. The domain name system (Domain Name Server) associates many types of information with domain names, but most importantly, it provides the IP address associated with the domain name. It also lists mail exchange servers accepting e-mail for each domain. In providing a worldwide keyword-based redirection service, DNS is an essential component of contemporary Internet use. DNS is useful for several reasons. Most well known, the DNS makes it possible to attach hard-to-remember IP addresses (such as 207.142.131.206) to easy-to-remember domain names (such as "wikipedia.org") Humans take advantage of this when they recite URLs and e-mail addresses. Less recognized, the domain name system makes it possible for people to assign authoritative names, without needing to communicate with a central registrar each time.
DOS	DOS commonly refers to the family of closely related operating systems which dominated the IBM PC compatible market between 1981 and 1995 (or until about 2000, if you include Windows 9X) : PC-DOS, MS-DOS, FreeDOS, DR-DOS, Novell-DOS, OpenDOS, PTS-DOS, ROM-DOS and several others. Of these, MS-DOS from Microsoft was the most widely used. These operating systems ran on IBM PC type hardware using the Intel x86 CPUs or their compatible cousins from other makers.
DVD-R	A DVD-Recordable or DVD-R (pronounced "DVD minus Are", DVD Are" or "DVD Dash Are") is an optical disc with a larger storage capacity than a CD-R, typically 4.7 GB (4.38 GiB) instead of 700 MiB, although the capacity of the

	original standard was 3.95 GB. Pioneer has also developed an 8.54 GB dual layer version, which appeared on the market in 2005. A DVD-R can be written to only once, whereas a DVD-RW (DVD-rewritable) can be rewritten multiple times.
E1	An E1 link operates over two separate sets of wires, usually coaxial cable. A nominal 2.4 volt signal is encoded with pulses using a method that avoids long periods without polarity changes. The line data rate is 2.048 Mbit/s (full duplex, i.e. 2.048 Mbit/s downstream and 2.048 Mbit/s upstream) which is split into 32 time slots, each being allocated 8 bits in turn. Thus each time slot sends and receives an 8-bit sample 8000 times per second (8 x 8000 x 32 = 2,048,000). This is ideal for voice telephone calls where the voice is sampled into an 8 bit number at that data rate and reconstructed at the other end.
	One timeslot (TS0) is reserved for framing purposes, and alternately transmits a fixed pattern. This allows the receiver to lock onto the start of each frame and match up each channel in turn. The standards allow for a full Cyclic Redundancy Check to be performed across all bits transmitted in each frame, to detect if the circuit is losing bits (information), but this is not always used.
	One timeslot (TS16) is often reserved for signalling purposes, to control call setup and teardown according to one of several standard telecommunications protocols. This includes Channel Associated Signaling (CAS) where a set of bits is used to replicate opening and closing the circuit (as if picking up the telephone receiver and pulsing digits on a rotary phone), or using tone signalling which is passed through on the voice circuits themselves. More recent systems used Common Channel Signaling (CCS) such as ISDN or Signalling System 7 (SS7) which send short encoded messages with more information about the call including caller ID, type of transmission required etc. ISDN is often used between the local telephone exchange and business premises, whilst SS7 is almost exclusively used between exchanges and operators. SS7 can handle up to 4096 circuits per signalling channel, thus allowing slightly more efficient use of the overall transmission bandwidth.
	Unlike the earlier T-carrier systems developed in North America, all 8 bits of each sample are available for each call. This allows the E1 systems to be used equally well for circuit switch data calls, without risking the loss of any information.
	While the original CEPT standard G.701 specifies several options for the physical transmission, almost exclusively HDB3 format is used.
E-Mail	Electronic mail, abbreviated e-mail or email, is a method of composing, sending, and receiving messages over electronic communication systems. The term e-mail applies both to the Internet e-mail system based on the Simple Mail Transfer Protocol (SMTP) and to intranet systems allowing users within one company or organization to send messages to each other. Often these workgroup collaboration systems natively use non-standard protocols but have some form of gateway to allow them to send and receive Internet e-mail. Some organizations may use the Internet protocols for internal e-mail service.
Ethernet	Ethernet is a frame-based computer networking technology for local area networks

	(LANs). The name comes from the physical concept of ether. It defines wiring and signaling for the physical layer, and frame formats and protocols for the media access control (MAC)/data link layer of the OSI model. Ethernet is mostly standardized as IEEEs 802.3. It has become the most widespread LAN technology in use during the 1990s to the present, and has largely replaced all other LAN standards such as token ring, FDDI, and ARCNET.
Exchange	Microsoft Exchange Server is a messaging and collaborative software product developed by Microsoft. It is a part of their Windows Server System line of server products. The use of Microsoft Exchange is very widespread in large corporations using Microsoft infrastructure solutions. Among other things, Microsoft Exchange manages electronic mail, shared calendars and tasks, provides full support for mobile and web-based access to information, and can support very large amounts of data storage. It is positioned as a rival to the Lotus Notes / Domino server from IBM and competes with a number of competitors such as Scalix, Open-Xchange and exchange4linux.
Firewall	In computing, a firewall is a piece of hardware and/or software which functions in a networked environment to prevent some communications forbidden by the security policy, analogous to the function of firewalls in building construction. A firewall is also called a Border Protection Device (BPD), especially in NATO contexts, or packet filter in BSD contexts. A firewall has the basic task of controlling traffic between different zones of trust. Typical zones of trust include the Internet (a zone with no trust) and an internal network (a zone with high trust). The ultimate goal is to provide controlled connectivity between zones of differing trust levels through the enforcement of a security policy and connectivity model based on the least privilege principle.

Proper configuration of firewalls demands skill from the administrator. It requires considerable understanding of network protocols and of computer security. Small mistakes can render a firewall worthless as a security tool. |
FireWire	FireWire (also known as i.Link or IEEE 1394) is a personal computer (and digital audio/video) serial bus interface standard, offering high-speed communications and isochronous real-time data services. FireWire has replaced SCSI in many applications due to lower implementation costs and a simplified and more adaptable cabling system.
Frame Relay	In the context of computer networking, frame relay (also found written as "frame-relay") consists of an efficient data transmission technique used to send digital information quickly and cheaply in a relay of frames to one or many destinations from one or many end-points. Network providers commonly implement frame relay for voice and data as an encapsulation technique, used between local area networks (LANs) over a wide area network (WAN). Each end-user gets a private line (or leased line) to a frame-relay node. The frame-relay network handles the transmission over a frequently-changing path transparent to all end-users.
FreeBSD	FreeBSD is a Unix-like free software operating system descended from AT&T UNIX via the Berkeley Software Distribution (BSD) branch through 386BSD and 4.4BSD. It runs on processors compatible with the Intel x86 family, as well as on the DEC Alpha, the UltraSPARC processors by Sun Microsystems, the Itanium

	(IA-64), AMD64 and PowerPC processors. It also runs on the PC-98 architecture. Support for the ARM and MIPS architectures is in development.

FreeBSD is developed as a complete operating system. The kernel, all of the expected userland utilities such as the shell and the device drivers are held in the same source code revision tracking tree (CVS). This is in contrast to Linux, a similar and better known free Unix-clone, in which the kernel is developed by one group, userland utilities by others such as the GNU project, and put together with applications into distributions that package all the parts together by others.

As an operating system, FreeBSD is generally regarded as quite reliable and robust, and of the operating systems that accurately report uptime remotely [1], FreeBSD is the most common free operating system listed in Netcraft's list [2] of the 50 web servers with the longest uptime. A long uptime also indicates that no kernel updates have been deemed necessary, as installing a new kernel requires a reboot and resets the uptime counter of the system. |
| FTP | FTP or File Transfer Protocol is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet). There are two computers involved in an FTP transfer: a server and a client. The FTP server, running FTP server software, listens on the network for connection requests from other computers. The client computer, running FTP client software, initiates a connection to the server. Once connected, the client can do a number of file manipulation operations such as uploading files to the server, download files from the server, rename or delete files on the server and so on. Any software company or individual programmer is able to create FTP server or client software because the protocol is an open standard. Virtually every computer platform supports the FTP protocol. This allows any computer connected to a TCP/IP based network to manipulate files on another computer on that network regardless of which operating systems are involved (if the computers permit FTP access). There are many existing FTP client and server programs, and many of these are free. |
| GIF | GIF (Graphics Interchange Format) is a bitmap image format for pictures with up to 256 distinct colours from the over 16 million representable in 24 bit rgb. The format was introduced by CompuServe in 1987 and has since come into widespread usage on the World Wide Web. GIFs are compressed files, and were adopted to reduce the amount of time it takes to transfer images over a network connection.

