# Unit 1 Internet: An Overview

## 1.0  Introduction

In the age of Information, Internet has become a very popular mode of communication. It has permeated all spheres of life. Internet is for anybody who wants to get in touch with anybody else. The Internet has shown a phenomenal growth. In this capsule, we will introduce you to the concepts of Internet and related tools such as e-mail, file transfer, remote login, World Wide Web (WWW) etc. We will be only discussing about a subset of commands/operations for specific packages. However, if you acquire an understanding of the logic of these operations, you can do similar operations using any other package.

## 1.1  Objectives

After studying this unit, you should be able to

Define what is Internet and how does it work

Describe the formats of addresses

Mention various modes of connecting to Internet

Describe tools and services on Internet

Define what is browsing and about different browsers.

## 1.2  What is Internet?

The Internet is a global collection of people, who are linked through computer cables and telephone lines, making communication possible with each other in a common language for specific purposes. However, the rigid technological definition of Internet is that it is a global collection of interconnected networks. By definition, a network allows computer users to share computer equipment, programs, messages, and information available at one site. The earlier attempts in computer networks were limited to Local Area Networks and Wide Area Networks. Internet is defined as network of networks; that is, it connects many LANs and WANs. Figure 1 depicts the Internet. There are many major networks participating in the Internet. Some of these are ARPANET, NSFNET, NASA, BITNET, DECnets etc. Internet is not the only global network available. Some of the commercial networks such as CompuServe (CIS) and MCI Mail and America Online are also global networks. These global networks are owned by different agencies that charge user for access.

**Figure 1: Internet: network of networks**

# 1.2.1 How does Internet Work?

A computer network, by definition, allows sharing of resources. One such major resource is information, which exists in computers in the form of files of data. Thus, one of the key aspects in network of many computers is to move the files between two specific computers. For such a communication, we require:

the address of the destination

a safe method of moving data in the form of electronic signals.

As far as safe movement of data is concerned, there exist a set of rules, which governs sending and receiving of data on the Internet. These rules are implemented in two parts in the network software and are called Transmission Control Protocol (TCP) and Internet Protocol (IP). These two are collectively called TCP/IP. For sending a large block of text/data to another machine, TCP divides the data into little data packets. It also adds special information e.g. the packet position in the document, error correction code etc. to make sure that these packets, at the destination, can be reassembled correctly, without any damage to data. The role of IP here is to put destination-address information on such packets.

On Internet it is not necessary that all the packets follow the same path from source to destination. A special machine called "router" tries to load balance various paths that exist on the network.

Another special hardware/software called gateway allows different electronic networks to talk to Internet which uses TCP/IP (refer to Figure 2). As an Internet user one may not be interested in knowing how messages are converted to packets, but one must know how addresses are to be given. Let us explore the addressing mechanism on Internet in more details.

**Figure 2: Working of Internet**

# 1.2.2    Domain Name System (DNS)

Addresses are essential for virtually everything we do on the Internet. The IP in TCP/IP is a mechanism for providing addresses for computers on the Internet. Internet addresses have two forms:

person understandable which are expressed as words

machine understandable that are expressed as numbers also called IP addresses.

The following can be a typical person understandable address on the Internet:

username@host.subdomain.domain

Hosts are, in general, machines at a particular location. Resources of a host machine are normally shared and can be utilised by many users on the Internet. A user is given an account by system administrator, which allows him to use the resources of the machine.

The *username* in general, is the name of your Internet account for logging into the host machine. *Logging in* is the process of gaining access to your account on a computer, which is shared by several users.

Hosts and local networks are grouped together into *domains*, which are grouped into one or more larger domains. For an analogy a host computer is considered as an apartment building in a housing complex and your account is just an apartment in it. Domain may be an apartment complex, a town, or even a country.

Sub-domains may correspond to organizations such as NASA or CompuServe. Domains are classified as non-geographic and geographic figure 3 lists various common domain names. The domain names in India come under a larger domain ".in".

| Code | Applicable for |
|------|----------------|
| .com | commercial organisations |
| .net | network organisations |
| .gov | parts of governments |
| .edu | organisations of higher education |
| .mil | non-classified military networks |
| .org | organisations that do not fit the commercial or educational designations |

**Non-Geographic domains**

| Country | Domain Name |
|---------|-------------|
| AUSTRALIA | .au |
| CHINA | .cn |
| GERMANY | .de |
| INDIA | .in |
| JAPAN | .jp |
| UNITED KINGDOM | .uk |
| UNITED STATES | .us |

**Few Geographic Domains**
**Figure 3 Non-Geographic and geographic domains**

The Internet address socis@del2.vsnl.net.in indicates that the host computer whose name is **del2** is one of the host computer in the sub-domain named Videsh Sanchar Nigam Limited (**vsnl**) which is a network organisation (**net**) and is situated in country India (**.in**). The **socis** is one the user group in this server/host (**del2**).

