

UNIT1: NEW MEDIA AND COMMUNICATION

1.0 Introduction

1.1 New Media

1.2 Differences between New Media and Old Media

1.3 Characteristics of New Media

1.3.1 Interpersonal Communication Media

1.3.2 Interactive play media

1.3.3 Collective participatory media

1.3.4 Information search media

1.4 Computer Mediated Communication

1.5 Problematic Behaviour of the Users of CMC

1.5.1 Behavioural Dis-inhibition

1.5.2 Internet and Peeping tom

1.6 Uses of Internet Technology

1.7 Impact of Internet Technology

1.8 New Media and Participatory Journalism

1.9 New Media: A Tool for Participation and Collaboration

1.10 Invisible Audiences in media

1.11 Features of Public Communication by New Media Technologies

1.11.1 Egalitarian

1.11.2 Intimacy

1.11.3 Passion

1.11.4 Speed of communication

1.12 The Properties of Computer Mediated Communication

1.12.1 Persistence

1.12.2 Replicability

1.12.3 Searchability

1.12.4 Scalability

1.13 Summary

1.0 INTRODUCTION

The Internet was destined to be a social medium from the start, open, unregulated, extensible and unpredictable. Like the telephone, it removes one of the critical barriers like geography to maintaining social networks.

We are witnessing the evolution of a universal interconnected network of audio, video, and electronic text communications that will blur the distinction between interpersonal and mass communication and between public and private communication.

New media transgresses the limits of print and broadcasting models and enable many to many conversations, simultaneous distribution of cultural objects, and provide instantaneous global contact.

1.1 NEW MEDIA

New media refers to on-demand access to content any time, anywhere, on any digital device, as well as interactive user feedback, creative participation. Real-time generated, unregulated content is another aspect of new media.

New media does not include television programs, feature films, magazines, books, or paper-based publications unless they contain technologies that enable digital interactivity. "New media technologies" are digital and interactive. For examples: Internet, websites, computer multimedia, video games, CD-ROMS, and DVDs. Wikipedia, an online encyclopedia, is a new media platform, combining Internet accessible digital text, images and video with web-links, creative participation of contributors, interactive feedback of users and formation of a participant community of editors and donors for the benefit of non-community readers. Facebook is an example of the social media model, in which most users are also participants.

Until the 1980s media relied primarily upon print and analog broadcast models, such as those of television and radio. The last twenty-five years have seen the rapid transformation of media. The use of digital computers has transformed the traditional printing press through the application of technologies such as image manipulation software like Adobe Photoshop and desktop publishing tools.

1.2 DIFFERENCES BETWEEN NEW MEDIA AND OLD MEDIA

The general difference between new media and old media is concerned more with authorship, publication, production and distribution. New media is different from old media in terms of

1. **Degree of interactivity:** that is offered by the media which enhances the participation and collaboration of content and production among users.
2. **Degree of autonomy:** users of new media have more control over the content published by other (Media house, organisation) and to distribute their own product in the network with lesser and zero amount spent.
3. **Degree of playfulness:** the features of new media open more interaction between users' and provide rich experiences and satisfaction to users.
4. **Degree of privacy:** new media has intruded into the private life of the people involuntarily in contrast to old media and have created invisible continuous surveillance across.

1.3 CHARACTERISTICS OF NEW MEDIA

1.3.1 INTERPERSONAL COMMUNICATION MEDIA: which include the telephone (increasing mobile) and e-mail (primarily for work, but becoming more personal). In general, content is private and perishable and the relationship established and reinforced may be more important than the information conveyed.

1.3.2 INTERACTIVE PLAY MEDIA: this includes the virtual reality devices and computer based video games. If we compare this branch of new media and old

media, we will find that the main difference lies in interactivity and dominance of process over use gratifications.

1.3.3 COLLECTIVE PARTICIPATORY MEDIA: This category includes the uses of the internet for sharing and exchanging information, ideas and experience and developing active relationships. These are instrumental, affective and emotion. As for example: video conferencing at the work station, internet etc.

1.3.4 INFORMATION SEARCH MEDIA: internet and WWW is a significant example which has been the source of data base of unprecedented volume. However, the diversity of content and motive for use defies any useful characterization which is beyond the behavioural implication of using various alternative technologies. Distinction between news information channels and sources is hard to establish, although the degree of interactivity and thus, flexibility and autonomy for the user may be the most useful discriminating variables.

1.4 CMC: COMPUTER MEDIATED COMMUNICATION

Computer mediated communication involves exchanges of information in textual, audio, and video formats that are transmitted and controlled by the use of computer and telecommunication technology. It must be noted that CMC is the basis of interpersonal interaction via groupware systems. CMC is a process of human communication via computers, involving people situated in particular context engaging in processes to shape media for variety of purposes.

1.5 PROBLEMATIC BEHAVIOUR OF THE USERS OF CMC

There is some problematic behaviour associated with internet access. Internet users feel free to express anger or hatred in the form of flaming, hostile comments, insults, name calling, cursing etc.

1.5.1 BEHAVIOURAL DIS-INHIBITION: On the internet, behaviour is less inhibited than comparative behaviour in real life and that is characterized by an apparent reduction of concern about socially favourable self presentation and the positive judgement of others.

In Face to Face communication, individuals are constrained by the social rules that govern interpersonal interaction, immediate negative feedback and visible consequences of their inappropriate behaviour, as well as by possible social sanctions. However, when using the internet, the users reside in relative anonymity and physical safety distant from others in interaction, often unaware of their identities and personalities as well as negative consequences of risky or potentially damaging behaviours. This contributes to express anger, aggression, inappropriate self-disclosure or personal use of socially doubtful material on the internet like disinhibition.

1.5.2 INTERNET PEEPING TOM: Internet is the communication technology that is probably most highly rated for 'big brother' and 'peeping tom' types of privacy violation. At numerous points of communication from information provider to consumer of information, the internet enables snooping of its users and looting of their private information. Despite this fact, pornographic sites on the web, downloading illegal copies of software or artwork; simply by sending email messages that disclose their private selves, negative attributes, opinions of other people, dishonest acts, hostile attitudes etc are quite apparent in web.

1.6 USES OF INTERNET TECHNOLOGY

Internet has dramatically changed the way we live our life. After the discovery of electricity, the computer ranks as one of the most important breakthroughs of modern era. It has reduced the cost of operations by increasing operational efficiency and staff productivity. Computer and internet revolution has improved revenues and bottom lines by helping management to take informed decision and focus on priority areas. It has improved customer satisfaction by providing better, faster and value added services. Computer and internet have opened up several of allied industries and employment opportunities which never existed before.

There are various uses of internet technologies.

- **Email:** You can send message to family and friends, business associates and acquaintances using electronic mail facility. Mail messages can be sent and received from anywhere in the world in a matter of second.
- **Chat:** Till some time ago, chatting on the internet was one of the fastest growing uses of World Wide Web. You can log onto chat room and converse with others by typing message that are instantaneously relayed. Today, with improvement in connectivity, speed and proliferation of broadband, you can not only type but also use medium like voice and graphic to converse with people.
- **E shopping:** Internet has helped to remove all the barriers of distance and nationality. You can shop for products and services across the world by logging onto web portal. Using credit card and debit card you can transfer your money between different accounts without having to move from your home.
- **E learning:** With intrinsic flexibility, internet provides a perfect medium for knowledge sharing and information dissemination. One can now pursue specialised higher studies in the comfort of your own office or home.
- **ATM, Internet banking:** Banking industry was one of the first to use internet to automate operations and save costs. The use of ATMs marked a major breakthrough in shifting the mundane back office work to the customer himself. Instead of hiring an army of bank clerk, ATMs operated directly by the customers have helped considerably reduce time and operational cost for the banks.

- **Online travel:** Internet boom has resulted in travel. Airlines, train, taxi or car companies have all gained tremendously by the internet. They can now publish their services along with latest discounts, packages and availability details. Customers on the other hand have benefitted because they can now compare rates, make online bookings and avail the discounts without having to run around multiple offices.
- **E government:** The government sector has also realized the benefits of new information technology. It is now possible to make online payments for public utilities like water, electricity, phones etc using credit card as the payment medium.

1.7 IMPACT OF INTERNET TECHNOLOGY

When applied in workforce, computers have the potential to replace labour, such as manufacturing plants like textile factories, thus increasing unemployment rates. In a country like India where labour is in abundance, this labour replacing capacity of computers is a mixed blessing. Trade unions in India for these reasons, initially opposed to computerization, particularly resisting the introduction of computers in banks and insurance companies. Since from the year 2000, computers have become ubiquitous in Indian banks, it is seen how new communication technology downgrade an occupation to a lower socio-economic status by replacing human skills with information handling equipments.

Compared to mass media- radio, television, and film, the new communication media have a higher ratio of information to entertainment. Many individual adopt computers because these tools allow them to obtain information about financial data, world news, government actions, travel schedules etc. These users tend to be highly educated and of higher socio-economic status. This close relationship between socio-economic status and computer adoption widen the information gap between the information rich and the information poor in the initial stage of computer diffusion. Once public access to computer becomes widespread through cyber café, internet community centres and public schools, the digital divide is also expected to be crossed eventually.

1.8 NEW MEDIA AND PARTICIPATORY JOURNALISM

The form of Journalism which is facilitated by internet is not is one to be tightly confined by the traditions and standards adhered to by the traditional profession.

In an era, anyone can be a reporter or commentator on the Web. The journalist becomes a 'forum leader,' or a mediator rather than simply a teacher or lecturer. The audience becomes not consumers, but 'pro-sumers,' a hybrid of consumer and producer. The news has been increasingly started produced by companies outside journalism. They can be found in weblog, newsgroups, forums, chat rooms, collaborative publishing systems and peer-to-peer applications like instant messaging and so forth. As new forms of participation have emerged through new technologies,

this form of journalism is known as participatory journalism. Conversation is a defining characteristic of participatory journalism.

Participatory journalism emphasises on the publishing of information rather than the filtering of content. The tradition principal of journalism such as fairness, balance and objectivity are too vague to raise the essential elements of this profession. The primary purpose of journalism is to provide citizens with the information they need to be free and self-governing. Media becomes how we define ourselves and our relationships. Thus, our life has been media centric with the mediation of large amount of assimilation of information coming to us from second and third hand.

Credibility, a traditionally reliable context as it has been viewed until now, is dead. Knowing what other people think news means in many layers, is something what is more important in new journalism.

1.9 NEW MEDIA: A TOOL FOR PARTICIPATION AND COLLABORATION

Participation has been a fundamental component of the Internet since its inception. Newsgroups, mailing lists and bulletin boards were the early cousins to the forums, weblogs and collaborative communities flourishing today. Those early forms are still thriving, a testament to our need to stay connected to our social networks. Participatory journalism flourishes in social media, the interpersonal communication that takes place through e-mail, chat, message boards.

Forums are typically arranged into threads in which an initial message or post appears at the beginning of a discussion and responses are attached in a branching manner. Some forums permit the audience to sort messages by various means -- popularity, date, ranking. Many forums are archived, turning them into a searchable knowledge base of community conversation.

Not all new media technology generated platforms are collaborative. Participatory media can follow the same model as broadcast models. Many a times, feedback and reviews are made open to users and audiences , the reviews are submitted by the audience to a product recommendation site, authenticated by editors, and broadcast out to a mass audience. Likewise, many webloggers have little interaction or open discussion with their audience. However, collaborative forms of participatory journalism publishing platform like forums, newsgroups, chat rooms, and group weblogs are more complex because they must balance the tension between the group and the individual.

1.10 INVISIBLE AUDIENCES IN MEDIA

In producing content through the camera, microphone, for printing press, journalists and actors sometimes prepare for invisible audiences by imagining the audience and presenting themselves to that imagined audience. When TV began, studio audiences were tremendously common because it helped people to gauge their performances. This audience was not the complete audience, but the feedback was still valuable for

the performers. These practices became a part of life among the users of cyberspace, as those who contributed to blog, social networking site, forum, actually have found a better and different way to locate their acts.

1.11 FEATURES OF PUBLIC COMMUNICATION BY NEW MEDIA TECHNOLOGIES

These new media technologies by its characteristics can breed trust and credibility and can make online participatory experiences fulfilling.

1.11.1 EGALITARIAN: Collaborative publishing platform like Wiki use open editing rules and version history to promote trust. Because any reader of a Wiki can add their own views or information to a Wiki article, they begin to trust the environment and the collective goal of the common good.