A GIF file employs lossless data compression so that the file size of an image may be reduced without degrading the visual quality, provided the image fits into 256 colours. (However, there is a hack that can overcome this limitation under certain circumstances; see #truecolour.) The GIF format's 256-colour limitation makes it unsuitable for photographs, though losslessly compressed photographs tend to be unacceptably large for the web anyway. On the other hand the lossy JPEG format does poorly on sharp transitions like those in diagrams or text, producing highly visible artifacts and little file-size reduction. Therefore GIF is normally used for diagrams, buttons, etc., that have a small number of colours, while the JPEG format |

	is used for photographs.
Gigabyte	A gigabyte (derived from the SI prefix giga-) is a unit of information or computer storage equal to one billion bytes. It is commonly abbreviated GB in writing (not to be confused with Gb, which is used for gigabit) and gig in writing or speech. There are two slightly different definitions of the size of a gigabyte in use: 1,000,000,000 bytes or 109 bytes is the decimal definition used in telecommunications (such as network speeds) and some computer storage manufacturers (such as hard disks and flash drives). This usage is compatible with SI. 1,073,741,824 bytes, equal to 10243, or 230 bytes. This is the definition used for computer memory sizes, and most often used in computer engineering, computer science, and most aspects of computer operating systems. The IEC recommends that this unit should instead be called a gibibyte (abbreviated GiB), as it conflicts with SI units used for bus speeds and the like.
HTML	In computing, HyperText Markup Language (HTML) is a markup language designed for the creation of web pages with hypertext and other information to be displayed in a web browser. HTML is used to structure information — denoting certain text as headings, paragraphs, lists and so on — and can be used to describe, to some degree, the appearance and semantics of a document. HTML's grammar structure is the HTML DTD that was created using SGML syntax. Originally defined by Tim Berners-Lee and further developed by the IETF, HTML is now an international standard (ISO/IEC 15445:2000). Later HTML specifications are maintained by the World Wide Web Consortium (W3C). Early versions of HTML were defined with looser syntactic rules which helped its adoption by those unfamiliar with web publishing. Web browsers commonly made assumptions about intent and proceeded with rendering of the page. Over time, the trend in the official standards has been to create an increasingly strict language syntax; however, browsers still continue to render pages that are far from valid HTML. XHTML, which applies the stricter rules of XML to HTML to make it easier to process and maintain, is the W3C's successor to HTML. As such, many consider XHTML to be the "current version" of HTML, but it is a separate, parallel standard; the W3C continues to recommend the use of either XHTML 1.1, XHTML 1.0, or HTML 4.01 for web publishing.
Hunt Group	A telephone system hunt group allows for automatic distribution of incoming calls to two or more extensions. A hunt group is a grouping of telephone lines (usually incoming) that are set up to receive calls in a particular order if a line is busy. For example: Line 1 - 555-1000 - First in hunt group Line 2 - 555-1001 - Second in

	hunt group Line 3 - 555-1002 - Third in hunt group If line 1 is busy and a call comes in, then that call will be routed to line 2. If both lines 1, and 2 are busy, then the call will be routed to line 3, etc.
Hyper-Threading	Hyper-threading, officially called Hyper-Threading Technology (HTT), is Intel's trademark for their implementation of the simultaneous multithreading technology on the Pentium 4 microarchitecture. It is basically a more advanced form of Super-threading that first debuted on the Intel Xeon processors and was later added to Pentium 4 processors. The technology improves processor performance under certain workloads by providing useful work for execution units that would otherwise be idle, for example during a cache miss.
Internet	The Internet, or simply the Net, is the publicly accessible worldwide system of interconnected computer networks that transmit data by packet switching using a standardized Internet Protocol (IP). It is made up of thousands of smaller commercial, academic, domestic, and government networks. It carries various information and services, such as electronic mail, online chat, and the interlinked Web pages and other documents of the World Wide Web.
Internet Protocol	The Internet Protocol (IP) is a data-oriented protocol used for communicating data across a packet-switched internetwork. IP is a network layer protocol in the internet protocol suite and is encapsulated in a data link layer protocol (e.g., ethernet). As a lower layer protocol, IP provides the service of communicable unique global addressing amongst computers. This implies that the data link layer need not provide this service. Ethernet provides globally unique addresses except it is not globally communicable (i.e., two arbitrarily chosen ethernet devices will only be able to communicate if they are on the same bus).
Internet Message Access Protocol (IMAP)	The Internet Message Access Protocol (commonly known as IMAP4, and previously called Internet Mail Access Protocol) is an application layer Internet protocol that allows a local client to access e-mail on a remote server. The current version, IMAP version 4 revision 1 (IMAP4rev1), is defined by RFC 3501. IMAP4 and POP3 (Post Office Protocol version 3) are the two most prevalent Internet standard protocols for e-mail retrieval. Virtually all modern e-mail clients and servers support both.
Internet Service Provider (ISP)	An Internet service provider (ISP, also called Internet access provider) is a business or organization that offers users access to the Internet and related services. Many but not all ISPs are telephone companies. They provide services such as Internet transit, domain name registration and hosting, dial-up or DSL access, leased line access and colocation.
JPEG	In computing, JPEG (pronounced jay-peg) is a most commonly used standard method of lossy compression for photographic images. The file format which employs this compression is commonly also called JPEG; the most common file extensions for this format are .jpeg, .jfif, .jpg, .JPG, or .JPE although .jpg is the most common on all platforms. The name stands for Joint Photographic Experts Group. JPEG itself specifies only

	how an image is transformed into a stream of bytes, but not how those bytes are encapsulated in any particular storage medium. A further standard, created by the Independent JPEG Group, called JFIF (JPEG File Interchange Format) specifies how to produce a file suitable for computer storage and transmission (such as over the Internet) from a JPEG stream. In common usage, when one speaks of a "JPEG file" one generally means a JFIF file, or sometimes an Exif JPEG file. There are, however, other JPEG-based file formats, such as JNG, and the TIFF format can carry JPEG data as well. JPEG/JFIF is the format most used for storing and transmitting photographs on the World Wide Web. For this application, it is preferred to formats such as GIF, which has a limit of 256 distinct colors that is insufficient for colour photographs, and PNG, which produces much larger image files for this type of image. It is not as well suited for line drawings and other textual or iconic graphics because its compression method performs badly on these types of images, for which the PNG and GIF formats are more commonly used.
Kilobyte	A kilobyte (derived from the SI prefix kilo-, meaning 1000) is a unit of information or computer storage equal to either 1024 or 1000 bytes. It is commonly abbreviated KB, kB, Kbyte, kbyte, or, very informally, K or k. The term "kilobyte" was first used to refer to a value of 1024 bytes (210), because the binary nature of digital computers lends itself to quantities that are powers of two, and 210 is roughly one thousand. As computers became more widely used, this misuse (according to the BIPM) of the SI prefix spread from the slang of computer professionals into the mainstream lexicon, creating much confusion. See binary prefix for more details.
LAN	A local area network (LAN) is a computer network covering a small local area, like a home, office, or small group of buildings such as a home, office, or college. Current LANs are most likely to be based on switched Ethernet or Wi-Fi technology running at from 10 to 10000 Mbit/s. The defining characteristics of LANs in contrast to WANs are: a) much higher data rates, b) smaller geographic range - at most a few kilometers - and c) they do not involve leased telecommunication lines. "LAN" usually does not refer to data running over local analog telephone lines, as on a private branch exchange (PBX).
Linux	Linux (also known as GNU/Linux) is a computer operating system. It is one of the most prominent examples of free software and of open-source development; unlike proprietary operating systems such as Windows, all of its underlying source code is available to the public for anyone to freely use, modify, improve, and redistribute. Initially, Linux was primarily developed and used by individual enthusiasts. Since then, Linux has gained the support of major corporations such as IBM, Sun Microsystems, Hewlett-Packard, and Novell for use in servers and is gaining popularity in the desktop market[1]. Proponents and analysts attribute this success to its vendor independence (the opposite of vendor lock-in), low cost, security, and reliability.
Mandriva Linux	Mandriva Linux (formerly Mandrakelinux or Mandrake Linux, and an acquisition