## IP Addresses:

**IP Addresses:** as stated earlier, these are machine understandable addresses. The IP address of a host computer (also called a server) is termed as host address. Significance of IP addresses for computers are same as significance of telephone numbers to us.

An IP Address consists of four sets of numbers that are separated by dots. These addresses are organised from left to right. The del2 server of VSNL has an IP address 202.54.15.30. A portion of number separated by the dot is known as an Octect, that is, 8 bits of information. Thus, IP addresses have four octets that are equal to 32 bits. Just like our telephone numbers which include country code, city code, exchange code and the user code, the IP addresses consist of sequence of domain code and sub-domain code from left to right.

Computers termed as *name servers* contain databases of Internet host addresses. They translate word addresses or person understandable addresses into numeric equivalents.

### 1.2.3    Who governs the Internet?

Internet has no president or chief operating officer and is governed by a number of authorities. The ultimate authority of Internet rests with Internet Society (ISOC) a voluntary membership organisation. The purpose of this organisation is to promote global interchange of information. Another authority is a group of invited volunteers' called-Internet Architecture Board (IAB). The IAB sets standard and gives Internet addresses. Internet Engineering Task Force (IETF) discusses the technical and operational problems on Internet.

**Who pays for it?**

No one pays for using Internet; instead everyone pays for its part.

### 1.2.4    What I can do on Internet?

You can perform many tasks if you have access to the Internet. Some of these are:

you can publish your research paper on Internet, thus, making it available for others

you can create campus wide information systems

you can use it for teaching, for example you can teach languages using WWW

you can use it for publicity and advertisement

you can use it for multimedia conferencing

you can refer to the pictures of an art gallery

you can have an electronic copy of classics such as Alice in Wonderland

you can have an electronic copy of journals and magazine from the Internet

you can meet people around the world, be in their touch

you can refer to job listings and requirements

you can get free public domain programs, you can see movies

you can send mail across the boundaries in no time

you can search for specific information.

