UNIT – V

INTERNET

The Internet is a network of computers linking many different types of computers all over the world. It is a network of networks sharing a common set of addressing and a common set of communication between two computers as a network.

Basic services provided by internet

i) Electronic Mail
ii) File Transfer Protocol
iii) World Wide Web
iv) Telnet
v) Usenet

i) **Electronic Mail**: Electronic Mail popularly known as e-mail. An email message takes just few seconds to several minutes to reach its destination because it travels from one network to another until it reaches its destination.

   It has many similarities with postal services. An important user has an e-mail ID just as we have our postal address. Each sending a mail to another user a sender specifies the e-mail address of the receiver just as we write the postal address of the receiver while posting any letter E-mail services.

ii) **File Transfer Protocol** (FTP) this is both a program and a method used to transfer file between computers on the internet. Anonymous FTP is an option that allows users to transfer files from thousands of host computers on internet to their Personal Computer account. File Transfer is quite rapid. FTP contains books, articles, software, games, images, sounds; multimedia courses work data sets and more.

COMMERCE:

It has become a buzzword for business over the past few years, with increased awareness about the use of computers and communication technologies to simplify business procedures. E-Commerce popularly known as electronic commerce. It is way
by which commerce is done electronically. It is thus a medium of transferring of data in
the form of internet.

Advantages of E-Commerce:

1) **24x7 Operations**: Round the clock an operation is an expensive proposition in
birch and motel worlds, while it is natural in click and conquer world.

2) **Global Reach**: The Net being inherently global, reaching global customer is
relative easy on the net compared to the world of bricks.

3) **Cost of acquiring, serving and retaining customer**: It is relatively cheaper
acquire new customer over the net; thanks to 24x7 operations and its global
reach.

4) **An extended enterprise is easy to build**: In today's world every world
enterprise is part of the ‘CONNECTED ECONOMY’ as such you need to extend
your enterprise all the way to your suppliers and business partners like
distributors, relatives and ultimately to end users. The internet provides an
effectives way to extend your enterprise beyond the narrow conifers your own
organization.

5) **Disintermediation**: Using the internet one can directly approach the costumes
and suppliers, cutting down on the number of levels and in the process, cutting
down the down the costs.

6) **Improved customer service to your clients**: it results in higher satisfaction and
more sales.

7) **Power to provide the best of both the worlds**: It benefits the traditional
business side by side with the internet tools.

8) **A technology based custance interface**: In a brick and motor business,
customer conduct transactions either face to face or over the phone with store
clacks. This includes PC based monitors, ATM machine, PDA; or other electronic
devices such as the DoCopMo imode in Japan and the Nokia 7100 in Europe.
Disadvantages of E-Commerce:

Some business processes may never link themselves the electronic commerce e.g. Perishable toads and high cost them may be difficult to inspect from a remote location, regardless of any technologies that might be devised in the future. Most of the disadvantages of electronic commerce today however stem from the newness and rapidly developing pace of the underlying technologies. These disadvantages will disappear as e-commerce matures and becomes more and more available to and gets accepted by the general population. Many products and services require a critical mass of potential buyers who are well-equipped and willing to buy through the internet.

Businesses often calculate the return on investment before committing to any new technology. This has been difficult to do with e-commerce since the costs and benefits have been hard to quantity. Costs, which are function of technology can change dramatically even during lived.

Commerce:

In addition to technology and software issues, many business face cultural and legal obstacles in conducting e-commerce some consumers are still somewhat fearful of sending their credit card numbers over the internet.

Types of E – Commerce:

1) **Business to consumers (B2C):** Consumers are increasingly going on line to shop for the purchase products arrange financing, arrange shipment or take delivering of digital products such as software and get service after the sale, often called as e-retail.

What is the Internet?

The Internet links are computer networks all over the world so that users can share resources and communicate with each other. Some computers have direct access to all the facilities on the internet such as the Universities and other computers, eg. Privately-owned ones, have direct links through a commercial service provider, who offers some
or all of the Internet facilities. In order to be connected to internet, you must go through service suppliers. Many options are offered with monthly rates. Depending on the option chosen, access time may vary. The internet is what we call a Mata network, that is, a network of networks that spans the globe. It’s impossible to give an exact count of the number of networks or users that comprise the internet, but it is easily in the thousands and millions respectively. The internet employs a set of standardized protocols which allow for the sharing of resources among different kinds of computers that communicate with each other on the network. These standards, sometimes referred to as the internet Protocol Suite, are the rule that develops adheres to when creating new functions for the internet. The internet is also what we call a distributed system; there are no central archives. Technically, no one runs the internet. Rather, the internet is made up of thousands of smaller networks. The internet thrives and develops as its many users fins new ways to create, display and retrieve the information that constitutes the internet.