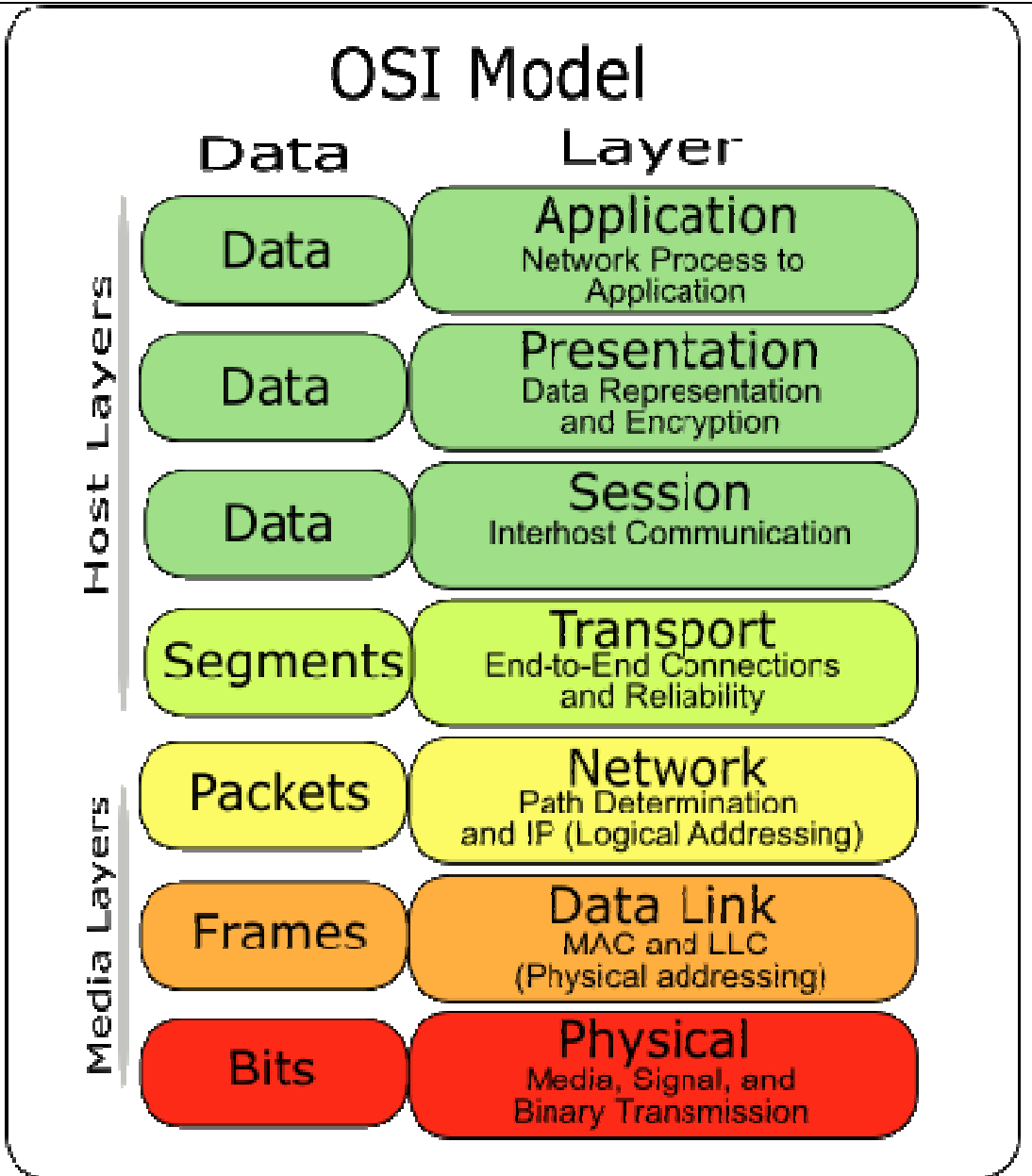|	
	of Conectiva and Lycoris) is a Linux distribution created by Mandriva, SA (formerly Mandrakesoft, SA). The first release was based on Red Hat Linux (version 5.1) and KDE (version 1.0) in July 1998. It has since diverged from Red Hat and has included a number of original tools mostly to ease system configuration. Mandriva Linux is also notable for compiling its packages with optimizations for Pentium and AMD64-class and more advanced processors which are incompatible with older CPU versions such as 386 and 486. Mandriva Linux (at those times named Mandrake Linux) was originated by Gaël Duval, who was also a co-founder of Mandrakesoft.
Megabyte	A megabyte is a unit of information or computer storage equal to approximately one million bytes. Megabyte is commonly abbreviated as MB (not to be confused with Mb, which is used for megabits), and sometimes as meg.
Modem	A modem (a portmanteau word constructed from modulator and demodulator) is a device that modulates a carrier signal to encode digital information, and also demodulates such a carrier signal to decode the transmitted information. The goal is to produce a signal that can be transmitted easily and decoded to reproduce the original digital data.
Motion JPEG	Motion JPEG (M-JPEG) is a video codec where each video field is separately compressed into a JPEG image. The resulting quality of intraframe video compression is independent from the motion in the image which differs from MPEG video where quality often decreases when footage contains lots of movement. In addition, it makes video editing easier, as cuts may begin on any frame, not only on the beginning of a group of frames. M-JPEG is best suited for broadcast resolution interlaced video (720×486 D1 NTSC or 720×576 PAL). Because most M-JPEG implementations are designed for interlaced video, M-JPEG is not well suited for movies that are smaller than television resolution. Movies designed to be viewed on progressive scan computer monitors (like web movies or CD-ROM videogames) are ill suited for these implementations of M-JPEG. The bitrate falls between uncompressed formats (like RGB, compression 1:1, and YUV, compression 1:1.5 to 1:2.5) and MPEG (1:100) Data rates in the range of 29 Mbit/s are very high quality, but also result in comparatively large file sizes.
MP3	MPEG-1 Audio Layer 3, more commonly referred to as MP3, is a popular digital audio encoding and lossy compression format invented and standardized in 1991 by a team of engineers directed by the Fraunhofer Society in Germany. It was designed to greatly reduce the amount of data required to represent audio, yet still sound like a faithful reproduction of the original uncompressed audio to most listeners. In popular usage, MP3 also refers to files of sound or music recordings stored in the MP3 format on computers.
MPEG-1	MPEG-1 is the designation for a group of audio and video coding standards agreed upon by MPEG (Moving Picture Experts Group). MPEG-1 video is used by the Video CD format. The output quality at usual VCD bit rates is roughly that of a VCR. MPEG-1 audio layer 3 is the full name for the popular audio format MP3.
MPEG-2	MPEG-2 (1994) is the designation for a group of coding standards for digital audio

	and video, agreed upon by MPEG (Moving Pictures Experts Group), and published as the ISO/IEC 13818 international standard. MPEG-2 is typically used to encode audio and video for broadcast signals, including direct broadcast satellite and Cable TV. MPEG-2, with some modifications, is also the coding format used by standard commercial DVD movies. MPEG-2 includes a Systems part (part 1) that defines Transport Streams, which are designed to carry digital video and audio over somewhat-unreliable media, and are used in broadcast applications. The Video part (part 2) of MPEG-2 is similar to MPEG-1, but also provides support for interlaced video (the format used by broadcast TV systems). MPEG-2 video is not optimized for low bit-rates (less than 1 Mbit/s), but outperforms MPEG-1 at 3 Mbit/s and above. All standards-conforming MPEG-2 Video decoders are fully capable of playing back MPEG-1 Video streams. With some enhancements, MPEG-2 Video and Systems are also used in most HDTV transmission systems. The MPEG-2 Audio part (defined in Part 3 of the standard), enhances MPEG-1's audio by allowing the coding of audio programs with more than two channels. Part 3 of the standard allows this to be done in a backwards compatible way, allowing MPEG-1 audio decoders to decode the two main stereo components of the presentation. In part 7 of the MPEG-2 standard, audio can alternatively be coded in a non-backwards-compatible way, which allows encoders to make better use of available bandwidth. Part 7 is referred to as MPEG-2 AAC.
MPEG-3	MPEG-3 is the designation for a group of audio and video coding standards agreed upon by MPEG (Moving Picture Experts Group). MPEG-3 was designed to handle HDTV signals in the range of 20 to 40 Mbit/s. It was soon discovered that similar results could be obtained through slight modifications to the MPEG-2 standard. Shortly thereafter, work on MPEG-3 was discontinued. MPEG-3 should not be confused with MPEG-1 Part 3 Layer 3 (or MPEG-1 Audio Layer 3), commonly referred to as MP3.
MPEG-4	MPEG-4, introduced in late 1998, is the designation for a group of audio and video coding standards and related technology agreed upon by the ISO/IEC Moving Picture Experts Group (MPEG). The primary uses for the MPEG-4 standard are web (streaming media) and CD distribution, conversational (videophone), and broadcast television. MPEG-4 absorbs many of the features of MPEG-1 and MPEG-2 and other related standards, adding new features such as (extended) VRML support for 3D rendering,

