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**CHAPTER
11**

INTRODUCTION TO INTERNET



NETWORK (Net)

It is a collection of computers and peripheral devices interconnected by communication channels allowing the sharing of resources and information. Specifically, its objectives are:

- the **data exchange**
- the **update** of common **files** & folders
- the **exploitation of** common **peripherals**



INTERNET

- It is a network created by the **connection of individual smaller networks** (e.g. Airline networks, Universities, Schools, Hospitals, Banks etc).
- The **Internet** is a global system of interconnected computer networks that serve billions of users worldwide.
- It is a **network of networks** that consists of millions of private, public, academic, business, and government networks, with local or global scope, that are linked by a broad array of electronic, wireless and optical networking technologies.
- The word "Internet" means **International Network**.



HISTORICAL DATA

- The Internet started in 1969 as a research program of the Military Department of Defense called **ARPANET**.
- Initially it connected 4 computers located in separate towns of America, so if some of them was disconnected, the others still communicated harmonically.
- In 1974 universities and businesses started connecting to the international network and finally the simple users connected to it.
- The term Internet was firstly introduced in 1990.



Main reasons for the prevalence of the Internet

- ▶ Great potential of gathering **information**
- ▶ **Easy way** of using services
- ▶ Easy connection with **no additional equipment**
- ▶ **Low running cost** of services

INTERNET SERVICES

1. WORLD WIDE WEB (**WWW**)
2. ELECTRONIC MAIL (**E-Mail**)
3. INTERNET RELAY CHAT (**Chat**)
4. TELECONFERENCE
5. NEWSGROUPS (**Usenet**)
6. FILE TRANSFER (**Ftp**)

POSSIBLE THREATS OF INTERNET

1. **Viruses** and other malicious software
2. Web pages with false and **inaccurate info**
3. Communication with **unknown people**

WORLD WIDE WEB (WWW)

- It is a system of interlinked hypertext documents accessed via the Internet. With a **web browser**, the user can view web pages that may contain text, images, videos, and other multimedia and navigate between them via hyperlinks.
- All information exchanging daily on the Web (e.g. texts, sounds, images, video) is organized into digital documents called **web pages**.
- Any company or individual user can create his own collection of Web pages, best known as **website** which is stored in a computer called a **server**, in order to be visited by other users of the net.
- The initial page of each web site is called a **home page**.



ELECTRONIC MAIL (Email)

- It is a method of **exchanging digital messages** from an author to one or more recipients in a few seconds.
- Through this service multimedia messages can be sent (messages consist of text, sound, image, animation or video).
- All the incoming and outgoing mail is managed by the appropriate software, such as **MS Outlook, Outlook Express** or **Eudora**.



INTERNET RELAY CHAT (IRC)

- It is a **real-time Internet text messaging** or a way of **synchronous** conferencing.
- It is mainly designed for users communicating in discussion forums, called **channels**, but also allows one-to-one communication via private message as well as chat and data transfer, including file sharing.
- Some of the most common IRC software is **mirc, msn** etc.



TELECONFERENCE (Video-conference)

- It provides an advanced communication technology that allows companies or individuals to use digital audio and visual connections for group meetings, seminars, or conferences among participants anywhere in the world.
- However, this service requires **additional equipment** (microphone, speakers, web camera) in order to fully satisfy the user's needs.
- Common software for teleconference is **Skype, Windows Messenger, Google Talk, Yahoo Messenger** etc.



NEWSGROUPS (Usenet)

- They are **electronic meeting places** on the Web which allow users to exchange **asynchronously** their ideas on issues that concern them.
- Any user registered in a newsgroup can **post** his messages to the group as well as read the messages of other members of the group.



FILE TRANSFER (FTP)

- It is a service used to transfer files from one computer to another.
- A user can **download** data from a remote server to his computer e.g. music, movies, games, applications etc.
- Also he can **upload** his own data to a remote computer of the Net.

