



ADSL	Asymmetric Digital Subscriber Line
AGP	Accelerated Graphics Port
ASP	Active Sever Page or Application Service Provider
BIOS	Basic Input/Output System
BMP	Bitmap
CAD	Computer-Aided Design
CMOS	Complementary Metal Oxide Semiconductor
CPU	Central Processing Unit
DAC	Digital-to-Analog Converter
DDL	Data Definition Language
DHCP	Dynamic Host Configuration Protocol
DLL	Dynamic Link Library
DNS	Domain Name System
DOS	Disk Operating System
DRAM	Dynamic Random Access Memory
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
DVI	Digital Video Interface
FTP	File Transfer Protocol
GPS	Global Positioning System
GPU	Graphics Processing Unit
GUI	Graphical User Interface
HTML	Hyper-text Markup Language
HTTP	Hyper-text Transfer Protocol
HTTPS	Hyper-text Transfer Protocol Secure
ICF	Internet Connection Firewall
ICMP	Internet Control Message Protocol
ICS	Internet Connection Sharing
IM	Instant Message
IMAP	Internet Message Access Protocol
InterNIC	Internet Network Information Center
IP	Internet Protocol
ISP	Internet Service Provider
IT	Information Technology
JPEG	Joint Photographic Experts Group
JRE	Java Runtime Environment
Kbps	Kilobits Per Second
LAN	Local Area Network
MAC Address	Media Access Control Address
Mbps	Megabits Per Second
MIDI	Musical Instrument Digital Interface
MP3	MPEG-1 Audio Layer-3
MPEG	Moving Picture Experts Group
MTU	Maximum Transmission Unit
NetBIOS	Network Basic Input/Output System
NIC	Network Interface Card
NTFS	New Technology File System
OLE	Object Linking and Embedding
PAN	Personal Area Network



P2P	Peer To Peer
PC	Personal Computer
PDA	Personal Digital Assistant
PDF	Portable Document Format
PHP	Hypertext Preprocessor
PNG	Portable Network Graphic
POP3	Post Office Protocol
Ping	Packet Internet Groper
PPI	Pixels Per Inch
PPP	Point-to-Point Protocol
PPPoE	Point-to-Point Protocol over Ethernet
RAM	Random Access Memory
RDRAM	Rambus Dynamic Random Access Memory
RFID	Radio Frequency Identification
RGB	Red Green Blue
ROM	Read Only Memory
RSS	RDF Site Summary
RTF	Rich Text Format
SAN	Storage Area Network
SATA	Serial Advanced Technology Attachment
SD	Secure Digital
SDRAM	Synchronous Dynamic Random Access Memory
SMTP	Simple Mail Transfer Protocol
SQL	Structured Query Language
SSID	Service Set Identifier
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol/Internet Protocol
TIFF	Tagged Image File Format
TWAIN	Toolkit Without An Informative Name
UPS	Uninterruptible Power Supply
URI	Uniform Resource Identifier
URL	Uniform Resource Locator
USB	Universal Serial Bus
VGA	Video Graphics Array
VoIP	Voice over Internet Protocol
WAN	Wide Area Network
WEP	Wired Equivalent Privacy
Wi-Fi	Wireless Fidelity
WPA	Wi-Fi Protected Access
XHTML	Extensible Hypertext Markup Language
XML	Extensible Markup Language