	object-oriented composite files (including audio, video and VRML objects), support for externally-specified Digital Rights Management and various types of interactivity. AAC (Advanced Audio Codec) was standardized as an adjunct to MPEG-2 (as Part 7) before MPEG-4 was issued. Most of the features included in MPEG-4 are left to individual developers to decide whether to implement them. This means that there are probably no complete implementations of the entire MPEG-4 set of standards. To deal with this, the standard includes the concept of "profiles" and "levels", allowing a specific set of capabilities to be defined in a manner appropriate for a subset of applications. The primary MPEG-4 audio codec, AAC is decoded/played by Apple's iPod product line. Two video codecs included in MPEG-4, Simple Profile (SP) and Advanced Video Codec AVC, are decoded/played by the 5th Generation iPod (AKA the "video iPod"). However, neither the iPod nor Apple's Quicktime Player are fully MPEG-4 compliant decoders, as they do not natively support many of the required parts of the standard.
MPLS	In computer networking and telecommunications, Multiprotocol Label Switching (MPLS) is a data-carrying mechanism which emulates some properties of a circuit-switched network over a packet-switched network. MPLS operates at a OSI Model layer that is generally considered to lie between traditional definitions of Layer 2 (data link layer) and Layer 3 (network layer), and thus is often referred to as a "Layer 2.5" protocol. It was designed to provide a unified data-carrying service for both circuit-based clients and packet-switching clients which provide a datagram service model. It can be used to carry many different kinds of traffic, including IP packets, as well as native ATM, SONET, and Ethernet frames.
Multilayer Switch	A multilayer switch (MLS) is a computer networking device that switches on OSI layer 2 like an ordinary network switch and provides extra functions on higher OSI layers.
MUXed	In telecommunications, multiplexing (also MUXing) is the combination of two or more higher level channels into a single lower level channel such that a reverse process, known as inverse multiplexing, demultiplexing, or demuxing, can extract the original channels. The individual channels are identifiable by a predetermined coding scheme. In electrical communications, the two basic forms of multiplexing are time-division multiplexing (TDM) and frequency-division multiplexing (FDM). In optical communications, FDM is referred to as wavelength-division multiplexing (WDM). Time-Division Multiplexing can be either synchronous or asynchronous. When encoding video, multiplexing often refers to the process of interleaving audio and video into one coherent stream. In digital television, DVB, ATSC, and ISDB can all multiplex several channels together. In digital radio, both the EUREKA 147 system of Digital audio broadcasting and the HD Radio and Digital Radio Mondiale systems of IBOC can multiplex channels. This is essentially required with DAB-type transmissions, but is entirely optional with IBOC systems.

	In spectroscopy the term is used in a related sense to indicate that the experiment is performed with a mixture of frequencies at once and their respective response unravelled afterwards using the Fourier transform principle. In FM broadcasting and other analog radio mediums, multiplexing is a term commonly given to the process of adding subcarriers to the audio signal before it enters the transmission equipment where modulation occurs. Multiplexing in this sense is sometimes known as MPX.
Network	A computer network is a system for communication between computers. These networks George Stibitz used a teletype machine to send instructions for a problem set from his Model K at Dartmouth College in New Hampshire to his Complex Number Calculator in New York and received results back by the same means. Linking output systems like teletypes to computers was an interest at the Advanced Research Projects Agency ARPA when, in 1962, J.C.R. Licklider was hired and developed a working group he called the "Intergalactic Network", a precursor to the ARPANet. In 1964 researchers at Dartmouth developed a time sharing system for distributed users of large computer systems. The same year, at MIT, a research group supported by General Electric and Bell Labs used a computer (DEC's PDP-8) to route and manage telephone connections. In 1968 Paul Baran proposed a network system consisting of datagrams or packets that could be used in a packet switching network between computer systems. In 1969 the University of California at Los Angeles, SRI (in Stanford), University of California at Santa Barbara, and the University of Utah were connected as the beginning of the ARPANet network using 50 kbit/s circuits. Networks, and the technologies needed to connect and communicate through and between them, continue to drive computer hardware, software, and peripherals industries. This expansion is mirrored by growth in the numbers and types of users of networks from researchers and businesses to families and individuals in everyday use.
Network Switch	A network switch is a computer networking device that connects network segments. It uses the logic of a Network bridge but allows a physical and logical star topology. It is often used to replace network hubs. A switch is also often referred to as an intelligent hub or switching hub. Note that the term "switch" is abused in the networking industry to name many different types of device - see Multilayer switch.
OC-1	OC-1 (optical carrier one) is a SONET line with transmission speed of 51.84 Mbit/s (payload: 50.112 Mbit/s; overhead: 1.728 Mbit/s) using optical fiber. This base rate is multiplied for use by other OC-n standards. For example, an OC-3 connection is 3 times the rate of OC-1.
OC-12	OC-12 (Optical Carrier 12) is a fiber optic network line with a SONET rate of 621.84 Mbit/s (payload: 601.344 Mbit/s; overhead: 20.736 Mbit/s) or 12 times the basic SONET signal transmitting rate of 51.84 Mbit/s (OC-1).

	OC-12 lines are commonly used by ISPs as WAN connections. While a large ISP would not use an OC-12 as a backbone (main link), it would for smaller, regional or local connections. This connection speed is also often used by mid-sized (below Tier 2) internet customers, such as web hosting companies or smaller ISPs buying service from larger ones.
OC-192	OC-192 (Optical Carrier 192) is a fiber optic network line with a SONET rate of 9953.28 Mbit/s (payload: 9621.504 Mbit/s; overhead: 331.776 Mbit/s), or 192 times the basic 51.84 Mbit/s SONET signal (OC-1), hence the name OC-192. This is the fastest connection commonly available to the Internet. A standardized variant of 10 Gigabit Ethernet, called WAN-PHY, is designed to inter-operate with OC-192 transport equipment while the common version of 10GE is called LAN-PHY. The naming is somewhat misleading, because both variants are suitable for use on a wide area network. As of 2005, OC-192 connections are the most common for use on the backbones of large ISPs. The OC-768 is the next increment in speed increase over OC-192, operating at 39,813.12 Mbit/s.
OC-3	OC-3 (Optical Carrier 3) is a network line with transmission speed of 155.52 Mbit/s (payload: 150.336 Mbit/s; overhead: 5.184 Mbit/s) using fiber optics. Depending on the system OC-3 is also known as STS-3 (electrical level) and STM-1 (SDH). When OC-3 is not multiplexed by carrying the data from a single source the letter c (standing for concatenated) is appended: OC-3c.
OC-3072	OC-3072 is, theoretically, a SONET line with transmission speed of about 160 Gbit/s using optical fiber. This technology is not yet standardized or manufactured.
OC-48	OC-48 (Optical Carrier 48) is a fiber optic network line with a SONET rate of 2488.32 Mbit/s (payload: 2405.376 Mbit/s; overhead: 82.944 Mbit/s) or 48 times the basic SONET signal transmitting at 51.84 Mbit/s. OC-48 connections are some of the fastest data connections in use today. Faster than OC-3 or OC-12 connections, and even surpassing gigabit ethernet, OC-48 connections are used as the backbones of many regional ISPs. Interconnections between large ISPs for purposes of peering or transit are quite common. As of 2005, the only connections in widespread use that surpass OC-48 speeds are OC-192 and 10 gigabit ethernet.
OC-768	OC-768 is a fiber optic network line with a SONET rate of 39,813.12 Mbit/s (payload: 38,486.016 Mbit/s; overhead: 1327.104 Mbit/s), or 768 times the basic SONET rate of 51.84 Mbit/s (OC-1). As of 2006, use of OC-768 connections outside of research or testing networks is quite rare, because of the high cost as opposed to link-bundled OC-192 and sheer lack of need for such speeds. Colloquially, it's referred to as "40 Gbit".
OC-n	OC-n, or Optical Carrier n is a SONET standard designating multiplier as compared

	to an OC-1 connection; which has a line rate of 51.84 megabits per second. An OC-3 is 3 times the line rate of an OC-1, an OC-12 is 12 times greater.
Open Source	Open source describes practices in production and development that promote access to the end product's sources. Some consider it as a philosophy, and others consider it as a pragmatic methodology. Before open source became widely adopted, developers and producers used a variety of phrases to describe the concept; the term open source gained popularity with the rise of the Internet and its enabling of diverse production models, communication paths, and interactive communities. Subsequently, open-source software became the most prominent face of open source. The open source model can allow for the concurrent use of different agendas and approaches in production, in contrast with more centralized models of development such as those typically used in commercial software companies.
OSI Model Layer 7	The Open Systems Interconnection Reference Model (OSI Model or OSI Reference Model for short) is a layered abstract description for communications and computer network protocol design, developed as part of the Open Systems Interconnection initiative. It is also called the OSI seven layer model. OSI model 7 Application layer 6 Presentation layer 5 Session layer 4 Transport layer 3 Network layer 2 Data link layer 1 Physical layer