## 1.3  How Can I Connect to Internet?

For connecting to the Internet, you need to have a computer account on a host machine. For using the account, you must provide the host machine with the username and password. This process is termed as logging in. Figure 4 gives various modes of connecting to Internet. These are discussed in the following subsections:
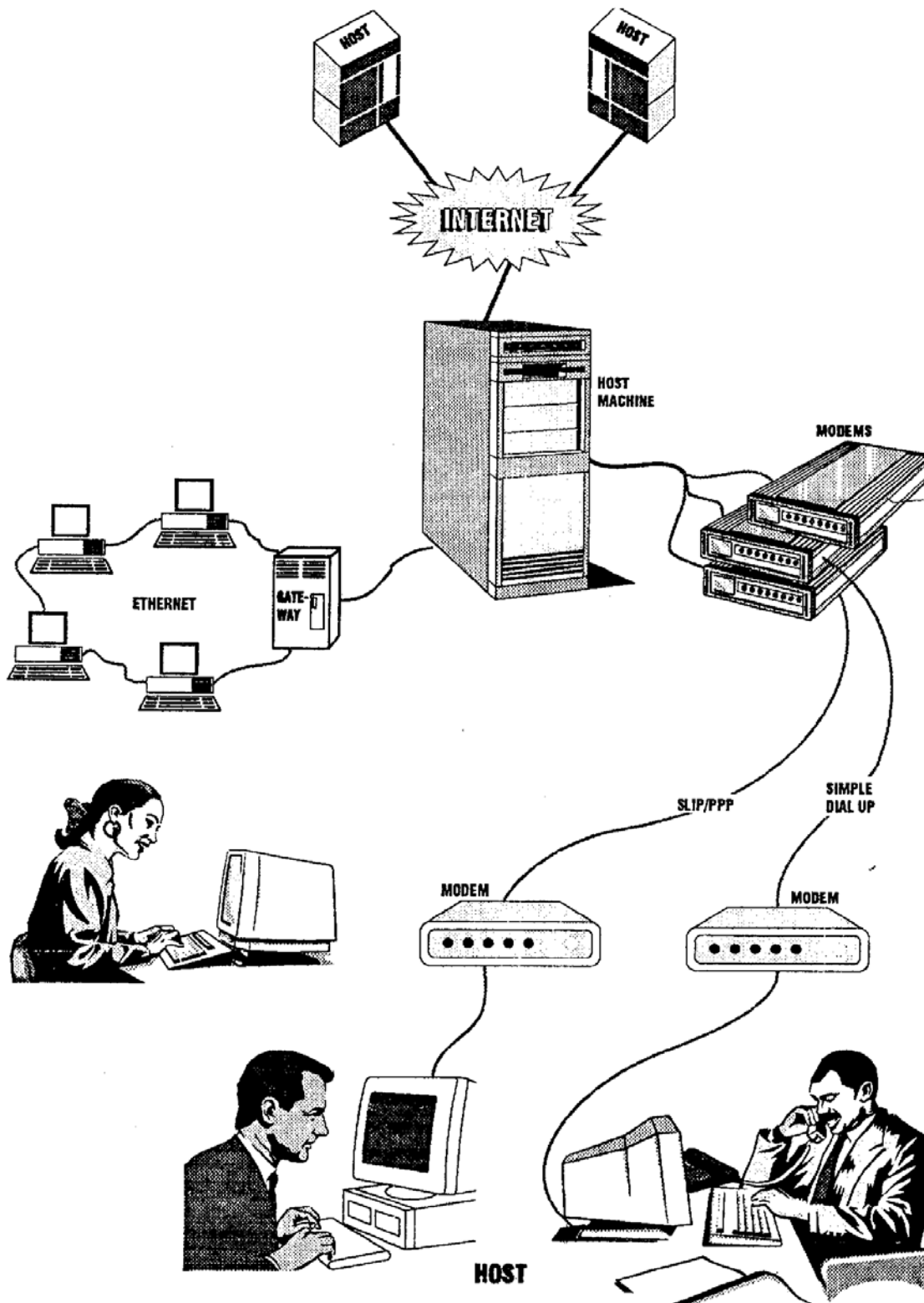
**Figure 4: Connecting to the Internet**

# 1.3.1 Host/Terminal Connections

You are connected to Internet in this mode when your computer behaves as if it is a terminal to an Internet host or server. In general, your terminal will be remote to the host, therefore, requiring a dial-up modem to transfer information from your computer to the host and back. VSNL does provide this kind of connection.

On such connections the information from any Internet sites will be reaching to your host machine. You have to get the information from your host by using communication software.

**Such connections may be well suited when you:**

have a limited budget

do not require constant connectivity

do not want to manage server by yourself

want to connect from different locations using remote log in facility.

In this connection only the utilities offered by host are available to the user. Most of these connections do not provide any graphical interface. This machine cannot exploit the multitasking features of the computer as this type of connection can perform only one type of communication at a time. Normally these shell accounts are on UNIX operating system.

# 1.3.2 Individual Computer TCP/IP Link

Such links help a computer to act as a TCP/IP host. You can customise this computer for specific access. These links are called Serial Line Internet Protocol (SLIP) or Point to Point Protocol (PPP) links. One can have dial-up SLIP or PPP connection. You can compress the data and send it using TCP/IP or vice-versa. A computer using such link allows Windows based applications on your computer. Thus, providing a very simple user interface for connecting to Internet.

Such connection allows use of graphical Internet browsers, file transfer capability, e-mail and other PC based services.

**Using TCP/IP link one can:**

perform remote login to a distant computer where you have an account

transfer files from a distant computer

find out information about people and organisations

browse the Internet using a browser

The limitations of a SLIP or PPP account are:

Normally, we are connected on SLIP/PPP through a dial-up connectivity and if our link is slower than 28.8 kbps then our host is accessible very slowly and we may not allow people to use our machine as this will reduce the speed of our computer drastically.

Many software packages are available for configuring SLIP or PPP connections.

# 1.3.3 Dial-up or On-Demand TCP/IP Link through LAN

This connection is considered to be an intermediate step between a dial-up connection and a dedicated high-speed link. It has some features of both the types. This kind of connection is established between your LAN server and the Internet host/server. You may request for a connection as and when desired from your LAN server. It may have a direct line or may dial the number of the Internet server to establish a link. A regular exchange of information between the LAN server and host machine of the service provider is the exchange of e-mail messages.