1.11.2 INTIMACY: Golgoff , a scholar in the University of Arizona's explains, "When people share intimate details of their lives with a virtual stranger, it affirms that an implicit context of trust has been established."

1.11.3 PASSION: According to Time magazine columnist, James Poniewozik, the problem with mainstream media today is a passion deficit. Many big-media journalists are now cautious, well-paid conformists distant from their audiences and more responsive to urban élites, powerful people and mega corporations especially the ones they work for. On the flip side of the new media ecosystem, online participatory journalism is fuelled by people who fanatically follow and passionately discuss their favourite subjects.

1.11.4 SPEED OF COMMUNICATION: Research has proved that response time is one indicator of the degree of trustworthiness of the individual.

1.12 THE PROPERTIES OF COMPUTER MEDIATED COMMUNICATION:

1.12.1 PERSISTENCE: While spoken conversations are ephemeral, countless digital technologies have been developed to capture moments and make them persistent. The introduction of writing allowed people to create records of events and photography provided a tool for capturing a fleeting moment. What is captured by photography has a different essence than the experienced moment. Both writing and photography provide persistence, but they also transform the acts they are capturing.

1.12.2 REPLICABILITY: shows the difference between original content and duplicate content. The printing press transformed writing because it allowed for easy reproduction of news and information, increasing the potential circulation of such content. New media digital technology has introduced a series of tools to help people duplicate text, images, video, and other media. When there are multiple numbers of replicated similar copies of the original text, it is very difficult to differentiate

between original copies from its duplicate. In a networked society, people can not recognise easily and even realize what is real.

1.12.3 SCALABILITY: new media technology enables broader distribution, either by enhancing who can access the real-time event or widening access to reproductions of the moment. Broadcast media like TV and radio made it possible for events to be simultaneously experienced across great distances, radically scaling the potential visibility of a given act and reshaping the public sphere. The Internet introduced new possibilities for distribution; blogging alone allowed for the rise of grassroots journalism and a channel for anyone to espouse opinions. The Internet may enable many to broadcast content and create publics, but it does not guarantee an audience.

1.12.4 SEARCHABILITY: Librarians and other information specialists have long developed techniques metadata schemes for organizing content to make accessing information easier and more effective. Yet, the introduction of search engines has radically reworked the ways information can be accessed. Search has become a commonplace activity among Internet users. While being able to stand in a park and vocalize “find” to locate a person or object may seem like an element of a science fiction story, such actions are increasingly viable in networked publics. Search makes finding people in networked publics possible and, as GPS-enabled mobile devices are deployed, we will see such practices be part of other aspects of everyday life.

1.13 SUMMARY

Internet is a new medium for collaboration and it has a great potential for improvement of effectiveness in communication and increase in production in any group work. New communication technology has opened new arenas for communication but also carried potential risk of misunderstanding, distrust, and poor decision making if used with disregard to different goals, tasks of mutual interpersonal relationships.

Internet can deliver in depth stories and news. However, audiences look to this medium for the quick news bites rather than more detailed information. Today we see online webcasts of news (www.freedomforum.org) and even the inject of audience input in breaking news (www.cnn.com/cnn/programs/news.site). It is a brave new world in the field of online journalism. Adhering to conventional ethics and credibility can help ensure its success.

Exercises and Questions

| |
|--------------------------------------|
| Answer to check your progress |
|--------------------------------------|

1. Write short notes on
 - a. Participatory journalism
 - b. Replicability
 - c. Scalability

- d. Searchability
- e. Persistence
- f. Egalitarian approach of ne media
- g. Interactive play media
- h. Interpersonal communication media

2. Fill in the blanks.

- a. Librarians and other information specialists use.....to organise information.
- b. 'Big brother' and 'peeping tom' are associated with

3. Video conferencing is an example of

- a. Interpersonal Communication Media
- b. Collective participatory media
- c. Information search media
- d. A and B

4. Give an example of information search media.

5. 'Video game is an interactive play medium', explain.

6. What is behaviour dis-inhibition ?

7. Can audiences be invisible? Discuss.

8. Discuss new media as a tool for participation and collaboration.

9. Examine various uses of internet technology.

SUGGESTED READINGS

- 1. Hassan Robert, Thomas Julian (2006) The New Media Theory Reader ,
Publisher: Open University Press
- 2. Marshall David Jr., David Marshall Joint, Robert Burnett (2002) Web Theory:
An Introduction, Publisher: Routledge

UNIT 2: EVOLUTION OF INTERNET TECHNOLOGY

2.0 Introduction

2.1 Evolution of Internet

2.1.1 ARPA net

2.1.2 Usenet

2.2 Internet

2.2.1 Growth of Internet

2.3 World Wide Web

2.3.1 Web Browser

2.4 TCP/IP and IP Address

2.5 Domain name system

2.6 HTML

2.6.1 HTML Editors

2.6.2 HTML Building Blocks

2.6.3 Tag Attributes

2.6.4 Attribute Values

2.6.5 Nesting Tags

2.7 HTML Document

2.8 Summary

2.0 INTRODUCTION

The term internet and WWW are often used in everyday speech without much distinction. However, the internet and the World Wide Web are not one and the same. The internet is a global data communication system including hardware and software infrastructure that provides connectivity between computers. In contrast, the web is one of the services provided via the internet. Web is the collection of interconnected documents and other resources linked by hyperlinks and URLs.

Communication is the characteristics that set human beings apart. An important development in the field of computers is the enhancement of their capacity to communicate with other computers. This chapter will examine some of the basic concept and terminology related to data communication, HTML document, WWW, web browser, search engine, and how they actually function and help us.

2.1 EVOLUTION OF INTERNET

Origin of Internet can be traced to 1957, the period which was marked by ensuing competition between the two super powers (USA and USSR) for technological supremacy in the prevailing cold-war atmosphere. The Soviet Union won the race by launching Sputnik, the world's first artificial satellite on 4th October, 1957. USA responded to the challenge by setting up the advanced Research Projects Agency (ARPA) within its defense establishment. ARPA's mission was to adapt the latest technologies to military applications in order to regain and maintain American technological lead over USSR. In 1957, the US Government formed the advanced Research Project Agency, a segment of the Department of Defense which is charged with the ensuing US leadership in science and technology with military applications. In 1962, John Licklider of MIT proposed a global network of computers and moved

over to Defense Advanced Research Project Agency (DARPA) to head the work to develop it. DARPA sponsored a conference and rolled out the blue-print for networking the main computer system of about a dozen DARPA funded Universities and research institutions. In 1969, ARPA came up with the idea of a distributed network called Advance Research Projects Agency Network to meet the military need for communication system that can withstand the disruption of limited nuclear attack. Accordingly, a user, at any computer, once having permission, can get the information from any other computer on the network.

2.1.1 APRANET

APRANET was a network to connect the major computers at the university of California at Los Angeles, the University of California at Santa Barbara, Stanford research Institute and the University of Utah. APRANET was designed to allow continued communication if one or more sites were destroyed. Unlike today, when millions of people have access to the internet from home, work and public library, ARPANET served only computer professional, engineers and scientist who knew their way around its complex workings.

The US department of defense laid the foundation of internet roughly 30 years ago with a network called ARPANET. But the general public did not use the internet much until after the development of the World Wide Web in the early 1990s.

* **Highlight**

The two most important governing principles of the internet, namely, the galactic network and packet switching, took shape in 1961-1962 and were brought together in the ARPA programme started in 1962.

According to some sources, however, packet switching was invented in 1962 by Paul Baran at RAND, the pentagon think tank. The technology breaks up every message into 'packages', puts these into 'envelopes' bearing the address of the common transmission network, so that they find their own individual and possibly separate paths according to the network traffic conditions and re assembles the 'packages' into the original message at the receiver's end.

Teams of scientist at MIT, RAND and the National Physics Labortory (UK) had all been working on networks for the computers dispersed over large geographical areas without any knowledge about one another's efforts. Their ideas, as well as a protocol to enable the computers to send and to receive messages and data to other computers were brought together in October, 1969 to successfully link computers at the University of California in Los Angeles and Stanford University in such a way that users at one location could access files stored on the computer at another location.

This was the birth of the first of those networks which would later coalesce into the internet. Named ARPAnet, it grew to include 23 computers by December 1971.

2.1.2 USENET

Usenet is a large distributed system of messages involving millions of people from all over the world. Too many messages are sent everyday, so they are divided into newsgroups with each newsgroup concentrating on one topic. Jokes, recipes, mathematics, philosophy, computers biology and it can be just about any subject you can think of has its own group. Unlike the commercial services such as America Online and CompuServe, there is no central authority that controls Usenet. Thus, whenever the users decide that there should be a new discussion group, they form one.

Usenet itself is often referred as NEWS or NETNEWS. The individual contribution to each newsgroup is called posting. Each Usenet site is run by the people who use it. Each use net site is run by a person called news administrator. His job is to manage the site. The lack of central authority is what gives Usenet its charm, and is what distinguishes it from other discussion group systems where there are rules and people in charge to authorize.

2.2 INTERNET

Internet is a massive connection of collection of computer networks that collect millions of computers, people, software programmes, databases and files which interact continuously. Simply, internet is called “the Net”, a world wide system of computer networks-- a network of networks.

Practically, internet is a vast collection of globally available information which can be accessed electronically, information which is of practical use for business, research, study and technical purposes. It is a means for electronic commerce- marketing, buying, and economic and financial data research. It is a collection of hundreds of libraries and archives on every conceivable subject. It is also a vast store house of information relation to your hobbies, travel, health, entertainment, games, software, etc.

Internet can be compared to the postal service, which is a packet switched network. Here you do not have a dedicated piece of the network. What if you intend to send is mixed with other messages, put in a pipeline, transferred to another post office, and sorted out again. The postal service is an apt analogy that can be used to understand the working of the internet.

2.2.1 GROWTH OF INTERNET IN INDIA

Over the past century and a half, important technological developments have created a global environment that is drawing the people around the world closer and closer together. During the industrial revolution, we learned to put motors to work to magnify human and animal muscle power.

In the new information age, we are learning to magnify brainpower by putting the power of computation whenever we need it and to provide information services on a global basis. Computer resources are infinitely flexible tools; networked together

allowing generating, exchange, sharing and manipulating information in an uncountable ways. Internet as an integrating force combines the technology of communications and computing to provide instant connectivity and global information services to all its uses at very low cost.

During next two decades, the network that evolved was primarily used by academic institutions, scientists and the government for research and communication purpose. The nature of the internet changed abruptly in 1992, when the US government began pulling out of network management, and commercial entities offered internet access to the general public for the first time.

In India, internet was inaugurated on the auspicious day of independence, on 15th August, 1995. This marks the inception of free information flow from every nook and corner of the world, thus, could well be called an independence day for the information age in the country. Videsh Sanchar Nigam Limited started a service called Gias gateway internet access service to internet accessibility to the Indian users.

2.3 WORLD WIDE WEB

World Wide Web is a network of electronic files stored on millions of computers all around the world. Hypertext lines these resources together. Uniform Resource Locators or URLs are the addresses used to locate the files. Every URL is unique and identifies one specific file.

For example: [http:// www. du. ac. in](http://www.du.ac.in) (The home page of Delhi University.)

The World Wide Web was originally developed in 1990 at CERN, the European Laboratory or Particle Physics. The original idea came from a young computer scientist, Tim Berners Lee. It is now managed by the World Wide Web (WWW) Consortium. The WWW Consortium is funded by a large number of corporate members, including AT& T, Adobe Systems, Microsoft Corporation and Sun Microsystems, Inc. Its purpose is to promote the growth of the Web by developing technical specifications and reference software that will be freely available to everyone.

The Web is known as a client- server system. The computer you use is the client. The remote computers that store electronic files are the servers. To visit the website, enter the address or URL of the website in your web browser. Browser requests the web page from the web server that hosts the requested site. The server sends the data over the Internet to your computer. Your web browser interprets the data, displaying it on your computer screen.

Popular Web Browser :

- Konqueror 4
- Safari 3.1
- Opera 9.5
- Firefox 3
- Amaya 10.0
- Flock 2
- Google Chrome 1
- Amaya 11.0
- Internet Explorer 8
- Netscape Navigator 9

2.4 TCP/IP AND IP ADDRESS

Each computer on the internet has a unique number, called its IP address identifying the host computers so that packets of information reach the correct computers. You may have to typewrite IP addresses when you configure your computer for connection to the internet.

