

# Internet Terms

## The Basics

### **FAQ: Frequently Asked Questions**

Questions and answers that are commonly asked on a mailing list or newsgroup. It is put together to eliminate the common questions in a forum and to provide a starting place for new readers.

### **Firewall**

Hardware and/or software at the entrance to a network that controls what kind of traffic can be shared between hosts inside the network and the Internet.

### **LAN: Local Area Network**

Geographically small collection of machines connected by a network. Another common definition says that a LAN is a network of machines separated by other portions of the network by a router.

### **Protocol**

Formal specification of the rules of a network service or communication method

## Infrastructure Terms

*Provide the foundation that everything else is build upon*

### **TCP/IP: Transmission Control Protocol/Internet Protocol**

The most popular set of rules by which machines communicate across a network

### **DNS: Domain Name Service**

Translates human-friendly domain names (e.g., "www.iii.com") to IP addresses (e.g., "205.227.88.232").

### **PPP: Point-to-Point Protocol**

A method of connecting a computer to a network over a modem line.

### **ISDN: Integrated Services Digital Network**

An enhanced type of telephone service where telephone conversations and data communications travel digitally between the subscriber and the phone company.

### **DSL: Digital Subscriber Line**

Another telephone company invention to get even higher digital speeds out of the same phone line.

### **POP: Point of Presence**

For an Internet Service Provider (ISP), a city or other location where a connection can be made to the network.

## Application Protocols

*Actually get some work done*

### **FTP: File Transfer Protocol**

Used to transfer files between two machines.

### **HTTP: Hyper Text Transport Protocol**

Specification for how web browsers communicate with web servers.

### **POP: Post Office Protocol**

Protocol specifying how an e-mail client, such as Eudora or Outlook Express, would retrieve messages from a mail server.

*The mail-store is on the client.*

**IMAP: Internet Mail Application Protocol**

Another protocol specifying how an e-mail client would retrieve messages from a server.

*The mail-store is on the server.*

**SMTP: Simple Mail Transport Protocol**

Protocol for sending electronic mail messages from one mail system to another.

# Web Terms

## The Basics

*This web thing will never catch on...*

**HTML: Hyper Text Markup Language**

The page description language used to construct web pages.

**URL: Uniform Resource Locator**

The "address" of a resource on the net. Consists of three parts: the "protocol", the "hostname", and the machine- or protocol-specific information.

**Cookie**

A bit of information that a web server requests a web browser to store and echo back to the server for subsequent transactions.

**GIF: Graphics Interchange Format**

One graphics format popularized by CompuServer which uses "lossless" compression, but limits the color depth

**JPEG: Joint Photographic Experts Group**

One graphics format which uses "lossy" compression, but has a much higher color depth

## More techie...

**CGI: Common Gateway Interface**

Specification for a web server to communicate with a program running on the web server.

**Java**

Network-oriented, machine-independent programming language designed by Sun Microsystems

**JavaScript**

Simple scripting language used to control web browser functions. Not related to Java.

**Java Applet vs. Java Application**

A "Java Applet" requires a web browser to provide a "framework" for the program. A "Java Application" stands alone (does not run inside a browser window).

**Proxy**

A network service with intercepts requests between a client and a server.

# Networking Terms

## 4-layer model

|                 |   |
|-----------------|---|
| Process Layer   | <ul style="list-style-type: none"> <li>To aid in the understanding and in the evolution of networks, network specialists and software developers have defined a four-layer model to describe the network.</li> <li>Each layer is built on the foundation of the layer below.</li> </ul> |
| Transport Layer |   |
| Network Layer   |   |
| Data Link Layer |   |

## Data Link Layer

|                  |  |
|------------------|--|
| Process          | <ul style="list-style-type: none"> <li>Physical connectivity between machines               <ul style="list-style-type: none"> <li>This is the layer where the "wire" is.</li> </ul> </li> <li>"Ethernet", "FDDI", "ATM", etc.</li> <li>Addressing: "Ethernet Address", etc.</li> <li>Equipment: Repeaters, Bridges, Switches</li> </ul> |
| Transport        |  |
| Network          |  |
| <b>Data Link</b> |  |

## Network Layer

|                |   |
|----------------|---|
| Process        | <ul style="list-style-type: none"> <li>Inter-machine Communication</li> <li>The "IP" of "TCP/IP" (Internet Protocol)</li> <li>Addressing: "IP Address"</li> <li>Equipment: Routers, Gateways</li> </ul> |
| Transport      |   |
| <b>Network</b> |   |
| Data Link      |   |

## Transport Layer

|                  |  |
|------------------|--|
| Process          | <ul style="list-style-type: none"> <li>End-to-End Communication               <ul style="list-style-type: none"> <li>Transmission Control Protocol (TCP)</li> <li>User Datagram Protocol (UDP)</li> </ul> </li> <li>Addressing: "Port"</li> <li>Equipment: Firewalls, Proxies</li> </ul> |
| <b>Transport</b> |  |
| Network          |  |
| Data Link        |  |

## Process Layer

|                |   |
|----------------|---|
| <b>Process</b> | <ul style="list-style-type: none"> <li>User Programs</li> <li>Telnet, WWW, FTP, etc.</li> </ul> |
| Transport      |   |
| Network        |   |
| Data Link      |   |

## "Low" Speeds

|                           |                   |           |
|---------------------------|-------------------|-----------|
| <b>Modems</b>             |                   |           |
| ITU V.34 (spring 1995)    | 28.8Kbps          | 1         |
| ITU V.34 (fall 1996)      | 33.6Kbps          | 1.5       |
| ITU V.90                  | 56Kbps            | 2         |
| <b>Enhanced Telephony</b> |                   |           |
| ISDN                      | 56.6Kbps, 128Kbps | 2 to 4    |
| xDSL                      | 1Mbps to 5Mbps    | 35 to 173 |

## "High" Speeds

| <b>"T" series/"E" series</b> |           |        |
|------------------------------|-----------|--------|
| T1                           | 1.54Mbps  | 54     |
| E1                           | 2.048Mbps | 73     |
| T3                           | 45.5Mbps  | 1,580  |
| <b>"OC" series</b>           |           |        |
| OC-3                         | 155Mbps   | 5,382  |
| OC-12                        | 622Mbps   | 21,597 |
| OC-48                        | 2.488Gbps | 86,388 |

## Closing Thoughts

### Good resources

PC Webopaedia

<http://www.pcwebopedia.com/>

Click & Learn course

<http://www.mkdata.dk/click/>

ILC Glossary of Internet Terms

<http://www.matisse.net/files/glossary.html>

## Presentation Information

- Slides are available over the Internet at <http://www.PandC.org/peter/presentations/aall2000/>
- Presenter Information

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