OSI Model

	Data	Layer
Host Layers	Data	**Application** Network Process to Application
	Data	**Presentation** Data Representation and Encryption
	Data	**Session** Interhost Communication
	Segments	**Transport** End-to-End Connections and Reliability
Media Layers	Packets	**Network** Path Determination and IP (Logical Addressing)
	Frames	**Data Link** MAC and LLC (Physical addressing)
	Bits	**Physical** Media, Signal, and Binary Transmission

P2P	A peer-to-peer (or P2P) computer network is a network that relies on the computing power and bandwidth of the participants in the network rather than concentrating it in a relatively low number of servers. P2P networks are typically used for connecting nodes via largely ad hoc connections. Such networks are useful for many purposes. Sharing content files (see file sharing) containing audio, video, data or anything in digital format is very common, and realtime data, such as telephony traffic, is also passed using P2P technology.

A pure peer-to-peer network does not have the notion of clients or servers, but only equal peer nodes that simultaneously function as both "clients" and "servers" to the other nodes on the network. This model of network arrangement differs from the client-server model where communication is usually to and from a central server. A |

	typical example for a non peer-to-peer file transfer is an FTP server where the client and server programs are quite distinct, and the clients initiate the download/uploads and the servers react to and satisfy these requests. Some networks and channels, such as Napster, OpenNAP, or IRC @find, use a client-server structure for some tasks (e.g., searching) and a peer-to-peer structure for others. Networks such as Gnutella or Freenet use a peer-to-peer structure for all purposes, and are sometimes referred to as true peer-to-peer networks, although Gnutella is greatly facilitated by directory servers that inform peers of the network addresses of other peers. Peer-to-peer architecture embodies one of the key technical concepts of the internet, described in the first internet Request for Comments, "RFC 1, Host Software" [1] dated 7 April 1969. More recently, the concept has achieved recognition in the general public in the context of the absence of central indexing servers in architectures used for exchanging multimedia files. The concept of peer to peer is increasingly evolving to an expanded usage as the relational dynamic active in distributed networks, i.e. not just computer to computer, but human to human. Yochai Benkler has developed the notion of commons-based peer production to denote collaborative projects such as free software. Associated with peer production are the concept of peer governance (referring to the manner in which peer production projects are managed) and peer property (referring to the new type of licenses which recognize individual authorship but not exclusive property rights, such as the GNU General Public License and the Creative Commons License).
PBX	A Private Branch eXchange (also called PBX or Private Business eXchange) is a telephone exchange that is owned by a private business, as opposed to one owned by a common carrier or by a telephone company.
Phishing	In computing, phishing is a form of criminal activity using social engineering techniques, characterized by attempts to fraudulently acquire sensitive information, such as passwords and credit card details, by masquerading as a trustworthy person or business in an apparently official electronic communication, such as an email or an instant message. The term phishing arises from the use of increasingly sophisticated lures to "fish" for users' financial information and passwords. With the growing number of reported phishing incidents, additional methods of protection are needed. Attempts include legislation, user training, and technical measures.
Pine	Pine is a powerful freeware e-mail client: the University of Washington's "Program for Internet News & Email." Many people believe that Pine stood for "Pine is not Elm." However, its original author, Laurence Lundblade, insists this was never the case and that it started off simply as a word and not an acronym, and that his first choice of a backronym for pine would be "Pine Is Nearly Elm" [1]. In comparison to other major e-mail clients, Pine offers excellent possibilities to

	organize and archive emails efficiently. For instance, it offers the file carbon copy (fcc) option, in which an outgoing e-mail to the e-mail address example@example.org is saved automatically in a file that stores only those emails to/from this particular e-mail address or contact person. Incoming emails from example@example.org can be quickly saved in this same file simply by pressing a combination of two keys. This allows the creation of a file for each contact person that contains all of his/her e-mails with very little effort. The emails in this file can be sorted, viewed, and searched quickly. Pine is mainly used in universities and research institutions, where it is widely considered to be the most efficient e-mail client. Pine's basic features (such as the file carbon copy) are generally very easy to use since the setup options are clearly arranged. More advanced options (which are lacking in most other e-mail clients) require more experience. There are both Unix and Windows versions of Pine. The Unix version is command line interface-based. Its user interface inspired the text editor Pico. Individuals associated with the university (students, faculty, staff, etc.) are also able to use WebPine, a version of Pine implemented as a web application. Webpine has several interesting characteristics: Ease of use: at the cost of fewer advanced features compared to its Unix and Windows counterparts Accessibility: only requires a web browser and proper university credentials (Pine and Pico are registered trademarks of the University of Washington.)
PNG	PNG (Portable Network Graphics) is a losslessly compressed bitmap image format. PNG was created to both improve upon and replace the GIF format with an image file format that does not require a patent license to use. PNG is officially pronounced as "ping" (/pɪŋ/ in IPA), but it is often just spelled out — possibly to avoid confusion with the network tool ping. PNG is supported by the libpng reference library, a platform-independent library that contains C functions for handling PNG images.
Point to Point	Point-to-Point telecommunications is most recently (2003) referenced regarding wireless data communications for Internet or Voice over IP via radio frequencies in the multi-gigahertz range. It also includes technologies such as laser for telecommunications but in all cases expects that the transmission medium is line of sight and capable of being fairly tightly beamed from transmitter to receiver. Point-to-Point is sometimes incorrectly referred to the peer-to-peer initialisms P2P, or Pt2Pt, or variations of this. P2P refers to peer-to-peer file sharing networks. Point-to-Point is distinct from point-to-multipoint and broadcast. In the telecommunications signal typically is bi-directional, either Time domain Multi-plexed or channelized. In hubs and switches, a hub provides a point-to-multipoint (or simply multipoint) circuit which divides the total bandwidth supplied by the hub among each

	connected client node. A switch on the other hand provides a series of point-to-point circuits, via microsegmentation, which allows each client node to have a dedicated circuit and the added advantage of having full-duplex connections.
Post Office Protocol (POP)	In computing, local e-mail clients use the Post Office Protocol version 3 (POP3), an application-layer Internet standard protocol, to retrieve e-mail from a remote server over a TCP/IP connection. Nearly all subscribers to individual Internet service provider e-mail accounts access their e-mail with client software that uses POP3.
POTS	Plain old telephone service, or POTS, are the services available from analogue telephones prior to the introduction of electronic telephone exchanges into the public switched telephone network. These services have been available almost since the introduction of the telephone system in the late 19th century. The system was originally known as the Post Office Telephone Service or Post Office Telephone System in many countries. The term was dropped as telephone services were removed from the control of national post offices. POTS services include: bi-directional, or duplex, voice path with limited frequency range of 300 to 3400 Hz dial tone and ringing signals subscriber dialing operator services, such as directory assistance and long distance and conference calling assistance With the advent of electronic telephone exchanges and computerisation during the 1970s and 1980s, a raft of new network services became available. These had been termed PANS for pretty advanced network (or new) services by some in the industry, although that term has never really caught on. The services offered include: voice mail caller ID call waiting reminder calls (three-way) conference calling Enhanced 911 and a number of other similar services. The new services were made possible by the introduction of the support network for the ISDN as well as raised consumer expectations from services offered on mobile telephones. One thing to note is that while modems capable of operating at up to 56 kbit/s are available to most users, most telephone companies do not guarantee service to that speed on POTS lines as these were not meant to be Data lines. Unfortunately, this is not normally spelled out explicitly leading to unnecessary repair calls.