TCP/IP is the networking protocol on the internet. For TCP/IP to work, your network interfaces need to be assigned IP address. An IP address is a 32 bit number that uniquely identifies a network interfaces.

The IP address is assigned to a network interface card and not to a computer. So, if you have two network interface cards, then each card is assigned an IP address. The 32 bit IP addresses are normally expressed in dotted-decimal format with four numbers separated by periods, such as 151.201.123.132

These numbers can be in the range of 0 to 255. IP addresses are organized from left to right.

2.5 DOMAIN NAME SYSTEM

Every computer that hosts data on the Internet has a unique numerical address. For example, the numerical address of the White House is 198.137.240. 100. But since few people want to remember long strings of numbers, the Domain Name System (DNS) was invented. DNS, a critical part of the Internet's technical infrastructure, correlates a numerical address to a word.

To access the White House website, we could type its number into the address box of our web browser. But most people prefer to use "www. whitehouse. gov" In this case, the domain name is whitehouse. gov

Domain name system is a distributed scalable database of IP addresses and their associate names. It is distributed in the sense that unlike the host files, no single computer contains all DNS information in the world. The DNS data is distributed across many name servers. Scalability of DNS server refers to increase in the total volume of DNS data requests from the machines from the same data, without significantly increasing the querying timing.

To understand he DNS and the way, it is used, we need to understand the internet naming structure.

- a. WWW: indicates that the machine is part of the World Wide Web
- b. Com: indicates the top level domain (TLD) that the machine is part of. It includes.com, .edu, .gov, .in etc.

A domain name is a way by which a company can uniquely identify itself on the internet. Registering a domain name on the internet is equivalent to register a company name at company's house. Based on top level identifications, there are basically two types of domains.

- I. Non-geographic Domains
- II. Geographic domains

com : commercial organizations
edu: Educational institute
mil: a US military set up
gov: A US govt. set up
org: other organizations
net: other networks
int: an international organization
In,uk: which country the network is in

Accordingly, the geographic top levels domains use two letter country designators

Au Australia
Ca Canada
Dk for Denmark
Fr france
Gr Greece
In India
Jp Japan
Us United States

2.6 HTML

The web, and by extension HTML is invading a significant part of our lives. At work, the web serves as advertising medium, as a communication tool, and even as a message centre. At home, the web has become integral even to television sets.

Throughout the world, companies, individuals, and organizations are providing, retrieving and publishing information with the help of HTML.

HTML is the standard programming language used to create and organize documents on the World Wide Web; lets users to format text, add graphics, sound, video, and save it all in a Text Only or ASCII format that any computer can read.

HTML stands for hypertext mark up language. It is not only a programming language, but also a mark up language. HTML was first proposed in 1989 by a researcher named Tim Berners Lee. HTML is a member of a family of markup languages called SGML. It took a shape of a subset of SGML(Standard Generalised Markup Language) which is a higher level mark up language that has long been a favorite of the DOD (Department of Defense) .

2.6.1 FUNCTION OF HYPERTEXT AND HYPERLINK

The “glue” that holds the Web together is called hypertext and hyperlinks. This feature allows electronic files on the Web to be linked so you can jump easily between them. On the Web, you navigate through pages of information, commonly known as browsing or surfing based on what interests you at that particular moment. Web pages are written in a computer language called Hypertext Markup Language or HTML. Hypertext allows creating a link in a Web page which leads to any other pages on the Web. Hence information on the Web can be accessed from many different locations.

| | |
|--|--|
| HTML shares important characteristics with its SGML parents: | <ul style="list-style-type: none">➤ A character-based method for describing and expressing content➤ A desire to deliver that content equally to multiple platforms➤ A method for linking document components together to compose compound document |
|--|--|

2.6.2 HTML EDITORS

HTML editors make it easy to write web pages. While it is possible to write a web page using just the text editor on your computer, most web designers find that it is much more efficient to use an HTML editor.

HTML editors give you features that are not usually available in plain text editors. Most of them are WYSIWYG editors.

- Microsoft FrontPage
- Netscape Composer First Page
- Microsoft Visual Web Developer
- Net Beans
- Microsoft SharePoint Designer.

Extensible Markup Language (XML) allows Web designers to create their own tags. Content created with the help of XML is completely separated from formats using Style Sheets.

2.6.3 HTML BUILDING BLOCKS

HTML tags are command words written between symbols < >, that indicate how browser should display the text. Tags may have opening and closing version. Text is places in a container, which starts with opening tag and ends with closing

` Bold text `

2.6.4 TAG ATTRIBUTES

Attributes offer a variety of options. It enters between command word and final symbol >

A single tag may have a few attributes. Attributes are places one after the other in any order.

``

2.6.5 ATTRIBUTE VALUES

Attributes can accept the values of particular types. Values of attributes should be enclosed in straight quotation marks "" may be omitted if the value contains only letters, digits, hyphen (-), and period (.)

2.6.6 NESTING TAGS

Hierarchy - tags that affect entire paragraph may contain tags affecting individual words or letters

Order - the current closing tag should correspond the last unclosed opening tag

Nesting Tags (example)

Correct:

`<H1> Information <I>System</I></H1>`

Incorrect:

`<H1> Information <I>System</H1></I>`

2.7 HTML DOCUMENT

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
  <HTML>
  <HEAD>
  <TITLE> My Resume Page </TITLE>
  </HEAD>
  <BODY>
    <H1> Resume </H1>
    <HR>
    Name:
    Address:
  </BODY>
</HTML>
```

The HEAD Section

```
<HEAD>          - begin the head section
<TITLE>          - page description
</TITLE>         - end of title
<!-- > Script may be placed here </>
</HEAD>         - end of the head section
```

The BODY Section

```
<BODY>
{ Text displayed by browser }
```

```
</BODY>
```

Commonly Used HTML Tags - 1

```
<H1> ... </H1>      Heading.
<H2> ... </H2>      Heading.
<H3> ... </H3>      Heading.
<BLOCKQUOTE> ... </ BLOCKQUOTE >
                        Indents block of text one tab.
```

2.7.1 COMMONLY USED HTML TAGS - 2

```
<P> ... </P> : Paragraph.
<B> ... </B> : Bold
<I> ... </I> : Italics
<U> ... </U> : Underline
<EM> ... </EM> : Emphasize (logical – exact effect depends on browser)
<BR />       : Line feed or break
<HR />       : Horizontal Rule (line)
```

2.7.2 CHANGING THE FONT

```
<FONT FACE="FONTNAME" SIZE="n">
```

```
{ Text } </FONT>
```

FONTNAME specifies the font

SIZE defines the size

N=3 corresponds to default value

2.7.3 ORDERED LIST

<OL TYPE=x START=n> Begin an Ordered List

 ... A list element

 ... Another list element

 End of Ordered List

TYPE, START are optional

X=A, a, I, i, 1, X=1 is default value

n – initial value for list items

Unordered List

<UL TYPE=shape > Begin an Unordered List

 ... A list element

 ... Another list element

 End of Ordered List

TYPE is optional,

Shape represents the kind of bullet

Uniform Resource Locator (URL)

“<http://www.atkinson.yorku.ca/~marina/itec.htm>”

2.7.4 URL can be

Absolute – contain all parts of URL;

Relative – present path and file name relatively current file.

Relative URL (examples)

A file from the same folder as current file: “file.htm”

A file from a subfolder of current folder: “images/picture.gif”

A file from another folder at the same hierarchical level: “../info/data.htm”

2.7.5 EXTERNAL LINK is a reference to another page

 Label text

Label text will be underlined or highlighted, click upon it will bring visitors to the page with given URL

Link to E-mail address

Say HELLO!!! Click on hypertext “Say HELLO!!!” will invoke an application such as MS Outlook to send E-mail to the address : name@website.ext.

2.7.6 IMAGES

SCR – source of image or file address

Another attributes:

BORDER=n, n-thickness of the border in pixels

ALT – alternative text

WIDTH – width of an image in pixels

Images (continue...)

HEIGHT – height of an image in pixels

ALIGN – position on a page (“top”, “middle”, “bottom”, “left”, “right”).

```
<IMG SRC="images/pic1.bmp" WIDTH=30  
      HEIGHT=30 ALT="Digimon"  
      ALIGN="left" >
```

2.7.7 TABLES

A table is a matrix formed by the intersection of a number of horizontal rows and vertical columns.

| | Column 1 | Column 2 | Column 3 |
|-------|----------|----------|----------|
| Row 1 | | | |
| Row 2 | | | |
| Row 3 | | | |

Tables (continue...)

The intersection of a column and row is called a cell. Cells in the same row or column are usually logically related in some way.

| | Column 1 | Column 2 | Column 3 |
|-------|----------|----------|----------|
| Row 1 | | | |
| Row 2 | | | |
| Row 3 | | | |

Tables (continue...)

Container

```
<TABLE> ... </TABLE>
```

2.7.8 ATTRIBUTES

BORDER= n – the border thickness in pixels

WIDTH=x – width of the table or a cell within the table in pixels

Tables (continue...)

A table is formed row by row To define a row

```
<TR>...</TR>
```

is used

Within a row table cells with data is determined by

```
<TD>...</TD>
```

or with headers by

```
<TH>...</TH>
```

Simple Table (example)

```
<HTML>
```

```
<HEAD>
```

```
  <TITLE> Example of table </TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<TABLE>
```

```
  <TR> <TH>Month</TH> <TH>Quantity</TH> </TR>
```

```
  <TR> <TD>January</TD> <TD>130</TD> </TR>
```

```
  <TR> <TD>February</TD> <TD>125</TD> </TR>
```

```
  <TR> <TD>March</TD> <TD>135</TD> </TR>
```

```
</TABLE>
</BODY>
</HTML>
```

Tables (more complicated)

To span a cell across a few columns attribute, COLSPAN=n, where n- number of columns is used

To span a cell across a few rows attribute, ROWSPAN=n, where n- number of rows is used

Table (example)

```
<TABLE BORDER=2>
  <TR>
    <TH> Quarter</TH><TH>Month</TH><TH>Quantity</TH>
  </TR>
  <TR> <TD ROWSPAN=3> I </TD> <TD>January</TD> <TD>130</TD>
</TR>
  <TR> <TD>February</TD> <TD>125</TD> </TR>
  <TR>
    <TD>March</TD><TD>135</TD>
  </TR>
```

Table (example)
(continue...)