This type of connection is ideally suited for environments where you have very little Internet traffic but many mail messages to exchange. For such systems the program running on network server makes the initiation of establishment of link. However, the speed of link is quite limited.

# 1.3.4 Dedicated Link Connections

This is a permanent connection, which can be set up over a telephone line using a modem or a router. A router is a specialised computer, which can read the address on a packet and can transmit the packet to its destination. Modems are used when the speed of transmission is low (28.8 kbps), whereas routers are used for higher speed (above 56 kbps).

Dedicated high-speed connection is best suited for larger organisations, which have to serve many internal and external customers. This kind of link allows you to become information provider round the clock. This connection allows full connectivity to Internet, however, because of organisations own security, privacy or policy reasons you may choose not to use all the connectivity features.

Presently, the main Internet service provider in our country is Videsh Sanchar Nigam Limited (VSNL). They offer all of the above type of connections.

# 1.4 Tools and Services on Internet

To work with Internet and to utilise the information and resources available on it, we use certain tools. For example, Telnet is a tool that is utilised for logging on remote computers on the Internet. Let us briefly discuss about some of the important tools and services.

# 1.4.1 Electronic Mail on Internet

One of the very useful things about the Internet is that it allows you almost instantly exchange of electronic message (e-mail) across the world instantly. E-mail is a popular way of communication of electronic matter. You can e-mail to your friend or a to researcher or to anybody for getting a copy of a selected paper. E-mail is mainly used for sending electronic piece of text. Through e-mail on Internet you can be in direct touch to many of your friend and colleagues.

An Internet account includes an electronic mailbox. A message meant for you is received at your Internet host computer, where it is stored in your electronic mailbox. As soon as you login in to your Internet account, one of the first thing you should do is to check your mailbox.

Some of the mail programs, which exist on Internet, are UCB mail, Elm, Pine etc. However, one thing, which you must emphasise while selecting a mail program, is the user friendliness of that program.

## Mailing Lists on Internet

E-mail provides a mechanism for groups of people who have common interests to establish and maintain contact. Such interest groups are referred to as *mailing lists (lists* for short), after all; they are mailing lists of the members' e-mail addresses. You can subscribe to any of such lists. You will receive copies of all the mail sent to the list. You can also send mail to all the subscribers of the list.

You can become a list subscriber, by contacting the list's administrator. There exist two types of list administrators: human or computer program called **listserv**. Your request to subscribe may sometimes be refused. Do not get disappointed, there will be plentiful more lists that will accept your subscription.
If you have joined many lists you may wind up with lots of mail in your mailbox. For example, if you subscribe to several active lists, you may receive over 100 messages every day. Thus, limit your subscriptions to limited lists. *Moderated lists* have one or more human moderators who screen all incoming mail and redistribute only a selected portion to the list. *Unmoderated lists* just

pass all the received mail to its subscribers.  If you do not like a particular list, you can always unsubscribe from it, by sending a request to the administrator.

**E-mail Auto Responses**

This facility helps in delivering automatic prestored responses on arrival of e-mail.

# 1.4.2    Usenet and Newsgroups

There are many ways to meet people and share information-using Internet.  One such way is through Usenet *newsgroups*.  These are special groups set up by people who want to share common interests ranging from current topics to cultural heritage.  There are currently thousands of Usenet newsgroups.

The Usenet can be considered as another global network of computers and people, which is interwined with the Internet.  However, Usenet does not operate interactively like the Internet, instead Usenet machines store the messages sent by users.  Unlike mail from mailing lists, the news articles do not automatically fill your electronic mailbox.  For accessing the information on usenet, one needs a special type of program called a *newsreader*.  This program helps in retrieving the news you want from Usenet storage site and display it on your terminal.

Usenet is like a living thing: New newsgroups get added, the groups which have too much traffic get broken up into smaller, specialised groups, and the groups even can dissolve themselves.  However, changes in newsgroups can occur on the basis of some commonly accepted rules and by voting.  For Usenet, there is no enforcement body; it entirely depends on the co-operation of its computer owners and users.

The newsgroups are really meant for interaction of people who share your interests.  You can post your own questions as well as your answers to the questions of others, on the Usenet.  One thing, which is worth mentioning here, is that when one is interacting with people on Internet certain mannerism should be adopted.  These rules are sometimes called "netiquette".  In a face-to-face conversation you can always see a person's facial gestures and hand movements and can ascertain whether he is teasing or is being sarcastic, or sometimes even lying.  However, in on-line interaction one cannot see the person one is interacting with.  The rules of netiquette may help to compensate some of these limitations of the on-line environment.

