

Lecture 5
Jargon
The Internet, Continued

1000Base-T	An Ethernet system that supports a data transfer rate of 1000 Mbps over a twisted-pair cable.
100Base-T	An Ethernet system that supports a data transfer rate of 100 Mbps over a twisted-pair cable.
10Base-T	An Ethernet system that supports a data transfer rate of 10 Mbps over a twisted-pair cable.
802.11a	A WLAN specification that supports a maximum data transfer rate of 54 Mbps.
802.11b	A WLAN specification that supports a maximum data transfer rate of 11 Mbps.
802.11g	A WLAN specification that supports a maximum data transfer rate of 54 Mbps and is backwards-compatible with 802.11b.
ACK	“Acknowledge”, a type of packet sent in response to data traffic.
amplitude modulation	AM. A type of radio transmission that sends information by changing the strength (amplitude) of the radio wave without affecting the frequency.
backbone	A conduit for traffic between networks that typically operates at a very high speed and capacity.
bandwidth	A measure of data transmission often used to describe the maximum amount of information that can be sent over a particular medium (such as a cable modem connection) in a particular amount of time (<i>e.g.</i> , megabits per second).
beaming	A method of wireless transmission (<i>e.g.</i> , IR).
Bluetooth	A wireless technology typically used in Personal Area Networks (<i>i.e.</i> , cell phones, PDAs, headphones, <i>etc.</i>).
broadband	Network connection accommodating multiple data streams (implies a high-bandwidth capacity).
bus network	A network in which all of the nodes are connected to the same cable.

cable	A physical medium (copper or optical) for transmission.
cable modem	A device for use with cable TV service that allows for simultaneous data networking.
checksum	Information produced by a mathematical technique used to check for errors.
coaxial cable	A type of cable with a copper conductor in the center surrounded by a layer for insulation and an outer shield.
collision domain	A logical area in a computer network where data packets can interfere with each other by colliding. (Computers connected to a hub are said to be in the same collision domain. Computers connected to a switch are said to be in different collision domains.)
crossover cable	Type of twisted-pair cable with the send and receive wires crossed.
datagram	A unit of transmission in a TCP network.
DHCP	Dynamic Host Configuration Protocol. The “language” spoken by DHCP servers with computers on a network in order to provide the latter IP addresses and other settings.
dialup modem	A networking device used to connect a host to a network over phone lines.
DNS	Domain Name System. The service that translates names to IP addresses (<i>e.g.</i> , <code>www.fas.harvard.edu</code> to 140.247.34.66).
DSL	Digital subscriber line. A means of transmitting network traffic over copper phone lines.
Ethernet	The most commonly used LAN technology, originally developed by Xerox, Ethernet is used for sending data over coaxial or twisted-pair lines. Data is sent to MAC addresses.
Ethernet address	See MAC address
fiber-optic cable	A thin, flexible cable with an essentially glass core surrounded by a protective coating, fiber-optic cable transmits data using light rather than electricity.

fragment	A piece of data. In networking (such as TCP/IP), large chunks of data are often fragmented, transmitted, and reassembled at the receiver's end.
frequency	The number of occurrences in a given time period, often expressed in cycles such as Hertz (Hz) or Megahertz (MHz).
frequency modulation	FM. Encodes information into a signal by varying the frequency of the signal (as opposed to the amplitude).
header	Block of information at the beginning of transmitted information containing information such as the originator and recipient.
hexadecimal	A numbering system based on 16 digits. The first ten digits are represented by 0 through 9, and the next six are represented by A through F.
hub	A device that serves as a junction for nodes on a network. It takes an incoming signal from one port and broadcasts it back on all other ports.
ISP	Internet Service Provider. A company that provides users with connections to the Internet.
MAC address	Media Access Control address. Unique address of a physical device on a network such as a NIC in a PC.
NAT	Network Address Translation. A technology that allows multiple computers to share one IP address.
NIC	Network Interface Card. An expansion card that provides a computer with physical means of being connected to a network.
packet	Fundamental unit of information transmitted on a network.
patch cable	Also called a straight-through cable, a type of cable used to interconnect networking devices or other cable.
peering point	Points of traffic exchange between ISPs.
port	An interface through which data is sent and/or received. Often used to describe a datajack on a networking device.
pulse modulation	Type of transmission that uses the modulation of both amplitude and frequency to transmit data.

ring network	A type of network configuration (topology) in which nodes are connected to each other in a closed loop.
root server	A name server (DNS server) that directs requests to TLD name servers.
router	A device that routes data from one network to another based on the data's source and/or destination address.
Rx	Shorthand for "receive."
sequence number	An identifier for packets to assist in their verification and reassembly on the receiving end.
star network	Network topology in which all nodes are connected through a central point.
straight-through cable	See patch cable.
switch	Hub-like device. It is "smarter" than a hub as it does not rebroadcast signals to all ports, but rather directs signals to a specific node.
TCP/IP	Transmission Control Protocol/Internet Protocol. The "language" that computers on the Internet speak in order to route data among computers.
topology	Physical layout of a network.
TTL	Time To Live. A sort of half-life measure for packets in a network. Once the TTL has been exceeded, the packet will no longer be transmitted.
Tx	Shorthand for "transmit."
UTP	Unshielded Twisted Pair. Describes a type of cable often used to connect computers via Ethernet.
warchalking	The practice of marking areas with accessible wireless networks.
wardriving	The practice of looking (by car) for accessible wireless networks.
wavelength	The distance between successive points on a wave.
WEP	Wired Equivalent Privacy. A (somewhat easily broken) form of encryption that can be used by computers to encrypt data between them and a wireless access point or router.

WiFi Synonym for wireless 802.11 networks.

WiMAX A wireless technology of increasing popularity, capable of greater distances than 802.11 networks.