```
  <TR> <TD ROWSPAN=3> II </TD> <TD>April</TD> <TD>130</TD>
  </TR>
  <TR> <TD>May</TD><TD>125</TD> </TR>
  <TR> <TD>June</TD><TD>135</TD> </TR>
  <TR> <TD COLSPAN=2> Total </TD> <TD>780</TD>
  </TR>
</TABLE>
```

Cell Attributes

FONT – establishes the font of a cell

ALIGN – determines horizontal alignment of cell content, accept values: “left”, “center”, or “right”

VALIGN - determines vertical alignment of cell content, accept values: “top”, “middle”, “bottom”, or “base line”

2.7.9 PURPOSES TO USE TABLES

- To present tabular data
- To create multicolumn text
- To create captions for images
- To create side bars

Cells may contain various HTML containers: Images, Hyperlinks, Text, Objects, even Tables.

There are two basic categories of HTML elements used in the body section :

- 1) Block-Level Elements
- 2) Text- Level Elements

2.7.10 BLOCK LEVEL ELEMENTS: are used to define the group of text for a specific role. They include tags that position text on the page, begin new paragraphs, set heading levels and create lists. Some commonly used block-level elements and their tags are:

Paragraph: <P> and </P>

Heading, level one: <H1> and </H1>

Heading, level two: <H2> and </H2>

Horizontal rule : <HR>

Centering <CENTER>

2.7.11 TEXT- LEVEL ELEMENTS: are mark up bits of text, including creating links, inserting things like images or sounds and changing the appearance of text. Some Commonly used text-level elements are :

Bold : and

Italic : <I> and </I>

Line break :

Link anchor : and

Image :

2.8 SUMMARY

- Internet as an integrating force has combined the technology of computing and communication and provided instant connectivity and global information services to all its users at low cost.
- WWW provides a graphical interface allows to create 'links' from one piece of information to another, incorporate references to text, graphics, sound etc.
- A web browser also called web client is a programme that your computer runs to communicate with web servers on the internet, which enables it to download and display the web pages that you request. Popular web browsers are Internet Explorer, Mozilla Firefox.
- HTML is one of a family of markup language called SGML.
- HTML stands for Hypertext Markup Language
- All tags are composed of elements that are contained within angle brackets (<>)
- Attributes provide extra information about a tag.

Exercises and questions

Answer to check your progress

- 1) The -----element is used to mark the position of head section.
 - a. Body tag
 - b. Font tag
 - c. Head tag
 - d. None of the above

- 2) HTML is a system of
 - a. Codes made up of tags and attributes that serve to identify parts and characteristics of HTML documents
 - b. Homepage which appears first in website
 - c. Formatting and alignment
 - d. None of the above

- 3) Visit your favorite website and find the title of the homepage in the browser.

- 4) Create a webpage that shows information about you. The HTML document should include background color or image, comments and following information about you:
 - a. Your name
 - b. Address
 - c. Qualification
 - d. Business skills you possess
 - e. Hobbies
 - f. Aim in life
 - g. Your email address

- 5) Distinguish between geographic domain and non-geographic domain.
- 6) What does DNS stand for?
- 7) What does XML stand for?
- 8) Mention two html editor.
- 9) How do you make a list that lists the items with 123...?
 - a. <DL>
 - b.
 - c.
 - d. <LIST>

- 10) Choose the correct HTML tag to make a text bold?
 - a. <BOLD>
 - b. <BLD>
 - c.
 - d.

SUGGESTED READINGS

- Internet and Web Design based on DOEACC III revised syllabus 'O' level

UNIT 3: SOCIAL MEDIA

3.1 Web 2.0

3.2 Blog

- 3.2.1 Linking**
- 3.2.2 The permalink**
- 3.2.3 Trackback**
- 3.2.4 The blogroll**
- 3.2.5 Videoblog**

3.3 Wikis

- 3.3.1 History**
- 3.3.2 Linking and creating pages**
- 3.3.3 Searching**
- 3.3.4 Server-side versus client-side wiki**
- 3.3.5 Controlling changes**
- 3.3.6 Vandalism**

3.4 Wikipedia

3.5 Social networking site

- 3.5.1 Profiles**
- 3.5.2 Friends Lists**
- 3.5.3 History of Social Network Sites**
- 3.5.4 Public Communication in Social Networking Site**

3.6 Electronic Market “E commerce”

- 3.6.1 Travel Aggregators**
- 3.6.2 Travel Companies/Tour Operators**
- 3.6.3 Hotels**
- 3.6.4 Railway Bookings**
- 3.6.5 The key drivers leading the growth of the online travel Industry are**
- 3.6.6 Online Non-Travel Industry**
- 3.6.7 E-Tailing**
- 3.6.8 Online Classifieds**
- 3.6.9 Growth of E commerce:**
- 3.6.10 Barriers to growth of E commerce**

3.7 Summary

3.1 Web 2.0

Web 2.0 emerged as a result of the need to communicate and to interact. O'Reilly coined the term in 2005 to refer to web-based technology that facilitates and promotes communication and sharing among users worldwide.

There are numbers of Web-based services and applications that work on the foundations of the Web 2.0 concept. These include blogs, wikis, podcasts, RSS feeds, aggregators, social bookmarks, content syndication and content tagging services.

The transition from mp3.com to Napster, Britannica Online to Wikipedia, personal websites to blogging, page views to cost per click, domain name speculation to search engine optimization, content management systems to wikis, directories (taxonomy) to tagging (folksonomy) are some examples of transition from Web 1.0 standard to Web

2.0 standard. Web 2.0 emphasizes more on participation along with publishing instead of simple publishing Web 1.0 offering. Web 2.0 provides the opportunity to syndicate web content for easy organised distribution across the network instead of the earlier version of stickiness went along the Web 1.0 standard.

3.2 BLOGS

Blog, refers to a simple webpage consisting of brief paragraphs of opinion, information, personal diary entries, or links, called posts, arranged chronologically with the most recent first, in the style of an online journal. John Barger has coined the term web-log in the year 1997.

Yochai Benkler, law professor in Yale University calls blog a ‘weighted conversation’ between author and a group of comment contributors.

Blogs enable individuals to write to their Web pages in hourly, daily, weekly whereas the Web page culture tends to be slower.

Each post published in blog platform is usually ‘tagged’ with a keyword or two. This allows the subject of the post to be categorised within the system and when the post becomes old it can be filed into a standard, theme-based menu system.

3.2.1 LINKING is an important aspect of blogging. It helps to retrieve the information from other blog and to reference from different blogs. It deepens the conversational nature of the blogosphere and its sense of immediacy.

3.2.2 THE PERMALINK is a permanent URL which is generated by the blogging system and is applied to a particular post. The permalink stays the same even if the item is moved within the database for archiving. Crucially, if the post is renamed, or if the content is changed in any way, the permalink will still remain unchanged.

3.2.3 TRACKBACK allows one blogger to notify another blogger that they have referenced or commented on another blogger’s posts. When another blog receives notification from one blog that a trackback has been created, other blog’s system automatically creates a record of the permalink of the referring post. Trackback only works when it is enabled on both the referring and the referred blogs. Some bloggers deliberately disable trackback as it can be a route in for spammers.

3.2.4 THE BLOGROLL is a list of links to other blogs that a particular blogger likes or finds useful. It is similar to a blog ‘bookmark’ or ‘favourites’ list. With the evolution of applications, bloggers have begun to incorporate multimedia into their blogs and there are now photo-blogs, video blogs (vlogs) and mob-blogging, blog through mobile phones.

3.2.5 VIDEOBLOG, or vlog, is a Web log (blog) that uses video rather than text or audio as its primary media source. Cell phones equipped with cameras that can record short video sequences. Videoblogs are usually accompanied by text or still images. Some vlogs include metadata (data that describe the content of a file, such as keywords) to further annotate the site. Digital video-editing software allows

videobloggers to cut and paste sequences and integrate audio (background music, special effects, and so forth).

Like a text blog, a videoblog is updated regularly, typically includes personal reflections, often contains comments on other sites, and offers a simple mechanism for subscription and delivery through RSS feeds. Videoblogging offers a richer Web experience than text blogging because it combines movies, sound, still images, and text, increasing the information and allows more natural expression than writing.

3.3 WIKIS

A wiki is a webpage or set of web pages that can be easily edited by anyone who is allowed access. Wiki pages have an edit button displayed on the screen and the user can click on this to access an easy-to-use online editing tool to change or even delete the contents of the page in question. Simple, hypertext-style linking between pages is used to create a navigable set of pages. Unlike blogs, wikis generally have a history function, which allows previous versions to be examined, and a rollback function, which restores previous versions.

A wiki enables documents to be written collectively in a very simple markup language using a web browser. A defining characteristic of wiki technology is the ease with which pages can be created and updated. Most wikis are open to the general public without the need to register any user account as had usually been required by various other types of interactive websites such as Internet forums or chat sites.

3.3.1 HISTORY

The WikiWikiWeb was the first wiki, established by Ward Cunningham on March 25, 1995, as a complement to the Portland Pattern Repository. Cunningham coined the term wiki after the "wiki wiki" or "quick" shuttle buses at Honolulu Airport.

3.3.2 LINKING AND CREATING PAGES

Wikis are a true hypertext medium, with non-linear navigational structures. Each page typically contains a large number of links to other pages. Hierarchical navigation pages often exist in larger wikis, often a consequence of the original page creation process, but they do not have to be used. Links are created using a specific syntax, the so-called "link pattern".

3.3.3 SEARCHING

Most wikis offer at least a title search, and sometimes a full-text search. The scalability of the search depends on whether the wiki engine uses a database; indexed database access is necessary for high speed searches on large wikis. On Wikipedia, a wiki-based encyclopedia, the so-called "Go button" allows a reader to view a page that matches the entered search criteria as closely as possible. The MetaWiki search

engine was created to enable searches across multiple wikis. Search is keyword-based.

3.3.4 SERVER-SIDE VERSUS CLIENT-SIDE WIKI

By far, the most common wiki systems are server-side. Wikipedia is also a server-side wiki. In essence, the edit, display and control functions are provided on the server through the wikiengine that renders the content into a HTML-based page for display in a web browser.

A client-side wiki system only requires the server to "serve" wiki files in much the same way as a web server allows HTML files to be retrieved using HTTP. In this type of wiki system, all the execution required to convert the underlying wiki text into an onscreen formatted display page could reside in the client browser. Likewise, the editing tools and functionality reside with the browser.

3.3.5 CONTROLLING CHANGES

Wikis are generally designed with the philosophy of making it easy to correct mistakes, rather than making it difficult to make them. Thus while wikis are very open, they provide a means to verify the validity of recent additions to the body of pages. The most prominent, on almost every wiki, is the "Recent Changes" page—a specific list numbering recent edits, or a list of all the edits made within a given timeframe.

3.3.6 VANDALISM

The open philosophy of most wikis of allowing anyone to edit content tends to exaggerate the danger of vandalism. Vandalism can be removed in 5 minutes or less. In some cases, user accounts or IP addresses are banned from editing certain wikis, and certain pages may be 'locked', to prevent further vandalism.

3.4 WIKIPEDIA

Wikipedia is the best-known and probably most remarkable embodiment of the 'Web 2.0' ethos. It is succinctly described on its main page as 'The free encyclopaedia that anyone can edit'.

Wikipedia grew out of Nupedia (2000–03), a free online encyclopaedia written by experts, set up by Jimmy Wales and Larry Sanger. Nupedia was no fun for the volunteer writers because a lot of academic peer review committees could criticise articles published in Nupedia and give feedback.

In 2003, Wales founded the Wikimedia Foundation, a non-profit charitable organization, and donated Wikipedia to it; an act intended to secure its non-commercial future.

Wikipedia is often criticized as an unreliable source of information which should not be referred to. Wikipedia is criticised for having no source of authority. Prior to Britannica, most encyclopaedias derived their authority from the author. Britannica came along and made the relatively radical assertion to vest authority in an institution.

3.5 SOCIAL NETWORKING SITES

Social network sites are similar to many other genres of social media and online communities that support computer-mediated communication. These are websites with a combination of features that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

What makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and make visible their social networks.

3.5.1 PROFILES: Profiles both represent the individual and serve as the locus of interaction. Profiles are a site of control, allowing participants to determine who can see what and how. While social network site profiles can be accessible to anyone “truly public”, it is common for participants to limit the visibility of their profiles, making them “semipublic.”

Semi-public profiles are still typically available to a broad audience, comprised of friends, acquaintances, peers, and interesting peripheral ties. In this way, profiles are where the potential audience is fixed, creating a narrower public shaped by explicit connection or affiliation.

Profile as a tool for impression management in Social networking site :

Because of the inherent social and often public or semi-public nature of profiles, participants or users of social networking site actively and consciously craft their profiles to be seen by others. Profile generation is an explicit act of how the users want to present themselves. Because of this, issues of fashion and style play a central role in users' approach to their profiles.

In addition to being a site of self-representation, profiles are a place where people gather to converse and share. Conversations happen on profiles and a person's profile reflects their engagement with the site. As a result, participants do not have complete control over their self-representation.

3.5.2 FRIENDS LISTS: On social network sites, participants articulate who they wish to connect with and confirm ties to those who wish to connect with them. Most social networking sites require connections to be mutually confirmed before being displayed. Each individual's Friends list is visible to anyone who has permission to view that person's profile.

3.5.3 HISTORY OF SOCIAL NETWORK SITES

The first recognizable social network site was launched in 1997. SixDegrees.com allowed users to create profiles, list their Friends and, beginning in 1998, surf the Friends lists. SixDegrees promoted itself as a tool to help people connect with and send messages to others.