Usenet has its own set of rules and manners, governing behaviour; most of them are based on common courtesy.  Unfortunately, not everybody follow them.  Some of the pointers on how to behave on Usenet are:

➢ As stated you cannot express facial gestures or your tone of voice on on-line communication to show that you are being sarcastic, or wink to indicate that you are kidding.  This can be added to on-line speech.  One can use a number of character sequences, that when viewed from a side looks something like a facial expression.  For example, the wink may be conveyed with ;-) and sadness may be conveyed with :-(.

➢ Read the news for a while before participating.  This helps you to observe the dynamics of a particular group.  Certain things that might be acceptable in one group would not be acceptable to another.  For example, a group may collectively choose not to discuss certain aspects of a topic.  Different groups may have different opinion of what is offensive or improper.  For example, jokes that are funny to some may be offensive to others.

➢ You can be emphatic about *highlighting* the word with asterisks to stand out.

➢ Many of the news articles involve questions.  So before asking a question, check the list of frequently asked questions (called FAQ's) for the group.  Do not ask questions for which answer is available readily.  People on Usenet may be extremely co-operative, but not if you are asking questions whose answers are prominently displayed in existing documents.

➢ Do not get involved in personal attacks or tirades.  This type of verbal attack is called flame.  Flaming is totally undesirable as it generates lots of articles that very few people want to read.  Thus, wasting Usenet resources.

## What is FAQ?

A great resource offered by Usenet is the FAQ's that is the list of frequently asked questions and responses for them for particular newsgroup.  These FAQ's are available on incredible number of topics, such as new Power PC to variety of dogs.  FAQ's are an excellent place for sharing information about a topic.

These FAQ's are generally text files or Usenet articles. FAQ's can be organised as a long list of questions and answers, or as a list of questions followed by answers. The second approach is better from the point of view of searching for a particular question and its answer. Some FAQ's go to a distance such that they provide annotated bibliography. FAQ's are very popular among Internet users. FAQ's are also archived.

Usenet serves primarily as a forum for questions by offering subscribers a document made up of frequently asked question (FAQ) and their answers periodically. You must read these documents to make sure that your questions haven't already been answered. If you have a new question, people on Usenet may be extremely co-operative in helping you getting the answer. Therefore, when other ask questions, it becomes your responsibility to assist them. It is only the people interaction with each other that has made Usenet the amazing information resource that it is.

# 1.4.3    Transferring Files with Ftp

Internet gives you access to all kinds of information. However, files and data are scattered all over the Internet in large and small archives. Some of these may contain text, some may contain pictures or sounds, or computer programs. A file may contain some important information for you, however it may be on a distant computer. If you want to have your own copy of the file then?

There exist a standard tool on Internet for transferring copies of files. This program is called *ftp,* that is, *file transfer protocol.* Ftp can be used to copy any file from one Internet host to other. However, for such transfer you need an account on a remote host. The ftp program will make a connection with the remote host, which will allow you to browse the directories and specify files at the remote host for transfer. However, you cannot look at the contents of these remote files by using ftp. You have to transfer the copy and then look at it, once it is on your own account.

What will happen if you do not have an account on a remote Internet host? For such cases ftp recognises a special account name called anonymous. Thus by using anonymous ftp you can access public archives on the Internet and copy a file from there.

Some of the common programs such as Stuffit, PKZip, or Compactor are used to compress a file before using ftp. The basic advantage of using these compressed files are that these files require less storage space, and less time to transmit from site to site on Internet.

# 1.4.4    Connecting to Remote Machines with Telnet

Telnet is a program that allows an Internet host computer to become a terminal of another host on the Internet. Ftp opens a connection solely for transfer of files, however, Telnet allows you to become a user on a remote machine. You can run the computer programs at remote host, browse the database or perform any desired operation of the remote machine using this facility.

Thus, Telnet provides a direct access to various services on Internet. Some of these services are available on your host, but Telnet is especially useful when these services are not available on your host. For example, if you want to use graphical interfaces designed by other users, then Telnet allows you to access their hosts and use their new interfaces. Similarly, whenever someone creates a useful service on his host, Telnet allows you to access this valuable information resource. This tool is especially useful for accessing public services such as library card catalogues, the databases available on the remote machine etc.