RAID	In computing, a redundant array of independent disks, also known as redundant array of inexpensive disks (commonly abbreviated RAID) is a system which uses multiple hard drives to share or replicate data among the drives. Depending on the version chosen, the benefit of RAID is one or more of increased data integrity, fault-tolerance, throughput or capacity compared to single drives. In its original implementations (in which it was an abbreviation for "redundant array of inexpensive disks"), its key advantage was the ability to combine multiple low-cost devices using older technology into an array that offered greater capacity, reliability, speed, or a combination of these things, than was affordably available in a single device using the newest technology. At the very simplest level, RAID combines multiple hard drives into a single logical unit. Thus, instead of seeing several different hard drives, the operating system sees only one. RAID is typically used on server computers, and is usually (but not necessarily) implemented with identically-sized disk drives. With decreases in hard drive prices and wider availability of RAID options built into motherboard chipsets, RAID is also being found and offered as an option in more advanced user computers. This is especially true in computers dedicated to storage-intensive tasks, such as video and audio editing. The original RAID specification suggested a number of prototype "RAID levels", or combinations of disks. Each had theoretical advantages and disadvantages. Over the years, different implementations of the RAID concept have appeared. Most differ substantially from the original idealized RAID levels, but the numbered names have remained. This can be confusing, since one implementation of RAID 5, for example, can differ substantially from another. RAID 3 and RAID 4 are often confused and even used interchangeably. The very definition of RAID has been argued over the years. The use of the term redundant leads many to split hairs over whether RAID 0 is a "real" RAID type. Similarly, the change from inexpensive to independent confuses many as to the intended purpose of RAID. There are even some single-disk implementations of the RAID concept. For the purpose of this article, we will say that any system which employs the basic RAID concepts to combine physical disk space for purposes of reliability, capacity, or performance is a RAID system.
RAM	Random-access memory (commonly known by its acronym RAM) refers to data storage formats and equipment that allow the stored data to be accessed in any order -- that is, at random, not just in sequence. In contrast, other types of memory devices (such as magnetic tapes, disks, and drums) can access data on the storage medium only in a predetermined order due to constraints in their mechanical design. Generally, RAM in a computer is considered main memory (or primary storage): the working area used for displaying and manipulating data. This type of RAM is usually in the form of integrated circuits (IC). These are commonly called memory sticks or RAM sticks because they are manufactured as small circuit boards with

	plastic packaging and are about the size of a few sticks of gum. Most personal computers have slots for adding and replacing memory chips. RAM is typically erased when a computer is shut down, though some RAM chips maintain data indefinitely without electrical power. Technically, RAM devices are not limited to memory chips, and random-access memory as a storage format is not limited to use as working memory. In a broad sense, modern storage devices for long-term or secondary storage, including magnetic media and laser-readable CDs and DVDs, are forms of random-access memory. Most RAM can be both written to and read from, so "RAM" is often used interchangeably with "read-write memory." In this sense, RAM is the opposite of read-only memory (ROM). Strictly speaking, however, "RAM" and "ROM" are not mutually exclusive designations because "RAM" refers only to the method of accessing stored data, not whether data can be written.
Red Hat Linux	Red Hat, Inc. (NASDAQ: RHAT) is one of the largest and most recognized companies dedicated to open source software. Founded in 1993, the company has nearly 1,300 employees and 27 offices worldwide, with its corporate headquarters in Raleigh, North Carolina in the United States. Red Hat is a market leader in the development, deployment, and management of Linux and open source solutions for Internet infrastructure, ranging from embedded devices to secure web servers. Red Hat's name came from the manual of the beta version, which contained a request for the return of Marc Ewing's characteristic red and white-striped fedora, should anyone find it. The name is often spelled Redhat or RedHat, perhaps owing to the CamelCase fad of the late-1990s. The name "Red Hat" is also frequently used to refer to the two variants of Linux the company produces under that name, Red Hat Enterprise Linux and the now-superceded Red Hat Linux.
Router	A router is a network device which is used to connect two or more different networks with each other.
SAN	In computing, a storage area network (SAN) is a network designed to attach computer storage devices such as disk array controllers and tape libraries to servers. As of 2005, SANs are common in enterprise storage. There are two variations of SANs: 1. A network whose primary purpose is the transfer of data between computer systems and storage elements. A SAN consists of a communication infrastructure, which provides physical connections, and a management layer, which organizes the connections, storage elements, and computer systems so that data transfer is secure and robust. The term SAN is usually (but not necessarily) identified with block I/O services rather than file access services. 2. A storage system consisting of storage elements, storage devices, computer

	systems, and/or appliances, plus all control software, communicating over a network.
SATA	In computer hardware, Serial ATA (SATA - pronounced sah-tah) is a computer bus technology primarily designed for transfer of data to and from a hard disk. It is the successor to the legacy Advanced Technology Attachment standard (ATA, also known as IDE or Integrated Drive Electronics). This older technology was retroactively renamed Parallel ATA (PATA) to distinguish it from Serial ATA.
SCSI	SCSI stands for "Small Computer System Interface", and is a standard interface and command set for transferring data between devices on both internal and external computer buses. It is pronounced "scuzzy". SCSI is most commonly used for hard disks and tape storage devices, but also connects a wide range of other devices, including scanners, printers, CD-ROM drives, CD recorders, and DVD drives. In fact, the entire SCSI standard promotes device independence, which means that theoretically SCSI can be used with any type of computer hardware. Since its standardization in 1986, SCSI has been commonly used in the Apple Macintosh and Sun Microsystems computer lines. It has never been popular in the IBM PC world, due to the lower cost and adequate performance of its ATA hard disk standard. The introduction of USB, FireWire, and ATAPI made SCSI a relatively unattractive proposition on PC due to its high cost and rising complexity. At this time, SCSI is popular on high-performance workstations, servers, and high-end peripherals; and RAID arrays on servers almost always use SCSI hard disks. Desktop computers and notebooks more typically use the ATA/IDE or the newer SATA interfaces for hard disks, and USB or FireWire connections for external devices.
Sendmail	Sendmail is a mail transfer agent (MTA) that is a well known project of the open source and Unix communities and is distributed both as free software and proprietary software.
Simple Mail Transfer Protocol (SMTP)	Simple Mail Transfer Protocol (SMTP) is the de facto standard for e-mail transmission across the Internet. Formally SMTP is defined in RFC 821 (STD 10) as amended by RFC 1123 (STD 3) chapter 5. The protocol used today is also known as ESMTP and defined in RFC 2821.
SOHO	The modern concept of Small Office and Home Office or SoHo, or Small or Home Office or Single Office/Home Office deals with the category of business which can be from 1 to 10 workers. Larger business enterprises, one notch up the size scale, are often categorized as a small business. When a company reaches 100 or more employees, it is often referred to a Small and Medium-sized Enterprises.
SONET	The Synchronous optical network, commonly known as SONET, is a standard for communicating digital information using lasers or light emitting diodes (LEDs) over optical fiber as defined by GR-253-CORE from Telcordia. It was developed to replace the PDH system for transporting large amounts of telephone and data traffic and to allow for interoperability between equipment from different vendors.

	The more recent Synchronous Digital Hierarchy (SDH) standard developed by ITU (G.707 and its extension G.708) is built on experience in the development of SONET. Both SDH and SONET are widely used today; SONET in the U.S. and Canada, SDH in the rest of the world. SDH is growing in popularity and is currently the main concern with SONET now being considered as the variation. SONET differs from PDH in that the exact rates that are used to transport the data are tightly synchronized across the entire network, made possible by atomic clocks. This Telecom Synchronization system allows entire inter-country networks to operate synchronously, greatly reducing the amount of buffering required between each element in the network. Both SONET and SDH can be used to encapsulate earlier digital transmission standards, such as the PDH standard, or used directly to support either ATM or so-called Packet over SONET networking. As such, it is inaccurate to think of SONET as a communications protocol in and of itself, but rather as a generic and all-purpose transport container for moving both voice and data.
SPAM	Spamming is commonly defined as the sending of Unsolicited and/or Bulk Email - that is, email that was not asked for (Unsolicited) by multiple recipients (Bulk). A further common definiton of spam restricts it to Unsolicited Commercial Email, a definiton that does not consider non commercial solicitations such as political or religious pitches, even if unsolicited, as spam. In the popular eye, the most common form of spam is that delivered in e-mail as a form of commercial advertising. However, over the short history of electronic media, people have spammed for many purposes other than the commercial, and in many media other than e-mail. Spammers have developed a variety of spamming techniques, which vary by media: e-mail spam, instant messaging spam, Usenet newsgroup spam, Web search engines spam, spam in blogs, and mobile phone messaging spam. A KMail folder full of spam e-mails collected over a few days.Spamming is economically viable because advertisers have effectively no operating costs beyond the management of their mailing lists. Because the barrier to entry is so low, the volume of unsolicited mail has produced other costs which are borne by the public (in terms of lost productivity and fraud) and by Internet service providers, which must add extra capacity to cope with the deluge. Spamming is widely reviled, and has been the subject of legislation in a number of jurisdictions.
SQL	SQL (commonly expanded to Structured Query Language is the most popular computer language used to create, modify and retrieve data from relational database management systems. The language has evolved beyond its original purpose to support object-relational database management systems. It is an ANSI/ISO standard.
SSH	In computing, Secure Shell or SSH is both a computer program and an associated network protocol designed for logging into and executing commands on a networked computer. The designers of SSH aimed to replace the earlier rlogin,