Another site, Classmates.com allowed people to affiliate with their high school or college and surf the network for others who were also affiliated, but users could not create profiles or list Friends until years later.

From 1997 to 2001, a number of community tools began supporting various combinations of profiles. AsianAvenue, BlackPlanet, and MiGente allowed users to create personal, professional, and dating profiles. Users could identify Friends on their personal profiles without seeking approval for those connections. Likewise, shortly after its launch in 1999, Live Journal listed one-directional connections on user pages. The Korean virtual worlds site Cyworld was started in 1999 and added SNS features in 2001, independent of these other Sites.

The next wave of SNSs began when Ryze.com was launched in 2001 to help people leverage their business networks.

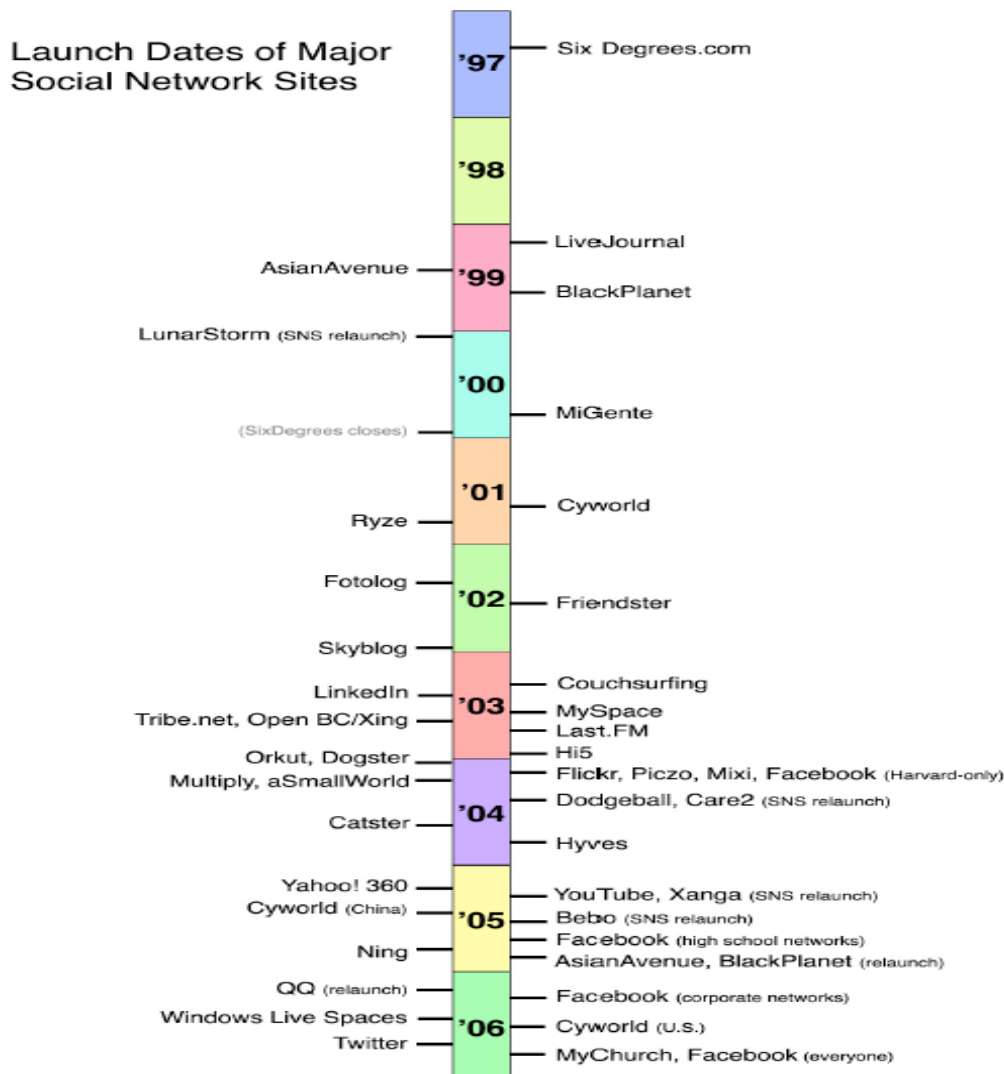


Figure1. Timeline of the launch dates of many major Social networking sites
3.5.4 Tools for Public Communication

Most social networking sites provide various tools to support public or semi-public interactions between participants. Group features allow participants to gather around shared interests. A more commonly used tool for public encounters are the commenting features that display conversations on a person's profile ("The Wall" on Facebook). Comments are visible to anyone who has access to that person's profile and participants use this space to interact with individuals and cohorts.

3.6 ELECTRONIC MARKET "E COMMERCE"

The cutting edge for business today is e-commerce. Most people think e-commerce means online shopping. But web shopping is only a small part of the picture. The term

also refers to online stock, bond transactions, buying and downloading software without ever going to a store. In addition, e-commerce includes business to business connections that make purchasing easier for big corporations.

E-commerce is generally described as a method of buying and selling information, products and services electronically. The main vehicle of e-commerce remains the Internet and the World Wide Web, but uses of e-mail, fax and telephone orders are also prevalent. E-commerce is a modern business technique that addresses the needs of the organization, merchants and consumers to cut costs while improving the quality of goods and services and speed of service delivery.

E commerce industries can be divided into two categories.

1. **Online Travel Industry**, comprising Air, Rail, Hotel Reservations, Car Rentals, Tour Packages.
2. **Online Non-Travel Industry**, comprising eTailing, Digital Downloads, Classifieds and Paid Content Subscription.

*** The Online Travel Industry caters to the masses, whereas, the Online Non-Travel Industry caters to niches, thereby attracting comparatively less number of Internet users.**

3.6.1 TRAVEL AGGREGATORS: They offer Air tickets, tour packages, hotel reservations, car rentals across the globe in collaboration with multiple service providers. The attractive packages offered by Travel Aggregators with a guarantee of 'most economical deals' attracts a lot of Internet Users to their websites. Their operations are mainly online and are supported by 24-hours customer care to provide information and solve queries. Since they are collaborators of travel services, they generate revenue through commissions on every sale.

3.6.2 TRAVEL COMPANIES/TOUR OPERATORS: They are the key intermediaries bringing travel products and services of various players closer to the customers. Like Travel Aggregators, they offer air tickets, hotel reservations, car rentals, tour packages for India and abroad. Their revenues are also determined by the commissions through the sales generated.

3.6.3 HOTELS: These comprise hotel chains that have spotted the potential of adding yet another channel to reach out to their customers. Today, most of the three to seven star hotels have started developing websites for online bookings of their room inventory. With hotels moving their inventory online, customers can book a room with just a few clicks from anywhere in the world.

3.6.4 RAILWAY BOOKINGS: The online ticketing website of the Indian Railways has emerged as one of the largest single-product E-Commerce sites in the country. Online rail reservation system proved to be a major relief to the travellers spending hours in queues at railway reservation counters.

3.6.5 THE KEY DRIVERS LEADING THE GROWTH OF THE ONLINE TRAVEL INDUSTRY ARE:

- **Increase in the Internet users:** Increasing penetration of Internet connectivity and PCs has led to an increase in the Internet users across India. The demographic segments that have witnessed maximum growth comprise college going students and young persons. These segments are the users of advanced applications and technologies online and are most likely to be heavy E-Commerce users.
- **Growth in low cost carriers:** The concept of 'Low Cost Carriers' or 'No Frill Airlines', targeted primarily at the middle-class has brought a revolution in the Indian Travel Industry. With Air Tickets getting cheaper, growth in the number of travellers and the number of travels per person has increased tremendously. This has in-turn affected the entire travel industry in a positive way.
- **Convenience is the priority:** The online processes are constantly being worked upon to make them easier to understand and use. The travellers are constantly seeking comfort and ease in planning their trips. Combination of the two has led to the increase in the usage of websites as against physical booking counters.

3.6.6 ONLINE NON-TRAVEL INDUSTRY: The Online Non-Travel Industry comprises of eTailing, Digital Downloads, Classifieds and Paid Content Subscription.

3.6.7 E-TAILING : E-Tailing is the web version of Retailing. These are online shops where a customer can choose from a variety of items like Apparel, Accessories, Cell Phones, Cameras, Computers, Books, Magazines, Music CDs and DVDs, Electronic Goods, Shoes, Furniture, Health Equipments, Flowers, Jewellery, etc.

The two popular models that exist in the eTailing marketplace are **Online Retailers** and **Online Auctions**. The Website of an Online Retailer is used as a storefront to sell physical goods that are then delivered by a third party.

The Online Auctions, on the other hand, serves as a platform where a seller can offer to sell its products to interested buyers and provides the enabling infrastructure for electronic transactions. In the past, auctions were limited to only high valued items such as paintings, antiques and collectibles or for commodities in the wholesale market places. However, now it is possible to auction even low valued items like old books, music cassettes, CDs, etc.

3.6.8 ONLINE CLASSIFIEDS: Online Classifieds is customer driven market. It enables Internet Users to place their offering including CVs for jobs, profile for matrimony, ads to buy and sell property and automobiles on websites.

3.6.9 GROWTH OF E COMMERCE: There are the factors that lead to the growth of e-commerce or online market as follows.

- **Increase in the number of buyers and sellers:** The success of a marketplace depends on the presence of a large number of buyers and a large number of sellers. Over the years there has been a sharp increase in the number of buyers and sellers in this segment. In addition to online buyers, many offline stores have begun to sell their products in the online marketplace. The greater the number of sellers and buyers, the faster the market grows.
- **Convenience:** an online buyer saves time, effort and money when buying online as compared to buying from physical stores.
- **Better Bargains:** Online market eliminates the need to maintain expensive and fancy showrooms. Instead, what attracts customer attention to online stores is the '*great deals*' '*best prices*' and '*better bargains*'.

3.6.10 BARRIERS TO THE GROWTH OF E COMMERCE

- **Consumer Bias:** Consumers will display a bias for brands that they know well and have had a good experience in the past. Thus products of brands with a favorable bias will score over the products of less popular brands.
- **Lack of 'touch-feel-try' experience:** lack of ability to try a product before buying acts as a barrier for some Internet Users. In addition, often the product or the service delivered differs from the standards displayed on the website. The customer is not sure of the quality of the product unless it is delivered to him and post delivery of the product, it is sometimes a lengthy process to get a faulty or the unsuitable product changed.
- **Mounting competitive pressures:** The market for online buying is not at a nascent stage these days. To attract customers, numerous competing online players are adopting all means to provide products and services at the lowest prices. This has resulted in making the consumers choice-spoilt, who in turn surf various websites to spot the lowest price for the product.
- **Seasonality:** eTailing Market (online market) is faced by seasonal fluctuations. As told by an Industry player, August to February is the peak seasons for sale, while March to July is the dry seasons for sale. During the peak season, occasions that drive the sales are Diwali, Rakhi, Valentines Day, New Year, Christmas, Mother's Day, Friendship Day etc are. On these occasions younger generation prefers buying and sending gifts online.
- **Credibility in payment system:** online frauds and breach is the biggest barrier to online sales. As a result, prospective buyers prefer staying away from revealing their credit card and bank details.
- **Untimely Delivery of products:** it might take a few minutes to search, book and pay for products and services online, but the delivery of the product may

take unreasonable time. Thus, the online retailing raises more issues than the benefits it currently offers. The quality of products offered online and procedures for service delivery are yet to be standardized. Till the same is done, the buyer is at a higher risk of frauds.

However, looking at the flourishing trend of E commerce growth in India, efforts are taken to educate the online buyers on the steps that need to be undertaken while making an online purchase. Moreover, the feedback of an online buyer is also captured to identify flaws in service delivery. This is done through online communities and blogs that serve as advertising and marketing tools and a source of feedback for enterprises.

3.7 SUMMARY

There are numbers of web-based services and applications that demonstrate the foundations of the Web 2.0 concept. These are not really technologies as such, but services (or user processes) built using the building blocks of the technologies and open standards that underpin the Internet and the Web. Many of these applications of Web technology are relatively mature, having been in use for a number of years, although new features and capabilities are being added on a regular basis.

As Social Networking Site use are becoming more popular at workplace just like email and instant messaging. Privacy issues may be closely related with other workplace issues. We need to understand them and make more delicate use and support users' collective information practices at work.

The Internet is boosting efficiency and enhancing market integration in developing countries. A developing country can become industrialized and modernized if it can extensively apply internet technology to enhance productivity and international competitiveness, develop e-commerce and e-governance applications. Many countries in Asia are taking advantage of e-commerce through opening of economies, which is essential for promoting competition and diffusion of Internet technologies.

Exercises and Questions

| |
|--------------------------------------|
| Answer to check your progress |
|--------------------------------------|

1.Fill in the blanks.

- a. The permalink is agenerated by the blogging system.
- b. features in blog allows one blogger to notify another blogger that they have referenced or commented on another blogger's posts.
- c. Blogroll is similar to

2. Distinguish between blog and wiki.
3. Write the function of link back.
4. Examine the evolution of Wikipedia.
5. Discuss how profile in social networking site is a tool for impression management.
6. Discuss the future of electronic market in India.

UNIT 4: EMERGING TRENDS IN NEW MEDIA

4.0 Introduction

4.1 New Media/me media

4.2 New Media and Digital Identity

4.2.1 Origin of Avatar and Virtual boyfriend/ girlfriend

4.2.2 Avatar in Social Networking Site

4.3 Mobile Phone Identity

4.4 UID Card

4.5 Postmodernism and New Media

4.6 Participatory Culture

4.7 Use of Internet and Activism

4.8 Internet & Public Sphere

4.9 E-democracy

4.10 New Media & Digital Divide

4.11 Democracy, Digital divide and Mobile phone

4.12 Conclusion

4.0 INTRODUCTION

An individual in today's world spends more and more time using digital means to communicate, be that sending and receiving e-mail, talking on a mobile phone, participating in a social networking site or playing an online game. As such, many aspects of daily life are increasingly mediated by technology, and this has important implications for human interaction and social behaviour.

4.1 NEW MEDIA/ME MEDIA

The Internet and the World Wide Web have become 'new mediatized'. There is convergence in terms of delivery of news and information and devices used for this. There is convergence in terms of the tools to access content and places we use to access content. Convergence happens when media hybridize and recombine, as when movies are distributed over the Internet to download, or podcasts of radio shows can be listened to on an MP3 player or via a Personal Computer. These new technology has given countless opportunities to us and to 'me', to comment, to link up with others etc. Hence, this new media is currently known as 'me media' also. Users carry portable devices and are continuously connected to the Internet and to other users.

4.2 NEW MEDIA AND DIGITAL IDENTITY

Users of digital technologies today have a wide scope for constructing their identity. The mostly nameless and faceless environments of cyberspace create an ideal background for developing alternate identities or digital personae.

Unlike face-to-face interaction, it is much more difficult to categorize people online according to age, gender, race, country of residence, social class, body shape etc. Consequently, users may feel more inclined to interact with what seems to them more anonymous and forgiving. Moreover, the internet makes it fairly easy for individuals to create multiple representations of their identities, mainly due to the lack of a generic system for identification. This fragmentation of identities can be accidental, but also intentional.

Creating more than one identity can even be desirable to some, depending on the context and exchanges involved. For instance, a user may wish to be aggressive and egotistical in one context e.g. in a multiplayer game, but sensitive and sociable for virtual encounters of the romantic kind.

One of the most interesting but could be pernicious examples of how the digital world affects the construction of identity is the phenomenon of gender switching, i.e. when users represent themselves as female in the social interactions online whereas he is a male in actual.

* **Highlights**

There are many reasons why people might take the opportunity to explore multiple identities. The ability to change character at will. This gives users the possibility to explore other forms of existence and changing the ways in which they may be perceived by others.