It is extremely simple to use. Imagine the use of it as a utility. Suppose you are working as a faculty member of Indira Gandhi National Open University. You have a typical account FACULTY-1 on the IGNOU computer that is one of the hosts of the Internet. You are selected for Academic exchange scholarship to USA. You will get a user account in U.S.A. However, all you colleagues know only you IGNOU account. Thus, using Telnet you can always log on to your account in India for your papers, for running your programs, for your mail etc.

There are many databases available on the Internet. You can explore these databases using Telnet. There are many Internet services yet to be created. Every year better means of accessing the treasures of the Internet are appearing in which Telnet is the key for accessing.

## 1.4.5　　　Some Other Tools

There are many other tools that exist on Internet.  The following table provides a brief summary of these tools:

| Finger | This command allows display of the contents of the files that are associated with particular user identifier at a particular Internet site. |
|---|---|
| Talk | Allows private communication between two individuals. Both parties must be connected to Internet for a session. |
| Internet Relay Chat (IRC) | This allows each participant contribution displayed on the screens to all other taking part in the conversation. |
| Multi-user Dungeons (MUDS) and Multi-user Simulation Environment (MUSEs) | These tools have rules and regulations of Information sharing.  An approach for group learning. |
| Multicast BackBONE (MBONE) | It is used to broadcast speeches, news, conferences and other informational events on Internet. |
| CuSeeMe, Maven and VAT | These are tools for audio and video teleconferencing. |

**Figure 5: Advanced Tools on Internet**

# 1.5  Browsing the Internet

Both Telnet and ftp programs, require that one must know the address of the specific computer to be connected.  Neither of the two is conducive to provide a general information of what is out there on the Internet.  There are many *browsers* for the Internet, which provide the ability to view text and perform searches.  If you are using the browser then you need not remember UNIX commands or syntax.  You just have to start the browser and select from the choices they present. These browsers help you perform a sort of window-shopping of information on the Internet.

The first of these browsers, Gopher, presents the Internet as a series of hierarchical menus containing items that point to another menu or a file or a directory within a remote host or the articles of a Usenet newsgroup or to a variety of other things.  The second browsers take advantage of the World Wide Web (WWW). The World Wide Web places pointers to resources within its text, on selecting a pointer one automatically jumps to the resource pointed at.

Gopher and the World Wide Web are easy to use and most popular browsing mechanisms on the Internet.  The Internet is growing very fast.  It is very difficult to keep up with all the new information, archives, and other resources that are available on it.  So periodically, you must surf the Internet.

Surf implies venturing out just to see what you will find.  While doing surfing you have no particular destination in mind just like surfing in sea, where you do not know which wave will come in what way.  You do not know what you are searching yet you can search great things on Internet.

Surfing the Internet is just like channel surfing on your cable television.  You have very little idea what is on or even what you want to see.  You just flip through channels seeing what's on, and move to the next when you lose interest in what you are watching.  Gopher and World Wide Web make surfing a simple and enjoyable pastime.  Beware it is easy to lose track of time while exploring the Internet!

Internet users have grown frustrated, as the information on it is not organised.  Some people are also worried about the quality of information on the Internet.  Some individuals and groups have

taken up task of creating special subject-specific listings and archives. These are available through both Gopher and World Wide Web. These listings are just like libraries that specialise in material on one subject. These lists are maintained carefully and constant monitoring of Internet is made to update these lists.

# 1.5.1 What is Gopher?

Gopher displays a set of resources on the Internet in the form of menus or lists of items. You go around the Internet by selecting items from these menus. You need not know the addresses and commands. You just select an item of interest to see its content on the screen.