## Vocabulary

Bandwidth	Transmission capacity of a communications channel-an analog channel typically measured in hertz (Hz); high bandwidth can carry more data than a low bandwidth channel																				
Broadband	High bandwidth communications systems, such as cable TV and DSL are sometimes referred to as broadband																				
Narrowband	Low bandwidth systems that have less capacity to transmit data, such as a telephone system																				
Protocol	<p>Set of rules for efficiently transmitting data from one network node to another</p> <p>Network functions performed with protocols:</p> <ul style="list-style-type: none"> <li>✎ Dividing messages into packaging</li> <li>✎ Affixing addresses to packets</li> <li>✎ Initiating transmission</li> <li>✎ Regulating the flow of data</li> <li>✎ Checking for transmission errors</li> <li>✎ Acknowledging receipt of transmitted data</li> </ul>																				
Client/Server network	Contains one or more computers configured with server software and other computers, configured with client software, that access the servers. Server provides a centralized repository for data and a transfer point through which data traffic flows																				
Peer-to-Peer Network	P2P-Treats every computer as an equal so that workstations can store network data, which can be transported directly to other workstations without passing through a central server-forms the basis for file sharing networks																				
Ethernet	<p>(Defined by IEEE 802.3) simultaneously broadcasts data packets to all network devices-refers to a family of LAN technologies that offer various data transmission rates over fiber-optic and twisted-pair cables arranged in a star or bus topology</p> <table border="0" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Ethernet Standards</th> <th style="text-align: left;">IEEE Designation</th> <th style="text-align: left;">Speed</th> <th style="text-align: left;">Cable</th> </tr> </thead> <tbody> <tr> <td>10Base T Ethernet</td> <td>IEEE 802.3</td> <td>10Mbps</td> <td>CAT3 or CAT5</td> </tr> <tr> <td>Fast Ethernet</td> <td>IEEE 802.3u</td> <td>100Mbps</td> <td>CAT 5 or fiber optic</td> </tr> <tr> <td>Gigabit Ethernet</td> <td>IEEE 802.3z</td> <td>1000Mbps</td> <td>CAT 5 or fiber optic</td> </tr> <tr> <td>10 Gig Ethernet</td> <td>IEEE 802.3ae</td> <td>10Gbps</td> <td>Fiber Optic</td> </tr> </tbody> </table>	Ethernet Standards	IEEE Designation	Speed	Cable	10Base T Ethernet	IEEE 802.3	10Mbps	CAT3 or CAT5	Fast Ethernet	IEEE 802.3u	100Mbps	CAT 5 or fiber optic	Gigabit Ethernet	IEEE 802.3z	1000Mbps	CAT 5 or fiber optic	10 Gig Ethernet	IEEE 802.3ae	10Gbps	Fiber Optic
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Physical Topology	Arrangement of devices in a network																				
Star Topology	Has a central connection point for all workstations and peripherals. Central connection is not necessarily a server-can be a hub which will broadcast data to workstations and peripherals (many homes use Star topology)																				
Ring Topology	Connects all devices in a circle, with each device having only two neighbors. Data is transferred in a circle around the ring (infrequently used in today's technology)																				



Bus Topology	Uses a common backbone to connect all network devices-works best with fewer devices-if backbone fails-network unuseable (network plan was based on a bus topology)
Mesh Topology	Connects each network device to many other network devices-has many routes for information to travel-if one route is down, information can travel another route (original plan for the Internet was based on mesh topology)
Tree Topology	Blend of star and bus networks-multiple star networks are connected into a bus configuration by a backbone (schools and businesses)
Repeater	Hub that can boost the strength of the signal that carries data over any network topology when the distance between two nodes exceeds the carrying capacity of their connecting links
Node	Each connection point on a network. A network node typically contains one of the following devices: <ul style="list-style-type: none"><li>✎ Server-computer responsible for storing data and programs</li><li>✎ Workstation-personal computer connected to a network</li><li>✎ Networked peripheral-devices such as printer or scanner directly connected to a network rather than to a workstation</li><li>✎ Network device-an electronic device that broadcasts network data, boosts signal, or routes data to its destination</li></ul>
Bridge	Device that connects two similar networks-simply transfers data without regard to its format
Hub	Network device designed to broadcast data to workstations and peripherals-anything that comes in one port is sent out to all the others-okay for small networks
Router	Electronic device that joins two or more networks-example: a home network can use a router and a DSL or cable modem to join the home's LAN to the Internet's WAN
Switch	similar to a hub, but more efficient-it pays attention to the traffic-most of the network traffic only goes where it needs to rather than to every port-can be faster
Gateway	Device that connects different topologies and technologies; Generic term for any device or software code used to join two dissimilar networks by converting data sent from one network into a format compatible to the receiving network
Wired Network	A network where data travels from one device to another over cables
Wireless Network	A network where data travels through the air, eliminating the need for cables
Twisted-pair Cable	Designed for telephone and network installations: STP-shielded twisted pair; UTP-unshielded twisted-pair; use RJ-11 plugs for telephone or RJ-45 plugs for computer networks Cable categories (CAT) indicate carrying capacity: CAT-1 is sufficient for telephone cabling, CAT-5 provides more capacity for networking
Fiber-optic Cable	Bundle of optical fibers that miniature lasers convert data into pulses of light that flash through the cables