The opportunity to form relationships that may be perceived to be more difficult in the offline world – e.g. between people from vastly different backgrounds or people who may be shy or uncomfortable with face-to-face interaction.

Cyberspace provides opportunity for those who are marginalised or persecuted in society to express their views freely without fear of discrimination or reprisal. The potential for finding groups and individuals geographically and socially disparate based on common interests, thereby stimulating dialogue and curbing loneliness.

The possibility of virtual identity for those who lack confidence or have little opportunity to engage in such possibilities in the offline world makes cyberspace a popular destination for many.

4.2.1 ORIGIN OF AVATAR AND VIRTUAL BOYFRIEND/ GIRLFRIEND

An avatar is an icon or representation of a user in a shared virtual reality space. Although avatars were first used in online role-playing games or virtual universes, their use, nowadays, is increasingly being extended to the non-gaming world, notably to online networking sites and forums. The avatar in this context is a picture or icon identity. In this respect, avatars may resemble a person's real or off-line self in varying degrees, wholly, partly or not at all.

Avatar comes from the Sanskrit word Avatara, which means “the descent of God” or “incarnation” or “an embodiment, a bodily manifestation of the Divine.” The digital world has transformed the original meaning of avatar. Today, avatar commonly refers to a graphical image of a user; for example, in instant messaging applications, or, a graphical personification of a computer or a computer process. Avatars are intended to make the computing or network environment a friendlier place. An avatar can also be the virtual representation of a real participant in an activity in a virtual reality environment. For example, an avatar could represent a participant in a virtual meeting, or a tutor in a distance learning situation. To be effective, a digital avatar will need to have some basic human characteristics, such as speech and language capabilities.

4.2.2 AVATAR IN SOCIAL NETWORKING SITE

Social networking sites while connect you with others, record your days, keep you up with friends can create their own avatars (“minimes”) and virtual spaces (“minihomes” and “minirooms”). The rise of such social networking sites points to the increasing use of publicly shared experiences to form social bonds. Unlike the offline world, contact with strangers is not avoided, but encouraged and even expected. It is possible, and in some cases acceptable, to exaggerate, to hide, to alter and to undermine the truth about oneself in order to encourage contact or construct more interesting and desirable online impressions or reputations. In some cases, online personalities can be vastly different from off-line personalities and those who are well-liked and seemingly sociable in virtual spaces may not necessarily be so when engaging in social interactions off line.

4.3 MOBILE PHONE IDENTITY

The mobile phone, a form of new media has become such an intimate and important aspect of a user’s daily life that it has moved from being a mere technical tool to an indispensable social accompaniment. The growing use of mobile phones has been blurring the boundaries between the private and public spheres of existence even further. Its highly personalized and emotive nature has meant that its form and use have begun to represent the very personality and individuality of its user. In other words, it has become a reflection of a user’s identity.

Much can be gleaned about the personality of a user by looking at their mobile phone:

- a) Its model, shape and size;
- b) the ringtone in use (e.g. traditional telephone ring, classical music, hip-hop or heavy metal music);
- c) The chosen wallpaper (e.g. personal photo, cartoon, abstract or realistic landscape);
- d) the messages and digital photos stored in the phone’s memory (e.g. content, style, number, origin and so on).

Mobile phones have transformed the way people interact in many respects. Not only can they communicate with each other anytime and anywhere, but they can also avoid contact by screening phone calls, resorting to voice mail, or limiting communication to SMS. In traditional fixed-line phone environments, most calls were dutifully answered when possible, and the identity of the person on the other end was typically unknown, or at least unconfirmed, until the conversation was engaged. Today, many young people text each other before engaging in a voice call.

4.4 UID CARD

The objective was to introduce multiple value added applications onto the identity card. The card itself is made of polycarbonate and anti-forgery laser-engraving technology is used for printing personal data, and a digital photo. A duplicate of the data with digital thumbprint templates is stored in a chip embedded on the card, and authentication is required every time the data in the chip is retrieved. This prevents unauthorized access.

4.5 POSTMODERNISM AND NEW MEDIA

When modernism was generally associated with the early phase of the industrial revolution, postmodernism is more commonly associated with many of the changes that have taken place after the industrial revolution. A post-industrial economy is one in which an economic transition has taken place from a manufacturing-based economy to a service-based economy. The rise of new information technologies, the globalization of financial markets, the growth of the service and the white-collar worker and the decline of heavy industry has characterised the post modern society.

- There are some noticeable cultural changes in post industrial post modern society. Consumption and leisure started determining the experiences rather than work and production. When ‘consumer culture’ has started determining the experiences of everyday life of the individual in society along with the uses of new technology, the consumer society came to produce.
- The differences between human and machine has begun to disappear. All the more, the old ‘human’ versus ‘technology’ binary opposition has started eradicating. Our interaction with the world around us is increasingly mediated by computer technology, and bit by bit digits.

4.6 PARTICIPATORY CULTURE

Increased and improved communication across the globe through satellite technology, digital television, improved telephone links and the Internet, certainly means that we are now in touch with people and events internationally with a frequency, speed, quality and affordability never imaginable in the analogue age. For some critics, this tendency towards globalization produces a world of increased cultural diversity. Indeed, some argue that we are witnessing the birth of a more ‘participatory culture’, allowing audiences to become increasingly involved in the creation and dissemination of meaning moving from a communication model of ‘one-to-many’ to a ‘many-to-many’ system which has radically changed traditional top-down models of communication and information distribution.

The increased interactivity of New Media generally allows audiences to play around with and make their own composite identities from various and sometimes even contradictory sources. With so many different communities now open to us on the web, we can begin to simply pick and choose which identities we want to adopt and which ones we want to reject, allowing an individual to decide how they define

themselves rather than simply having to stick to the narrow and limited number of choices that once defined the past. Websites like YouTube, MySpace and Facebook reflect the recent understanding of 'participatory culture'. Interactivity has allowed audiences to become 'producers' as well as 'receivers' of the media. Audiences are increasingly determining their own choice of media and what they do with it. The hypertextual 'cut' and 'paste' culture of New Media ,that seemingly encourages sampling, poaching and remixing, produces not only copyright problems, it also further confuses the very means by which we conceive of the media and its relationship with its audience.

This increased interactivity among the New Media audience has prompted that there has even been an increased 'democratization' in the nature of New Media compared to old. People use blogs, photos or phone footage to create news has given birth to citizen Journalism. The increased ability of 'ordinary' people to become actively involved in the very production of the media has moved the power away from the 'author' into the hands of the 'audience'.

4.7 USE OF INTERNET AND ACTIVISM

Internet helps to spread new social movements with networking diverse coalitions on agendas. It facilitates the ability of citizens to gather information about campaign issues and mobilize community. Digital technologies appear to be egalitarian, a resource for alternative social movements and trans-national advocacy networks.

Instances of Usenet groups tells us how do these groups have provided an electronic public space with the provision of posting political message which can facilitate political discussion for anti-government voices critical of authoritarian regimes. The cases like the anti-landmines campaign and the protest movements against the WTO, anti-fuel taxes, and genetically modified foods, show the potential of computer-mediated communications for linking borderless worldwide coalitions.

Post 9/11 developments have proved how Internet can be effective medium to express dissent and disseminate more than one side of the event.

Social media platform i. e. blogging which has been a new form of social interaction allows users to post their views and let others to see and offers the opportunity to engage in an online dialogue or conversation. On the other hand, professional and social networking sites facilitate meeting ground for like-minded people, sharing content, uses ideas by harnessing the power of the crowd. The new buzzword like crowd-sourcing takes to the ground which indicates the rise of the amateur where wisdom of the crowd is valued equally with those of professionals.

Edward Schwartz said that people can be more articulate in expressing their views via e-mail, online discussion lists or chat rooms, and more active in mobilizing around community affairs. As a new channel of two-way communication, the Internet can function to strengthen and enrich the connections between citizens and intermediary organizations including political parties, interest groups, public officials and agencies of local, national, and the news media.

4.8 INTERNET & PUBLIC SPHERE

The rapid development of the New Media and computer technologies have the potential to transform the very nature of the public sphere as it has brought new channels of communication to a spread new voices.

An observation by Robert D. Putnam among western public opens that they have become more and more disinterested with the traditional institutions of representative government. US public are detached from political parties, and disillusioned with older forms of civic engagement and participation through media like radio, TV and through tools like protest, conversation etc. He states that new generation in American has eroded the mass membership of voluntary associations. This has reduced the trust among the younger generation on political system and weaken the ability of communities to work together to solve common problems. The same kind of apathy towards democratic process is very much seen in Indian society also. The typical youth attitude “politics is not for us” is apparent in India.

Digital technology has opened a second chance to revive political conversation in the country and bring democracy to the world; to go beyond the Information Age to a new Age of Reason. New age of reason, a phenomenon considered to be one step ahead is characterized by communicative rationality which takes place irrespective of spaces. Communicative rationality involves rational-critical discourse where the force of better argument alone moves participants towards greater understanding and consensus.

Habermass (1989), while describing the public sphere viewed it as private people becomes public and they do debate with public authority. Public are those, for him, who critically use reason, and those who could vote or sit in Parliament. Nevertheless, it is well thought-out that democratic society depends on an informed public who can make political choices. World Wide Web gives visibility to alternative political perspective by promoting numbers of pressure groups and advocacy groups to shape public opinion and agenda.

4.9 E-DEMOCRACY

New media may also give direct electronic access to their political representatives and give people more power to set the policy agenda and give new opportunities for organizing with interested others in the grassroots level. The availability of competing news interpretations or frames on the Internet may help mass audiences to better understand the issues.

Networked computing operates according to principles of access, participation, reciprocity, and many-to-many rather than one-to-many communication which are fundamentally different from those of broadcast media. Internet contributes to free and speedy dissemination of information, though, the lack of infrastructure leads to lack of access have brought criticism against having ‘digital democracy’.

Internet offered potential for the renewal of direct democracy. With the availability of new media technology, all governments have made legislation, case law and other information available online. That leads to the evolution of the concept of e-democracy which is related to the online activities of governments, elected representatives, political parties and citizen groups. Meanwhile it may be expected to see the rejuvenation of Athenian sense of democracy where all citizens can vote on every major issues of citizen's concern.

This new media technology can possibly allow citizens to vote on every major issues of importance and can ensure direct rule of the people and by the people which was a distant dream in large complex modern society to institute a democracy of Athenian sense because of the logistical difficulties of having referendums on every issues of citizen's apprehension.

4.10 NEW MEDIA & DIGITAL DIVIDE:

While information and communication are legally perceived as human rights, the big business communication industries are not attracted to investing in poor communities. These marginalized groups tend to prioritize other social needs, i.e. food, shelter and clothing instead of information.

According to OECD (2001) the term 'digital divide' refers to "the gap between individuals, households, businesses and geographic areas at the different socio-economic levels with regard to their opportunities to access information and communication technologies. Ownership and access are not the necessary factors to determine digital divide. Some people who can own and have physical access to computer and internet may not necessarily be skilled users or in cases where they have the skills, they may not find relevant content online to become consistent users.

Similarly, lack of hardware and software operational skills can act as a barrier not only to using the Internet, but also in content production, hence creating the digital divide even among those with access.

Geographic location is one of the affecting factors for individuals to access digital technologies. Even though digital information and communication technologies provide distinct disadvantages to geographically isolated rural residents, rural citizens are expected to lag behind urban residents, because of limited telecommunication infrastructure, and culture.