It is based on the concept of client and servers. Here, clients are the programs that request information for a user, whereas, servers are programs that provide the information to clients. Gopher servers are scattered all over the Internet. Thus, servers sit and wait for requests from Gopher client programs. One can use the Gopher client program on ones own Internet host. If Gopher program is not available on your machine you can telnet to one of the public Gopher clients available on the Internet. The people who maintain running of Gopher services create the menus. A Menu item can point to materials on that Gopher server or to
materials on any other Gopher servers (Refer to Figure 6).
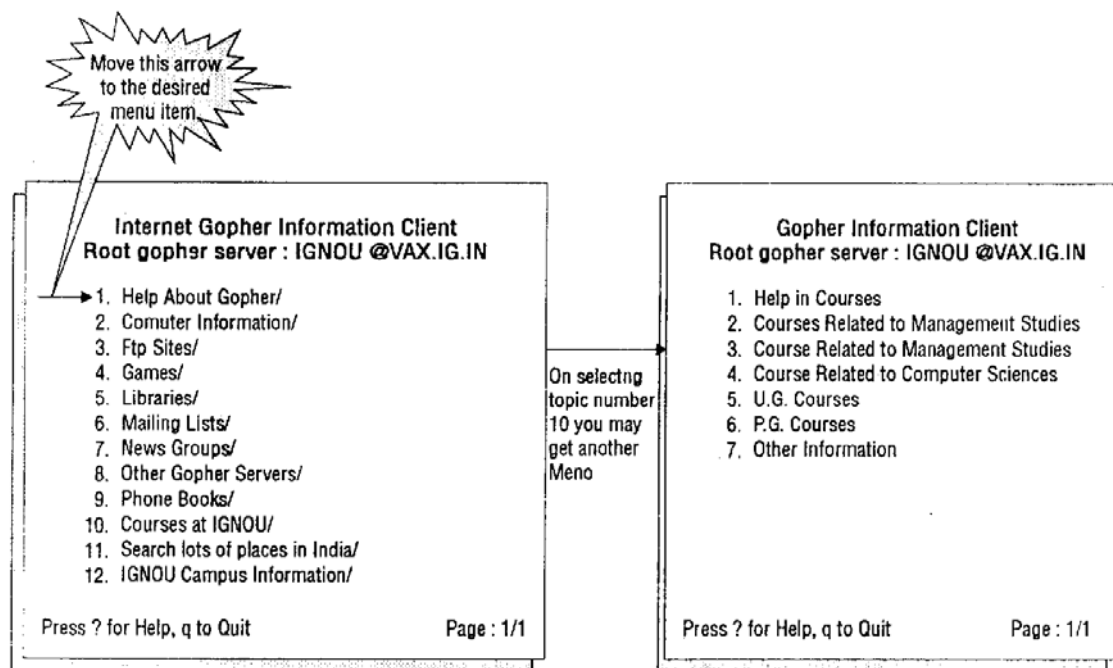


**Figure 6: A hypothetical view of Menus on Gopher**

All these Gopher servers, their respective information resources, and all the Internet resources we can reach are collectively referred to as Gopherspace. The terms like tunnelling through Gopherspace and travelling around Gopherspace have been common for Gopher users. The Internet has grown extremely fast in size, but Gopherspace is perhaps growing even faster.

# 1.5.2 What is World Wide Web?

Is the menus only way to browse the Internet? The World Wide Web offers a competing approach. The WWW does not require you to learn a lot of commands. You can simply read the text provided on the screen and select the items you wish to view. Thus, you can follow many different "trails" of information. It is very easy to use software, therefore, a favourite means of browsing the Internet.

The WWW provides an integrated view of the Internet using clients and servers. As discussed earlier, clients are programs that help you sought out information while servers are the programs that find information for the clients. WWW servers are placed all around the Internet.

The operations of the Web mainly rely on **hypertext** as its' mean of interacting with users. But what is hypertext? Hypertext as such is the same as regular text, that is, it can be written, read, searched, or edited, however, hypertext contains connections within the text to other documents.