History & Development of the internet

In its infancy, the internet was originally conceived by the Department of Defense as a way to protect government communications systems in the event of a military strike. The original network, dubbed Arpanet (for the Advanced Research Projects Agency that developed it) evolved into a communication channel among contractors, military personnel, and University researchers who were contributing to ARPA projects. The network employed a set of standard protocols to create an effective way for these people to communicate and share data with each other. Arpanet’s popularity continued to spread among researchers, and in the 1980’s the National Science Foundation, whose NSFNet, linked several high speed computers, took charge of the what had come to be known as the Internet.

By the late 1980’s thousands of cooperating networks were participating in the Internet. In 1991, the U.S. high Performance Computing Act established the NREN (National Research & Education Network). NREN’s goal was to develop and maintain high-speed networks for researcher and education, and to investigate commercial uses for the
Internet. The rest, as they say, is history in the making. The Internet has been improved through the developments of such services as Gopher and the World Wide Web. Even through the internet is predominantly thought of as a research oriented network, it continues to grow as an informational, creative, and commercial resource every day and all over the world.

Who Pays for the Internet?

There is no clear answer to this question because the internet is not one “Thing” it’s many things. No one central agency exists that charges individual internet users. Rather, individuals and institutions who use the internet service provider for their share of services. And in turn, those smaller internet service providers might purchase services from an even large network. So, basically, everyone who uses the internet in some way pays for part of it.

2- What makes the internet work?

The unique thing about the Internet is that it allows many different computers to connect and talk to each other. This is possible because of a set of standards, known as protocols, that governs the transmission of data over the network: TCP/IP (Transmission Control Protocol/Internet Protocol). Most people who use the internet aren’t so interested in details related to these protocols. They do, however, want to know what they can do on the internet and how to do it effectively.

The Clients/Server Model:

The most popular internet tools operate as client/server systems. You’re running a program called a Web client. This piece of software displays documents for you and carries out your requests. If it becomes necessary to connect to another type of service –say, to set up a talent session, or to download a file to your Web client will take care this too. Your Web client connects (or “talks”) to a Web server to ask for information on your behalf.

The Web server is a computer running type of Web software which provides data or “serves up” information resource to your Web client.
All of the basic Internet--- including Telnet, FTP, Gopher, and the World Wide Web--- are based upon the cooperation of a client and one or more servers. In each case, you interact with the client program and it manages the details of how data is presented to you or the way in which you can look for resources. In turn, the client interacts with one or more servers where the information resides. The server receives a request, processes it, and sends a result, without having to know the details of your computer system, because the client software on your computer system is handling those details. The advantages of the client/server model lies distributing the work so that each tool can focus or specialize on particular tasks: the server serves information to many users while the client software for each user handles the individual users interface and other details of the requests and results.

The Use of Local Clients:

Every computer should be equipped with basic client software packages that allow you to perform functions such as electronic mail, Telnet, Gopher and FTP.

Electronic mail on the Internet:

Electronic mail, or e-mail, is probably the most popular and widely used Internet function. E-Mail, e-mail, or just mail, is fast and efficient way to communicate with friends or colleagues. You can communicate with one person at time or thousands; you can receive and send files and other information. You can even subscribe to electronic journals and newsletter. You can send e-mail messages to a person in the same building or on the other side of the world.

How does E-Mail Work?

E-Mail is an asynchronous form of communication, meaning that the person whom you want to read your message doesn’t have to be available at the precise moment you send your message. This is a great convenience for both you and the recipient.

On the other hand, the telephone, which is a synchronous communication medium, requires that both you and your listener be on the line at the same time in order for you to communicate (unless you leave a voice message). It will be impossible to discuss all the details of the many e-mail packages available.
Reading an Internet Address:

To use Internet e-mail successfully, you must understand how the names and addresses for computers and people on the Internet are formatted. Mastering this technique is just as important as knowing how to use telephone numbers or postal addresses correctly. Fortunately, after you get the hang of them, Internet addresses are usually no more complex than phone numbers and postal addresses. And, like those methods of identifying a person, an organizational, or a geographic location – usually by a telephone number or a street address. Internet addresses have rules and conventions for use.

Sample Internet Address: Custcare@aucegypt.edu. The Internet address has three parts:

1. a user name [Custcare in the example above]
2. an “at” sign (@)
3. The Address of the user’s mail server [aucegypt.edu in the example above]

Sometimes it’s useful to read an Internet address (like custcare@aucegypt.edu) or a domain name from right to left because it helps you address like 201B6DQF@asu.edu doesn’t tell much about the person.

Who’s sending me a message, but I can deduce that the sender is affiliated with an educational intuition because of the suffix edu. The right-most segment of domain names usually adhere to the naming conventions listed below:

EDU Educational sites in the United States

COM Commercial sites in the United States

GOV Government sites in the United States

NET Network administrative organizations

MIL Military sites in the United States

ORG Organizations in the U.S. not covered by the categories (e.g) non-profit organizations).
Introduction To e-Commerce

The term “Electronic Commerce” (or e-commerce) refers to the use of an electronic medium to carry out commercial transactions. Most of the time, it refers to the scale of product via Internet, but the term e-commerce also covers purchasing mechanism via Internet (for B-To-B).