Connections giving plentiful information at low cost and high speed in oppose to those without connections and connection slow in speed, blocked by the barrier of time, cost, uncertainty and dependent upon outdated information. In addition to infrastructural barriers, socio-cultural factors such as language, class, gender and education further compound the digital divide. The social divide is about the differences in access between various social groups due to socio-demographic barriers such as class, income, education, gender, age etc.

Educational attainment is one of the main determinants of Internet use. Education positively affects the likelihood of an individual using the Internet. Added to these, the growing population, insufficient funds, affordability, and delays in implementation of government policies and programmes have been some of the

challenges that have lead to unequal development in the society, which are responsible for digital divide.

4.11 DEMOCRACY, DIGITAL DIVIDE AND MOBILE PHONE

Democracy, however, depends more on connections than on inclusion which implies that citizen need to be able to communicate with each other. They also need to be able to access important information. The struggle to secure open access to government records has been basic to democracy. The digital divide is one to threaten the increasing political participation. However, the disquiet for digital divide seems to get a solution from this product of digital convergence, i.e. mobile phone. The mobile phone penetration in developing countries now stands at 68% which is higher than any internet technology (ITU statistics, 2010). Adequate, affordable and available broadband access will ensure more innovative adoption of mobile phone and internet technology to fulfil the needs of the people.

The recent proliferation of mobile technology has not only led to de-massification process but also to promoting trust, co-operation among people and also economic growth. One of the most renowned examples shows the potential for mobile communication to effect political change is the ousting of Filipino President Joseph Estrada. In January of 2001, Filipino citizens up with civil unrest where text messaging played a central role in coordinating the massive demonstrations and later culminated in the collapse of Estrada's cabinet.

4.12 CONCLUSION

The Internet has been accused of narrowing people's choices down and encouraging obsessions with worthless and unimportant trivia such as bizarre hobbies and low-quality television shows. Meanwhile, the breakdown of the 'private' and 'public' sphere has serious implications on civil liberties that are only now being fully recognized.

The Internet is also bore on as a dangerous and out of control technology that allows pornography, extreme religious, political fanaticism and computer hackers, and viruses to continually undermine civil society.

Officials from China, Iran and other nations have received criticism for censoring websites, spying on Internet users and persecuting bloggers.

However, Technological utopianism might suggest that New Media will automatically improve our world for the better, but our future well-being clearly lies in how and what we do with the choices we now have on offer.

Exercises and Questions

Answer to check your progress

1. Fill in the blanks.
 - a. Avatar means in Sanskrit.
 - b. In social networking sites, users can create their own avatars which is called and virtual spaces which is called
2. Write short note.
 - a. UID
 - b. Participatory culture
 - c. Digital divide
 - d. Communicative rationality
 - e. New age of reason
3. Why is new media called as ‘me media’?
4. How does the digital world transform the original meaning of avatar?
5. How do you glean about the personality of a user from the use of mobile phone?
6. Explain how do new media increase democratization?
7. “Internet offers potential for the renewal of direct democracy”, Examine.
8. Discuss the factors that widen the digital divide.

SUGGESTED READINGS

- 1) Marshall P David (2004) New Media Cultures, _Publisher: HODDER STOUGHTON EDUCATIONAL
- 2) Hassan [Robert](#) (2004) Media, Politics and the Network Society 1st Edition, Publisher: Open University Press

UNIT 5: BASICS OF CONVERGENCE

UNIT STRUCTURE

- 5.0 Introduction
- 5.1 Definition of convergence
- 5.2 Digital convergence
- 5.3 Various Drivers and Constraints of digital convergence
- 5.4 Technological convergence
- 5.5 Mobile phone: a convergent technology
- 5.6 Implication of digital convergence on society
 - 5.6.1 Benefits of convergence
 - 5.6.2 Downside of convergence
- 5.7 Convergence in newsroom
 - 5.7.1 Normative aspects of newsroom convergence
- 5.8 Convergence and regulations in India
- 5.9 Summery
- 5.10 Answer to check your progress
- 5.11 Exercises and Questions
- 5.12 Further Reading

OBJECTIVES

- To understand the concept of convergence
- To find out different types of convergence
- To find out the implication of convergence in society
- To understand the changing trends in newsroom and media houses
- To find out the laws and regulation related to media convergence

5.0 INTRODUCTION

Now a days, consumer and business customers have started seeking rich content, multi-use devices, and networked products. All the more, converged services, for instance, on-demand video, digital TV, high speed Internet, and wireless applications are popular among us. It is convergence which gratifies the consumer needs by satisfying the greatest number of beneficial purposes.

Evolution of information and communication technologies has built the foundation of convergence. It may turn vice versa that mere convergence of technologies lead to the evolution of information and communication technologies. Convergence helps to connect people and speeding information flows more rapid than past days. Internet reduces distance and enhances societal interaction by network convergence. Increasing interdependence between global enterprises and increasing demand for greater inclusion are the result of convergence.

5.1 DEFINITION OF CONVERGENCE

According to *Webopedia*, an online encyclopedia, convergence refers to coming together of two or more disparate discipline or technologies. Convergence is a term combining of computing and other information technologies such as telecommunication and television, and interlinking of media content and communication networks. However, the term convergence spans across business, economy, politics and culture in addition to technology.

In economic scenario, the term convergence stands for integration of national economies through lowering of trade barriers and full currency convertibility. In politics, convergence means increasing legislative power to global and multilateral agencies such as United Nations Organization and the European Union. In cultural sphere, we can get to see the manifestation of convergence in the spread of local cultures and sub-cultures across the globe and resulting hybrid cultural forms in terms of fusion music, *Hinglish* (combination of English and Hindi), instances where Hollywood films are influenced by Asian cinema or vice versa and so on. In the social realm, convergence is seen at the level of perception of a consumer and his attitude towards multi-tasking. For an example: a teenager who may be watching television while doing an assignment for his class and exchanging emails with his friends on his personal computer.

Technological convergence and network convergence has integrated previously distinguishable digitalized information formats, services, applications, and business models in such a way that reduces or blends the distinctions.

A few examples of convergence are given below:

- LG Electronics Company has created a microwave with a television screen for those kitchen goers who do not want to miss TV programmes during the meal cooking time; however, consumer would not use the microwave as the household TV.
- The Wii has been a very popular video game console among kids. Wii is released by Nintendo on November 19, 2006. Recently Wii is incorporated with more flexible gamepad to use it at different condition. Now accompanying a games console Wii is equally used for watching TV and for having video chat with friends, family members and partners. All the more, new Nintendo Wii U with the latest features like touch-screen, motion sensitive control buttons work as a web browser as well as social networking tool.
- Development of 3-D representation and its use in geological formations helps to determine better where to drill for oil. The 3-D representation is also used in battlefield as a real-time integrated intelligence to make quick battlefield decisions.

5.2 DIGITAL CONVERGENCE

The concept, digital convergence is coined by Nicholas Negroponte in 1978. Negroponte used the term digital convergence to describe the overlap of computing, printing, and broadcasting. He posited that the greatest growth would be possible in the intersection of these separate industries. Negroponte's vision has materialized twenty-seven years later around the year 2000.

Digital convergence refers to digitization of the full range of data and information to enable ease of use of data and information. Once information is digitalized into the binary of one and zero, it could move more freely. Digital convergence is meant for consumers. Consumer requires to use data and information at ease and as quick as possible at a cheap price with a guarantee of being safe and secure.

Digital convergence is characterised by the integration of the data handling systems like software, platforms, and communication pathways. This has made data and information move seamlessly across all software, platforms, and communication pathways. Digital Convergence leads to the global reach of data, information and content. More and more communication among the consumers through the prolific use of abundant devices around them spread the reach of information across the world.

Following factors have accelerated the convergence process.

1. Digitization and packetization of data
2. Reductions of cost of computing capacity and storage
3. Increased availability and take-up of broadband over narrowband and high speed Connectivity and network
4. Advances in software development tools

5.3 VARIOUS DRIVERS AND CONSTRAINTS OF DIGITAL CONVERGENCE

Digital convergence is subject to a number of technological, institutional, and policy developments which form numerous enabling and constraining elements. The most critical drivers of digital convergence are as follows:

- **Embeddedness and miniaturization:**

Embeddedness and miniaturization gives ubiquitous communication. It is because of embeddedness, we can take the comfort of a technology anywhere and everywhere. We get to see embeddedness in our cars in the form of build-in-music and CD system, build-in-GPS trackers. Appliances like microwave television is the result of embeddedness. Our wearing cloths fixed with toys are another form of embeddedness which drives and being driven by digital convergence.



- Interoperability and standardization:**
 Digital Living Network Alliance (DLNA), a non-profit collaborative trade organization established by Sony in June 2003, with 250 members worldwide defines the interoperability guidelines. These are especially for those homes which use digital appliances more. It addresses the challenge of seamless flow of data on multiple devices and platforms.
- Distributed value creation**
 Digital convergence has made to evolve a spectrum of new organizations to create new and enhanced products and services. This spectrum of organisation has created values which are distributed through more and more collaboration in between organisations and through customer participation. This has flattened the hierarchies of organisation and manages a better product and its delivery.
- Power management** has been one constrains of digital convergence. Until the challenges related to power management are met, “wireless” and “mobility” will remain euphemisms. Power management is a particular challenge as devices undergo miniaturization. Several large device manufacturers including Sanyo, IBM, Toshiba and Fujitsu have started focusing on fuelling cells. There are efforts to keep a small handheld device running for 20 hours on 2ccs of methanol.

5.4 TECHNOLOGICAL CONVERGENCE

Digital convergence has facilitated more technological convergence. Technological convergence has made technologies of distribution and consumption as complementary part of the same technology. As a result, television broadcasting television reception and internet, everything can be possible in a personal computer.

Increasing use of digital content management systems like extensible markup language (XML) facilitates smooth delivery of common content on different platforms. The spread of wireless internet access, either through mobile telephone systems or through local wireless networks makes to connect the internet.

Growing sophistication of TV sets accompanying with the access to internet and store digital content has allowed viewers to interact with content as they do on personal computers.



The arrival of multi-channel interactive digital TV is reinforcing the place of television set's as the primary entertainment hub in consumers' minds. Those who own such sets, generally see the their personal consumers as the main gateway to the internet for using email and instant messaging services, accessing information and e-commerce sites (mainly shopping and purchasing tickets) and for growing range of multimedia entertainment and multi-functionality like streaming audio-video services, downloads, music, and online gaming.

Technological convergence unleashes diverse experiences in media production in terms of content creation, content distribution and consuming of content. Internet becomes a converged platform offers e-commerce services, downloading e-book, music, video and photographs, e banking and introduced converged practices. Use of single device for communication and consumption of content and applications have become possible due to convergence.

The expansion of mobile technologies will enable a significant number of people to access converged services whenever and wherever they may be.

5.5 MOBILE PHONE: A CONVERGENT TECHNOLOGY

In the mid 20th century, television is converged with the movie technology and radio technology. Gradually, television has converged with the mobile phone industry and the Internet. We started making phone calls with the use of personal computers.

Convergence of technologies combines multiple technologies into one. New mobile phones feature cameras, videos, music apart from clock, calendar and so on. Latest "Smart phone," incorporates multimedia services, GPS, Internet access, and mobile telephony into it makes a perfect example of convergent technology. These high end mobile devices provide variable utility along with portable services and remove the need to carry multiple devices.

Smart phone and the services it offers are quite helpful for media companies, broadcasters, enterprises and call centers. For example, voice SMS which integrate SMS with voice. SMS is very popular now a days and it becomes a consistent contact strategy with the consumer for the organisations. Many business houses and organisations avoid having multiple numbers, for instance, one for voice calls and another one for SMS. Technological convergence shows a way out simply to merge the reception of formats, voice call and SMS in one number. As a result, consumers can text or call at one number and be sure that the message will be received.

5.6 THE IMPLICATIONS OF CONVERGENCE AND CONVERGED ICTS FOR THE FUTURE