	TELNET and rsh protocols, and the resultant protocol provides secure encrypted communications between two untrusted hosts over an insecure network. Users of SSH can also use it for tunneling, forwarding arbitrary TCP ports and X11 connections over the resultant secure channel; and can transfer files using the associated SFTP or SCP protocols. An ssh server, by default, listens on the standard TCP port 22.
SuSE Linux	SUSE (properly pronounced /susə/, but often pronounced /suzi/) is a major retail Linux distribution, produced in Germany. The company is owned by Novell, Inc. SUSE is also a founding member of the Desktop Linux Consortium.
T1	Digital signal 1 (DS1, also known as a T1) is a T-carrier signaling scheme devised by Bell Labs. It is a widely used standard in telecommunications in North America and Japan to transmit voice and data between devices. E1 is used in place of T1 outside of North America and Japan. Technically, DS1 is the data transmitted over a physical T1 line, however, the terms are often used interchangeably. A DS1 circuit is made up of twenty-four 8-bit channels (a.k.a. timeslots and DS0's), each channel being a 64 kbit/s DS0 multiplexed pseudo-circuit. A DS1 is also a full-duplex circuit, meaning you can (in theory) send 1.536 Mbit/s and receive 1.536 Mbit/s simultaneously. A total of 1.536 Mbit/s of bandwidth is achieved by sampling each of the twenty-four 8-bit DS0's 8000 times per second. This sampling is referred to as 8 kHz sampling. See Pulse-code modulation. An additional 8 kbit/s is obtained from the sampling of a final framing bit, for a total of 1.544 Mbit/s: (8 bits/channel * 24 channels/frame + 1 framing bit) * 8000 frames/s = 1.544 Mbit/s

T-carrier				
	T-Carrier Systems	North American	Japanese	European (CEPT)
	Level zero (Channel data rate)	64 kbit/s (DS0)	64 kbit/s	64 kbit/s
	First level	1.544 Mbit/s (DS1) (24 user channels) (T1)	1.544 Mbit/s (24 user channels)	2.048 Mbit/s (32 user channels) (E1)
	(Intermediate level, US. hierarchy only)	3.152 Mbit/s (DS1C) (48 Ch.)	-	-
	Second level	6.312 Mbit/s (DS2) (96 Ch.)	6.312 Mbit/s (96 Ch.), or 7.786 Mbit/s (120 Ch.)	8.448 Mbit/s (128 Ch.) (E2)
	Third level	44.736 Mbit/s (DS3) (672 Ch.) (T3)	32.064 Mbit/s (480 Ch.)	34.368 Mbit/s (512 Ch.) (E3)
	Fourth level	274.176 Mbit/s (DS4) (4032 Ch.)	97.728 Mbit/s (1440 Ch.)	139.264 Mbit/s (2048 Ch.) (E4)

		400.352 Mbit/s (DS5) (5760 Ch.)	565.148 Mbit/s (8192 Ch.)	565.148 Mbit/s (8192 Ch.) (E5)
	Fifth level			

TCP	The Transmission Control Protocol (TCP) is one of the core protocols of the Internet protocol suite. Using TCP, applications on networked hosts can create connections to one another, over which they can exchange data or packets. The protocol guarantees reliable and in-order delivery of sender to receiver data. TCP also distinguishes data for multiple, concurrent applications (e.g. Web server and email server) running on the same host. TCP supports many of the Internet's most popular application protocols and resulting applications, including the World Wide Web, email and Secure Shell. In the Internet protocol suite, TCP is the intermediate layer between the Internet Protocol below it, and an application above it. Applications often need reliable pipe-like connections to each other, whereas the Internet Protocol does not provide such streams, but rather only unreliable packets. TCP does the task of the transport layer in the simplified OSI model of computer networks. Applications send streams of octets (8-bit bytes) to TCP for delivery through the network, and TCP divides the byte stream into appropriately sized segments (usually delineated by the maximum transmission unit (MTU) size of the data link layer of the network the computer is attached to). TCP then passes the resulting packets to the Internet Protocol, for delivery through a network to the TCP module of the entity at the other end. TCP checks to make sure that no packets are lost by giving each packet a sequence number, which is also used to make sure that the data are delivered to the entity at the other end in the correct order. The TCP module at the far end sends back an acknowledgement for packets which have been successfully received; a timer at the sending TCP will cause a timeout if an acknowledgement is not received within a reasonable round-trip time (or RTT), and the (presumably lost) data will then be re-transmitted. The TCP checks that no bytes are damaged by using a checksum; one is computed at the sender for each block of data before it is sent, and checked at the receiver.
Terabyte	A terabyte (derived from the SI prefix tera-) is a measurement term for data storage capacity equal to approximately 1000 gigabytes. Another way to look at is one trillion (short scale) bytes. It is commonly abbreviated TB. Because of irregularities in using the binary prefix in the definition and usage of the kilobyte, the exact number in common practice could be either one of the following: 1,000,000,000,000 bytes – 10004 or 1012. 1,099,511,627,776 bytes – 10244 or 240. (This capacity may be expressed unambiguously as a tebibyte.) The prefix "tera" originates from the Greek word teras meaning 'monster'.
Unix	Unix or UNIX is a computer operating system originally developed in the 1960s and 1970s by a group of AT&T Bell Labs employees including Ken Thompson,

	Dennis Ritchie, and Douglas McIlroy. Today's Unix systems are split into various branches, developed over time by AT&T, several other commercial vendors, as well as several non-profit organizations, such as individuals who write code under the GNU general public license. Unix was designed to be portable, multi-tasking and multi-user in a time-sharing configuration. The Unix systems are characterized by various concepts: plain text files, command line interpreter, hierarchical file system, treating devices and certain types of inter-process communication as files, etc. In software engineering, Unix is mainly noted for its use of the C programming language and for the Unix philosophy. The present owner of the UNIX trademark is The Open Group, while the present claimants on the rights to the UNIX source code are The SCO Group and Novell. Only systems fully compliant with and certified to the Single UNIX Specification qualify as "UNIX" (others are called "UNIX system-like" or Unix-like). During the late 1970s and early 1980s, Unix's influence in academic circles led to massive adoption (particularly of the BSD variant, originating from the University of California, Berkeley) of Unix by commercial startups, the most notable of which is Sun Microsystems. Sometimes, Traditional Unix may be used to describe a Unix or GNU operating system that has the characteristics of either Version 7 Unix or UNIX System V.
URL	A Uniform Resource Locator (URL) is a string of characters conforming to a standardized format, which refers to a resource on the Internet (such as a document or an image) by its location. For example, the URL of this page on Wikipedia is http://en.wikipedia.org/wiki/URL. An HTTP URL, commonly called a web address, is usually shown in the address bar of web browser. The term is typically pronounced as a spelled-out initialism ("yoo arr ell"), but sometimes as earl or ural as in the Ural Mountains. Tim Berners-Lee created the URL in 1991 to allow the publishing of hyperlinks on the World Wide Web, a fundamental innovation in the history of the Internet. Since 1994, the URL has been subsumed into the more general Uniform Resource Identifier (URI), but URL is still a widely used term. The U in URL has always stood for Uniform, but it is sometimes described as Universal, perhaps because URI did mean Universal Resource Identifier before RFC 2396.
USB	Universal Serial Bus (USB) provides a serial bus standard for connecting devices, usually to computers such as PCs and the Apple Macintosh, but is also becoming commonplace on video game consoles such as Sony's PlayStation 2, Microsoft's