A client who purchases on the internet is called a cyber consumer. E-Commerce is not only limited to online sales, but also covers:

- Preparation of estimates online
- Counseling of users
- Provision of an electronic catalog
- Access plan of sales
- Real-Time management of product availability (stock)
- Online payment
- Delivery tracking
- After-sales service

In certain cases, electronic commerce makes it possible to highly customize products, in particular when the electronic commerce site is linked with the production system of the enterprise (e.g. business cards, customized items such as T-Shirts, cups, caps, etc.

Finally, insofar as electronic services and products are concerned (MP3 files, software Programs, e-books, etc.) electronic commerce makes it possible to receive the purchase in a very short time, if not immediately.

ONLINE STORES

Most electronic commerce sites are online stores which have at least the following elements at the front-office level:
• An Online electronic catalog listing all products for sale, their price and sometimes their availability (product in stock or number of days before delivery).

• A search engine which makes it possible to easily locate a product via search criteria (brand, price range, key word, etc.);

• A virtual caddy system (sometimes called virtual cart): this is the heart of the e-commerce system. The virtual caddy makes it possible to trace the purchase of the client along with the way and modify the quantities for each references;

• Secure online payment (accounting) is often ensured by a trusted third party (a bank) via a secure transactions.

**TYPES OF E-COMMERCE:**

• *(Business-to- Business)* Companies doing business with each other such as manufactures selling to distributors and wholesalers selling to retailers. Pricing is based on quantity of order and is often negotiable.

• *(Business-to-Consumer)* Business selling to the general public typically though catalogs utilizing shopping cart software. By order volume, B2B takes the prize, however B2C is really what the average Joe has in mind with regards to ecommerce as a whole.

Having a hard time finding a book? Need to purchase a custom, high-end computer system island? With the advent ecommerce, all three things can be purchased literally in minutes without human interaction. Oh how far we’ve come!

• *(Consumer –to-Business)* A consumer posts his projects with a set budget online and within hours companies review the consumer’s requirements and bid on the project. The consumer reviews the bids and selects the company that will complete the project. Elance empowers consumers around the world by providing the meeting ground and platform for such transactions.
There are many sites offering free classifieds, auctions and forums where individuals can buy and sell thanks to online payment systems like PayPal where people can send and receive money online with ease. eBay’s auction service is a great example of where person-to-person transactions take place everyday since 1995.

**ADVANTAGES:**

The greatest and the most important advantage of e-commerce, is that it enables a business concern or individual to reach the global market. It caters to the demands of both the national and international market, as your business activities are no longer restricted by geographical boundaries. With the help of electronic commerce, even small enterprises can access the global market for selling and purchasing products and services. Even time restrictions are nonexistent while conducting businesses, as e-commerce empowers one to execute business transactions 24 hours a day even on holidays and weekends. This in turn significantly increases sales and profit.

Electronic commerce gives the customers the opportunity to look for cheaper and quality products. With the help of e-commerce, consumers can easily research on a specific product and sometimes even find out the original manufacturer to purchase a product at a much cheaper price than that charged by the wholesaler. Shopping online is usually more convenient and time saving than conventional shopping. Besides these people also come across reviews posted by other customers, about the products purchased from a particular from an e-commerce site, which can help make purchasing decisions.

For business concerns, e-commerce significantly cuts down the cost associated with marketing, customer care, processing, information storage and inventory management. It reduces the time period involved with business process re-engineering, customization of products to meet the demand of particular customers, increasing productivity and customer care services. Electronic commerce reduces the burden of infrastructure to conduct businesses and thereby raises the amount of funds available for profitable investment. It also enables efficient customer care services. On the other hand, it
collects and manages information related to customer behavior, which in turn helps develop and adopt an efficient marketing and promotional strategy.

DISTADVANTAGES:

Electronic commerce is also characterized by some technological and inherent limitations which have restricted the number of people using this revolutionary system. One important disadvantage of e-commerce is that the internet has still touched the lives of a great number of people. Either due to the lack of knowledge of trust, a large number of people simply not use of the internet for any kind of financial transaction. Some people transactions, as in the case of e-commerce. Many people have reservations regarding he requirement to disclose personal and private information for security concerns. Many times, the legitimacy and authenticity of different e-commerce sites have also been questioned.

Another limitation of e-commerce is that it is not suitable for perishable commodities like food items. People prefer to shop in the conventional way than to use e-commerce for purchasing food products. So e-commerce is not suitable for such business sectors. The time period required for delivering physical products can also be quite significant in case of e-commerce. A lot of phone calls and e-mails may be required till you get your desired products. However, returning the product and getting a refund can be even more troublesome and time consuming than purchasing, in case if you are not satisfied with a particular product.

Thus, on evaluating the various pros and cons of electronic commerce, we can say that the advantages of e-commerce have the potential to outweigh the disadvantages. A proper strategy to address the technical issues and to build up customers trust in the system, can change the present scenario and help e-commerce adapt to the changing needs of the world.