The telecommunications community has moved from the older technologies, such as Public Switched Telecommunications Network (PSTN) and its digital successors, including Integrated Services Digital Network (ISDN) to newer IP based networks. It has created opportunities for newer applications at ever faster speeds which are not limited to voice and video.

We can see that more investment in communications networks in fixed, wireless, satellite and cable in recent years has improved the physical infrastructure and made easy availability of new services, both residential and business to customers. Companies and organisation which once had provided only one service have now opened market for package of voice, video, and broadband Internet. This has made even little distinction among the technology platforms used to deliver the services. Cable operators are integrated horizontally into the provision of voice and Internet access. Newspapers and other traditionally 'print-based' media have started offering audiovisual content via their online presence. Internet portals and other online service providers are offering voice and video applications as well as user generated content.

Future investments in network technologies will make communications technology and services even more broadly available throughout the world. Network operators have enlarged their service portfolio by offering additional video applications.

Development of new technologies within a framework of digitization and convergence of these technologies has facilitated media globalization. Media globalization is defined as intensification of world-wide social relations. Media and communication has been linking distant localities and facilitating the mutual shaping of local happenings and distant events. The growing interconnectedness is marked by media facilitated interaction and interdependency.

5.6.1 BENEFITS OF CONVERGENCE

Convergence promotes the use and deployment of information and communication technologies (ICTs) across the stakeholders like business, government and individuals. The convergence presents new business opportunities, increase choice and lower prices that benefit all users.

- Digital and Technological convergence enhances educational opportunities in remote areas. It has promoted multimedia education in classroom and in other workplaces and hence opened additional way to get more information. Thus, by providing the scope to integrate multiple media such as audio, visual and text and graphic into one, convergence helps to enhance cognitive capacity of the students and learners. Digital and technological convergence has made healthcare accessible and available in remote places. As for example, **telemedicine**.
- The advent of the Web 2.0 and the convergence of technologies have blended and integrated voice, video and data into a flexible network. It facilitates significant online social interaction and creative collaboration. It improves the integration of people with special needs and non-traditional working groups into society. These online platforms have become mouthpieces for public opinion and its relevance in the society is very much acknowledged by political leaders too.
- Ecommerce has been a buzzword now a-days. Various online medium i.e. email, teleconferencing, newly upgraded softwares with improved version of programming script help management of multiple numbers of supply chains across the distance. Converged web application has provided customer the opportunity to shop at home.

Telemedicine is an upcoming field in health science arising out of the effective fusion of Information and Communication Technologies (ICT) with Medical Science. It has enormous potential in meeting the challenges of healthcare delivery to rural and remote areas. It may be as simple as two health professionals discussing medical problems of a patient and seeking advice over a simple telephone. It may be as complex as transmission of electronic medical records of clinical information, diagnostic tests such as E.C.G., radiological images etc. It can be carried out real time interactive medical video conference with the help of IT based hardware and software, broadband telecommunication and satellite and terrestrial network.

5.6.2 DOWNSIDE OF CONVERGENCE

Adoption of technological innovation of convergence is not free from doubts and questions. One common claim arises that when people can have e-mail and Internet on their phone, why do they still want a separate Computer with Internet and e-mail in addition?

Initially, converged devices are frequently less functional and less reliable than their component parts. DVD may perform better on a traditional DVD player than on a game console. As the number of functions in a single device escalate, the ability of that device to serve its original function decreases. Another example we may find in consumer device such as i-Phone. This i-phone can perform many different tasks, but does not feature a traditional numerical pad to make phone calls. Instead, the phone features a *touchpad* which some users find more troublesome.

There has been criticism against the technological convergence is that in many cases technological convergence is unnecessary or unneeded. Consumers have found that

technologies with additional functions are harder to use, if not impractical, rather than one specific technology with no add on features.

5.7 CONVERGENCE IN NEWSROOM

In today's society, the idea of media convergence has emerged as a key point of reference as newer as well as established media companies attempt to visualize the future of the entertainment industry. Technology can be used as a means to address the problems of the enterprise or organization and to provide strategic solutions to the problems. Many of today's businesses and governments define their priorities and adopt technologies to get the support to the end goals. For example, removing paper files from an office or from a department process and introduction of computer database has accounted for a 10 to 20 percent increase in efficiency and cost savings.

Convergence in news room, in reality, is more than just a shift in technology. Media convergence is essentially a process and not an outcome. It alters relationships between industries and audiences, genres and format of production and distribution and markets.

Convergence in news room can be, simply put, as use of various medium and media platforms to create new experiences and to explore creativity. It leads to develop new forms of content that connect us socially. It increases interaction between individual consumers and corporate producers of media on a social level which were not readily accessible in the past.

News room convergence brings the news stuffs, different products, different technologies and geography together which were, previously, there in the separate provinces of print, television, and online media. Ability to cross promote media products is a major impetus for convergence. Convergence introduces new ways to tell stories through media and to facilitate communication both with and among audiences.

In India, two largest industrial houses Tata and Reliance have cross media ownership in telephony, cable television and internet services. Another example of this type of convergence is the acquisition of Radio Mirchi FM channel by Times of India group, the Times Music CD and Cassette Company, the planet M-chain of cassette and CD stores, and the Times Multimedia. The Hindustan Time's group of publications had sought foreign investment for expanding its operations into radio, television and entertainment apart from print.

Media convergence is still evolving in the media houses in India. Two or three years of convergence practices by a media house may not be enough to show a complete picture of media convergence, but it certainly has some results. The reporters in those media houses have more diverse presentation skills as to publish, to broadcast and to upload their stories for cross platforms. This shows the technical acumen which a reporter needs to acquire to work for multiple media platforms and to suit the multiple needs of the audience. When these media houses are integrated to avoid over specification, they create opportunities for fresh thinking across organizational boundaries and use employee creativity to compete in the changing environments. All these practices have flattened the organizational hierarchy, and implement a team-based workplace with shared decision making. Media convergence influences an

organization to create a culture of contribution where power and accountability are shared in ways that allow media companies to respond quickly to challenges and opportunities.

5.7.1 NORMATIVE ASPECTS OF NEWSROOM CONVERGENCE

Professional code of ethics stress a set of common norms intended to guide journalists in meeting the public service obligations. This includes commitment to accuracy, avoidance of sensationalism, and a need to treat sources with respect and dignity. Convergence foregrounds such values.

However, a study by Jane B. Singer explores the normative concerns in a converged newsroom. The study examined whether journalists in such newsrooms see convergence as a challenge to their public service.

Convergence calls for a quality check in productions as profession such as writing, photography, video or design are threaten to deteriorate if news professionals have to prepare different versions of the same story for multiple media platforms.

There are apprehensions regarding convergence in newsroom as public loses important services rendered by journalist because of the demands of multimedia presentation in the backdrop of technological convergence. This has prevented them from putting needed concentration to write thoughtful pieces on important subjects. In the event of convergence, the television culture is likely to dominate news in an organization because of television's glamour and technological edge over print. Also, since thinking reporters are likely to write controversial stories, media conglomerates may actually prefer this kind of superficiality to depth.

Convergence leads to more corporatization of newsroom. Corporate media ownership has long being criticized on public interest grounds. Corporatization of newsroom can lead to inherent conflict between the logic of maximizing return and maximizing public understanding.

It is argued that in the long term convergence makes less, not more, information available to the public by reducing the numbers of distinct media voices.

Converged newsroom serves those audiences who are already converged in a practical sense. It can provide a 360 perspective to the story and viewers are better served. It makes the product better having access to the minds and the expertise of every other journalist.

Technological convergence holds immense potential to improve life and liberty in some ways. New media and high technology provide new channels for information, deliberation and participation. They empower people with knowledge and information, and with the ability to communicate their interests and concerns to others.

5.8 CONVERGENCE AND REGULATIONS IN INDIA

Policy and regulatory frameworks, by definition, struggle to keep pace with the speed of innovation resulting from new technologies and business models. Now that the media and telecommunications sectors are coming together, along with the largely

unregulated computing and internet sector, the need is felt for new mechanisms to regulate these spheres.

India has tried although unsuccessful so far to replace sector-specific regulatory laws for broadcast and telecommunications by a common convergence law.

In the year 2001, the communication convergence bill was drafted to replace the Indian Telegraph Act, 1885, the Indian Wireless Telegraph Act, 1931, the Telegraph Wires (Unlawful possession) Act 1950, the Telecom Regulatory Authority of India Act, 1987 and the Cable Television Networks (regulation) Act, 1995. The intent of the draft bill is to propose a single law to cover the entire converged information and communication technology sector and to set up a single body, the Communication Commission of India (CCI) to regulate the entire sector.

In 2002, the draft Bill was made public for discussion and tabled in the LOK Sabha. However, it came in for criticism including the concerned Standing parliamentary Committee and industry bodies for vesting too much power in the CCI. The NDA (national democratic alliance) government then decided not to press ahead with the Bill and the bill remained in deep freeze till then.

There are concerns centered on the government's attempt to exercise complete and arbitrary control over the converged sector of communication including content. The proposed Communication Commission of India would have been a fully government controlled body, though nominally autonomous. The proposed bill's mandate would have included the regulation not only of the carriage of communication but also its content. It entails that if the bill gets passed, it would have legalized systematic censorship through the back doors.

5.9 SUMMARY

Convergence has made us possible to migrate from a single-application based regime like telecommunications, TV, radio, commerce to a multi-application regime. Convergence leads to grow the content markets for online music, video-on-demand and online gaming applications.

On the other hand, these wider set of convergent product and services frame the policy issues related to copyright and intellectual property rights. New policy mechanisms will have to be developed to appropriately address the issues like privacy, resilience, reliability and mobility and scalability. Adequate and effective intellectual property protection and enforcement are essential components of a policy framework to continue the advancement of convergence.

Policymakers should recognize the need for interoperability in the converged network. They should acknowledge the value of **security** for easy transaction of mobile-commerce and to prevent other cyber crimes; **privacy** which has been a constitutional right for individual; **mobility, scalability** which is important to measure the effectiveness of the channel through which communication occurs ; **resilience** to meet the consumers need anywhere and everywhere without being worried about specific circumstances ; and **reliability** in order to create the right environment to promote growth and development.

5.10 ANSWER TO CHECK YOUR PROGRESS

- What do you understand by convergence?
- What is technological convergence?
- Which are the factors that accelerated the convergence process?
- What is DLNA?
- Who has coined the concept of digital convergence and when it is coined?
- Explain embeddedness and miniaturization as an important driver of convergence.
- Explain power management as a constraint to digital convergence.
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5.11 EXERCISES AND QUESTIONS:

- Find some instances of convergence in major Indian news media.
- Write about the effects of convergence on news values and ethics.
- Visit a news organization where convergence of some type has been introduced and study the changes this has brought in various aspects of news work.
- What do you understand by digital convergence? What kinds of impact digital convergence can have in promoting digital revolution?
- Find out the features embedded in mobile phone which has made it a product of technological convergence.
- List out the numbers of converged items you use in day to day life and find out how convergence has surrounded you from every angle.

5.12 SUGGESTED READINGS

- Jenkins, Henry. 2006. 'Convergence Culture: Where Old and New Media Collide'. New York: New York University Press.
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