	Xbox 360, Nintendo's Revolution, and PDAs, and even devices like televisions and home stereo equipment. Transfer speed USB supports three data rates. A Low Speed rate of 1.5 Mbit/s (183 KiB/s) that is mostly used for Human Interface Devices (HID) such as keyboards, mice and joysticks. USB 1.1 A Full Speed rate of 12 Mbit/s (1.4 MiB/s). Full Speed was the fastest rate before the USB 2.0 specification and many devices fall back to Full Speed. Full Speed devices divide the USB bandwidth between them in a first-come first-served basis and it is not uncommon to run out of bandwidth with several isochronous devices. All USB Hubs support Full Speed. USB 2.0 A Hi-Speed rate of 480 Mbit/s (57 MiB/s).
VoIP	Voice over Internet Protocol (also called VoIP, IP Telephony, Internet telephony, and Broadband Phone) is the routing of voice conversations over the Internet or any other IP-based network. The voice data flows over a general-purpose packet-switched network, instead of traditional dedicated, circuit-switched telephony transmission lines. Protocols used to carry voice signals over the IP network are commonly referred to as Voice over IP or VoIP protocols. They may be viewed as commercial realizations of the experimental Network Voice Protocol (1973) invented for the ARPANET. Voice over IP traffic might be deployed on any IP network, including ones lacking a connection to the rest of the Internet, for instance on a private building-wide LAN.
VPN	A Virtual Private Network, or VPN, is a private communications network usually used within a company, or by several different companies or organizations, to communicate over a public network. VPN message traffic is carried on public networking infrastructure (e.g. the Internet) using standard (often insecure) protocols, or over a service provider's network providing VPN service guarded by well defined Service Level Agreement (SLA) between the VPN customer and the VPN service provider.
WAN	A wide area network or WAN is a computer network covering a wide geographical area, involving a vast array of computers. This is different from personal area networks (PANs), metropolitan area networks (MANs) or local area networks (LANs) that are usually limited to a room, building or campus. The most well-known example of a WAN is the Internet. WANs are used to connect local area networks (LANs) together, so that users and computers in one location can communicate with users and computers in other locations. Many WANs are built for one particular organization and are private.

	Others, built by Internet service providers, provide connections from an organization's LAN to the Internet. WANs are most often built using leased lines. At each end of the leased line, a router connects to the LAN on one side and a hub within the WAN on the other. Network protocols including TCP/IP deliver transport and addressing functions. Protocols including Packet over SONET/SDH, MPLS, ATM and Frame relay are often used by service providers to deliver the links that are used in WANs. X.25 was an important early WAN protocol, and is often considered to be the "grandfather" of Frame Relay as many of the underlying protocols and functions of X.25 are still in use today (with upgrades) by Frame Relay.. Academic research into wide area networks can be broken down into three areas: Mathematical models, network emulation and network simulation.
WiFi	Wi-Fi (also WiFi, Wi-fi, Wifi, or wifi) is a brand licensed by the Wi-Fi Alliance to products which pass testing demonstrating that they implement a set of product compatibility standards for wireless local area networks (WLAN) based on the IEEE 802.11 specifications. New standards beyond the 802.11 specifications, such as 802.16 (WiMAX), are currently in the works and offer many enhancements, anywhere from longer range to greater transfer speeds. Wi-Fi was intended to be used for mobile devices and LANs, but is now often used for Internet access. It enables a person with a wireless-enabled computer or personal digital assistant (PDA) to connect to the Internet when in proximity of an access point. The geographical region covered by one or several access points is called a hotspot. Certified products can use the official Wi-Fi logo, which indicates that the product is interoperable with any other product also showing the logo.
Windows	Microsoft Windows is a series of popular proprietary operating environments and operating systems created by Microsoft for use on personal computers and servers. Microsoft first introduced an operating environment named Windows in November, 1985, as an add-on to MS-DOS. This was in response to the growing trend of graphical user interfaces such as the Apple Macintosh. Microsoft Windows eventually came to dominate the world personal computer market with market analysts like IDC estimating that Windows has around 90% of the client operating system market. All recent versions of Windows are fully-fledged operating systems.
WMA	Windows Media Audio (WMA) is a proprietary compressed audio file format developed by Microsoft. It was initially a competitor to the MP3 format, but with the introduction of Apple's iTunes Music Store, it has positioned itself as a competitor to the Advanced Audio Coding format used by Apple and is part of the Windows Media framework. A large number of consumer devices, ranging from portable hand-held music players and handphones to set-top DVD players, support the playback of WMA files. WMA is second only to MP3 in popularity in terms of number of devices supported.

	Files in this format can be played using Windows Media Player, Winamp (with certain limitations, DSP plugin support and DirectSound output is disabled using the default WMA plugin) and many other alternative media players. The FFmpeg project has reverse-engineered and reimplemented the WMA format to allow its use on POSIX compliant operating systems such as Linux.
WMV	Windows Media Video (WMV) is a generic name for the set of video codec technologies developed by Microsoft. It is part of the Windows Media framework. The codecs were originally developed as proprietary codecs for low-bitrate streaming applications. However, in 2003 Microsoft drafted a video codec specification based on its Windows Media Video version 9 codec and submitted it to SMPTE for standardization. The standard was officially approved in March 2006 as SMPTE 421M, thus making the Windows Media Video 9 codec no longer a proprietary technology. Earlier versions of the codec (7 and 8) are still considered proprietary as they fall outside the SMPTE 421M standard.

WMV is not built solely on Microsoft in-house technology. It is believed that WMV version 7 (WMV1) was built upon Microsoft's own non-standard version of MPEG-4 Part 2. However, as WMV version 9 has been standardized as an independent SMPTE standard (421M, also known as VC-1), it's reasonable to believe that WMV has sufficiently evolved in a different direction than MPEG-4 to be considered a unique codec in its own right. There are currently (April 2006) 16 companies in the VC-1 patent pool. Microsoft is also one of the members of the MPEG-4 AVC/H.264 patent pool.

The video stream is often combined with an audio stream of Windows Media Audio and encapsulated in Advanced Systems Format files, carrying the .wmv or .asf file extensions.

WMV files are played by players such as MPlayer or Windows Media Player, the latter being only available for Microsoft Windows and Macintosh systems. Many third-party players exist for various platforms such as Linux that use the FFmpeg implementation of the WMV codecs.

WMV is generally packed into an Advanced Systems Format (ASF) container. It can also be put into AVI or Matroska container formats. The resulting files may be named .avi if it is an AVI-contained file, or .wmv or .asf if it is an ASF file, or .mkv if it is an MKV file. WMV can be stored in an AVI file when encoding with the VirtualDub encoder and using the WMV9 VCM codec implementation. Microsoft's Windows Media Player for the Mac does not support all WMV encoded files since it supports only the ASF file container. More files can be played with Flip4Mac and Quicktime or MPlayer for MacOSX.

When encapsulated in ASF file format, WMV can support digital rights management facilities intended to protect intellectual property rights. |

	Besides being one of the most popular codecs for distributing video on the Internet, the codec is also used to distribute high definition video on standard DVDs in a format Microsoft has branded as WMV HD. This WMV HD content can be played back on computers or compatible DVD players.
World Wide Web	The World Wide Web ("WWW" or simply the "'Web") is a global information space which people can read-from and write-to via a large number of different Internet-connected devices. For example, computers, Personal Digital Assistants, cellular phones, telephone kiosks, etc. The World Wide Web is also available (sometimes only partially) through digital television services, exposing content onto television screens. The term is often mistakenly used as a synonym for the Internet itself, but the Web is actually a service that operates over the Internet, just like e-mail.
XML	The Extensible Markup Language (XML) is a W3C-recommended general-purpose markup language for creating special-purpose markup languages, capable of describing many different kinds of data. In other words: XML is a way of describing data and an XML file can contain the data too, as in a database. It is a simplified subset of Standard Generalized Markup Language (SGML). Its primary purpose is to facilitate the sharing of data across different systems, particularly systems connected via the Internet. Languages based on XML (for example, Geography Markup Language (GML), RDF/XML, RSS, MathML, Physical Markup Language (PML), XHTML, SVG, MusicXML and cXML) are defined in a formal way, allowing programs to modify and validate documents in these languages without prior knowledge of their form.
XviD	XviD is an open-source MPEG-4 video codec originally based on OpenDivX. XviD was started by a group of volunteer programmers after the OpenDivX source was closed in July 2001. XviD features MPEG-4 Advanced Simple Profile features such as b-frames, global and quarter pixel motion compensation, lumi masking, trellis quantization, and H.263, MPEG and custom quantization matrices. XviD is a main "competitor" of DivX (XviD spelled backwards). While DivX is closed source and may only run on Windows, Mac OS and Linux, XviD is open source and can potentially run on any platform.