For example, in Figure 7 on selecting the option: "Arranging Windows and Icons" you are linked to another screen, where you can select "titlebar" to get linked to a new screen. Please note that these new texts can also have links and may connect you to other documents. Thus, continually selecting text will take you to a tour of information. The hypertext links are called **hyperlinks**. These hyperlinks can create a complex virtual web of connections.
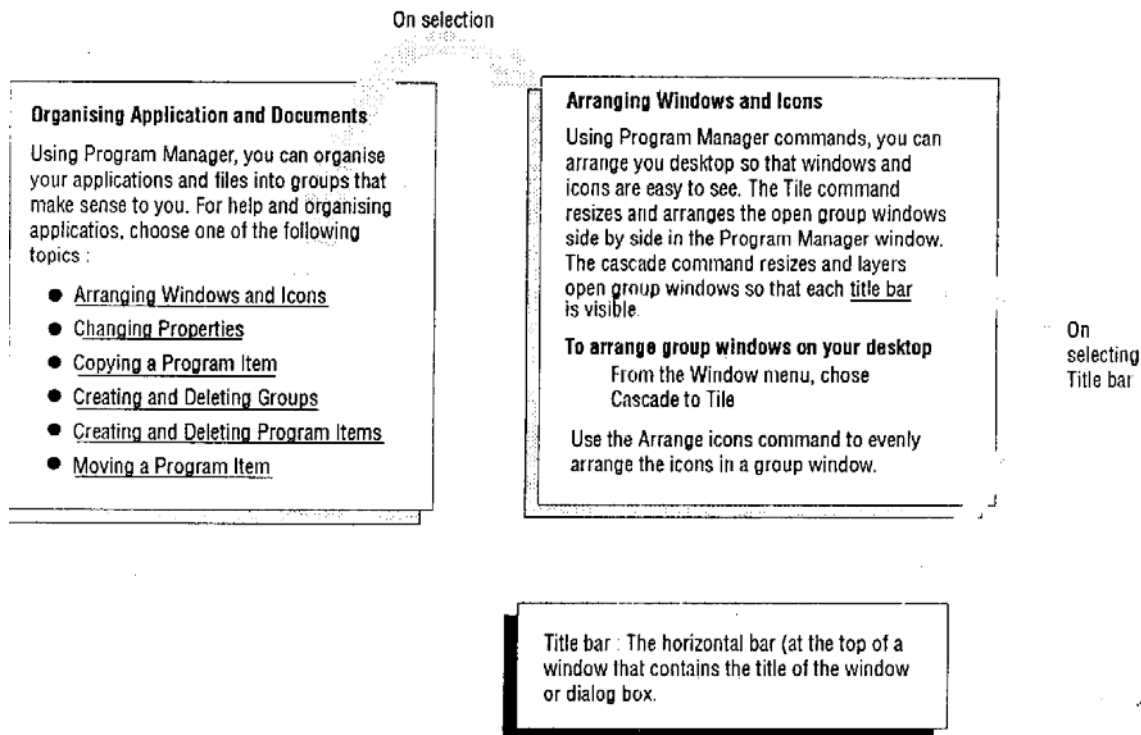
On selection

**Organising Application and Documents**

Using Program Manager, you can organise your applications and files into groups that make sense to you. For help and organising applicatios, choose one of the following topics :

- Arranging Windows and Icons
- Changing Properties
- Copying a Program Item
- Creating and Deleting Groups
- Creating and Deleting Program Items
- Moving a Program Item

**Arranging Windows and Icons**

Using Program Manager commands, you can arrange you desktop so that windows and icons are easy to see. The Tile command resizes and arranges the open group windows side by side in the Program Manager window. The cascade command resizes and layers open group windows so that each title bar is visible.

**To arrange group windows on your desktop**
From the Window menu, chose
Cascade to Tile

Use the Arrange icons command to evenly arrange the icons in a group window.

On selecting Title bar

Title bar : The horizontal bar (at the top of a window that contains the title of the window or dialog box.

**Figure 7: Working of hypertext**

## Hypermedia

**Hypermedia** is advanced version of hypertext documents as it contains links not only to other pieces of text, but also to other forms of media such as sounds, images, and movies. In fact, images themselves can be selected to link to sounds or documents. Hypermedia contains hypertext and multimedia.

The **World Wide Web** is described as a "wide-area hypermedia information initiative aiming to give universal access to a large universe of documents". World Wide Web provides users on computer networks with a consistent way to access a variety of media in a simplified fashion. A popular software program to search the Web is called **Netscape**. The Web project has modified

the way people view and create information-it has created the first global hypermedia network. The Web browsers identify the location on the Internet using a notation called Uniform Resource Locator (URL). URL indicates the tool being used and the address of Internet site where presently information is being located. For example, URL http://www.whitehouse.gov means that presently Hypertext Transfer Protocol (http) is active, that is, World Wide Web browsing tool is looking at the site www.whitehouse.gov.

The Web information facilitates an easy exchange of hypermedia through Internet. The native documents on the World Wide Web are written in HTML known as **HyperText Markup Language**. HTML defines the structural elements of the documents such as headers, citations, addresses, layout information such as bold and italics; and the use of inline graphics alongwith the ability to provide hypertext links.

It is availability of WWW on the Internet that has made it so popular among masses. However, there is a limitation of Web information, that is the information available on a site is static (does not change automatically). To make this happen an object oriented programming language JAVA is becoming increasingly popular for Web page designs.

# 1.6 Summary

This unit is an attempt for answering some of the basic queries about Internet, a network of networks where lot of Information is available and is meant to be utilised by you. We have presented an overview of how and what you can do on Internet. For more details about how to get connectivity to Internet and how to work with various tools you can get in touch with VSNL, NICNET, ERnet. Using Internet you can overcome the boundaries across the globe. The Internet technology is growing so fast that it is difficult to keep pace with it. You can do so only if you are using Internet, a mega source of information.