

⑬ Major tools of the Internet continued...

BROWSER → Web browsers are used for browsing through web pages on the internet websites. Early browsers displayed web pages containing text and links to other web pages. The pages were stored as HTML file. MOSAIC 2.0 was the first menu based browser. It was developed by the National Centre for Super Computing Applications. Modern browsers are —

Netscape Navigator, Opera, Crazy, Microsoft Internet Explorer, Microsoft Edge, Google Chrome, Brave. Netscape is available on all platforms. Brave is a open source browser application.

HTML — Hyper Text Mark-up Language is used to make web pages which is displayed on the browser over the world wide web.

Web-browsers display these documents in a pre-determined format. Mark-up languages are developed using any meta language. One of the powerful feature of HTML is its ability to link to documents on other computers. These documents are identified on the basis of the Uniform Resource Locator (URL).

HTTP — Hyper Text Transfer (Transport) Protocol is used to transfer HTML documents across the internet.

The transfer of information from internet network to a client's browser is performed by following steps:—

- The client browser uses HTTP commands to communicate with the HTTP server through a reference provided by the URL.
- A TCP/IP connection is established from the client to the server.
- A request message is sent by the browser client to the server computer, typically for a file containing either text, images, audio, video, animation or other hypertext document.
- The server sends a response message with the requested data to the client in the format of internet mail and MIME (Multipurpose Internet Mail Extensions)
- The connection is terminated.

MIME → MIME was developed by RSA Data Security Inc. for transporting secure message, that is; encrypted and signed messages can be sent and received using MIME.

MIME (Multipurpose Internet Mail Extension) is an internet standard that extends the format of e-mail to support:—

- Text in character sets other than ASCII
- Non-text attachments
- Message bodies with multiple parts.
- Header information in non-ASCII character sets.

MIME's use, however, has grown beyond describing the content of e-mail to describing content type in general, including for the web.

All human-written internet e-mail and a fairly large proportion of automated e-mail is transmitted via SMTP in MIME format. Internet e-mail is so closely associated with the SMTP and MIME standards that it is sometimes called SMTP/MIME e-mail.

The content types defined by MIME standards are also of importance outside of e-mail, such as in communication protocols like HTTP for the WWW. HTTP requires that data be transmitted in the context of e-mail like messages, although the data most often is not actually e-mail.

SERVERS → In computer networking, a server is simply a program that operates as a socket listener. The server is also often generalized to describe a host that is deployed to execute one or more such programs.

A server computer is a computer, or series of computers, that link other computers or electronic devices together. They often provide essential services (deployed) across a network, either to provide users inside a

large organization or to public users through the internet. For example, when we enter a query in a search engine, the query is sent from your computer over the internet to the servers that store all the relevant web pages. The results are sent back by the server to your computer.

Many servers have dedicated functionality such as web server, print server, and database servers. Enterprise servers are servers that are used in a business context. Servers provide essential services across a network. Example — Windows NT Server, Linux or Unix Server, Novell Server, FreeBSD, Solaris Servers.

Servers on the Internet

Internet is based on client-server model. High-level root nameservers, DNS servers and routers direct the traffic on the internet. There are millions of servers connected to the internet, running continuously throughout the world.

Root Name Server — Server for the Domain Name System's root zone.

A CISCO 7301 router, part of the AMS-IX mirror at the K root server.

DNS Server — It is a distributed hierarchical naming system for computers, services, or any resources connected to the internet or private network.

Client Workstation — Client workstation is a node attached with internet network and any user can get any information from any server located over internet network if the information is shared by host computer for public use.