# Internet & WWW

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# Topics

- The Internet
- The World Wide Web
- Ways to Access the Internet and the web
- Types of Web Sites
- Other Internet Services

# 1. The Internet

1.1 History and Evolution

- INTERNET– an interconnected network of networks that link computer to computer using protocol.

- It was called ARPANET in 1969 as a research network by Advanced Research Projects Agency (ARPA) of the US Defence Department.

- ARPANET development resulted from a collaboration among universities, industry, and government.

# 1. The Internet

- World Wide Web (WWW) started in 1989 at the European Particle Physics Laboratory (CERN) by Tim Berners-Lee.

- It is a network of computers that serve web pages that distributed hypermedia information system on the Internet.

- Information can be organized, linked, and accessed via client-server protocol.

# 2. The World Wide Web

**2.1 Web Standard**

- World Wide Web(WWW) is a part of the Internet that consists of Internet connected computers called Web Servers that store electronic documents called Web Pages.

- Web Page is a specially formatted document that can contain images, text, interactive elements, and hyperlinks, which links to other pages.

- Web Site is a group of related Web Pages.

- A web site's primary page known as Home Page, typically introduces the web site and provide information about the site's purpose and content.

# 2. The World Wide Web – Cont.

- A **hyperlink**, or simply known as link, is a word, phrase or image that connects web pages.



- Exploring the Web by jumping from one Web page to another is sometimes called **browsing** or **surfing the web**.

## Difference between Internet and WWW (World Wide Web):

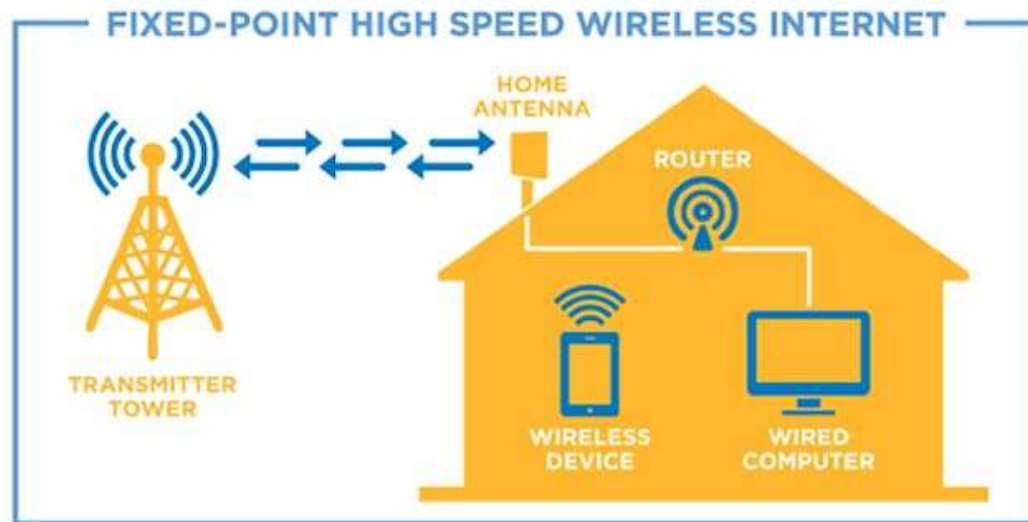| Internet | WWW |
|---|---|
| Internet is a massive network of networks, a networking infrastructure. | WWW is a way of accessing information over the medium of the internet. |
| It connects millions of computers together globally. | It is an information sharing model that is built on the top of internet. |
| It does not utilize web browsers & it is the structure on which WWW is based. | It utilizes web browsers such as internet explorer or firefox to access web documents called web pages. |
| No such creator. | It was created by Tim Berners Lee in 1992. |
| Nature Hardware. | Software. |
| Uses Transmission Control Protocol/Internet Protocol (TCP/IP) | Uses Hyper Text Transfer Protocol (HTTP). |
| Comprises fiber optic cables and wireless networks | Comprises Files, folders and documents. |

# 3.Ways to Access the Internet and the web

- In the past, the most common way to access the Internet was using a dial-up telephone line. Today, faster access methods, including digital dedicated lines, cable broadband, and wireless transmissions.

- The speed at which data travel from one device to another is called the **transfer rate**, which is expressed as **bits per second (bps)** – that is, the number of bits the line can transmit in one second.

# 3. Ways to Access the Internet and the web – Cont.

## 3.1 Fixed and Mobile Wireless Access

- **Fixed wireless** is Internet connectivity service that uses satellite technology.

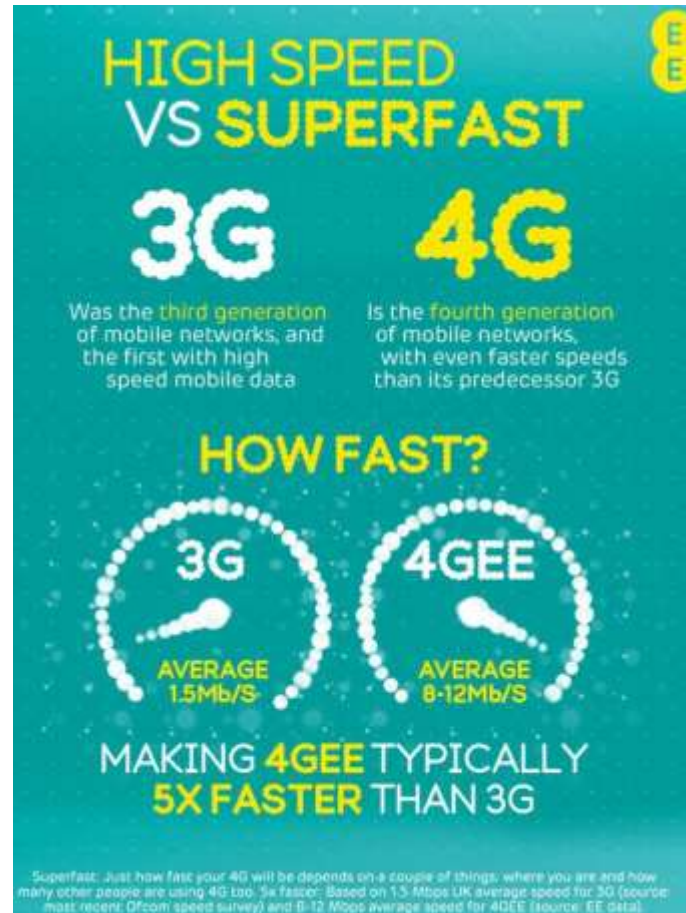# 3.Ways to Access the Internet and the web – Cont.

- **Mobile wireless** is Internet connectivity service that uses radio signals or **wireless fidelity (Wi-Fi).**
- Wi-Fi provides wireless connectivity to devices within a certain range.

# 3.Ways to Access the Internet and the web – Cont.

- **3G** and **4G** are wireless internet technology. The 'G' stand for generation.

- 3G device must support speech and data services, while 4G systems will support gaming and stream multimedia.

# 3.Ways to Access the Internet and the web – Cont.

# 3.Ways to Access the Internet and the web – Cont.

3.2 Internet Service Providers

- **Internet Services Providers (ISP)** is a business that has a permanent Internet connection and provides temporary Internet connections to individuals and companies using one or more access method: dial-up, high-speed dial-up, broadband, or wireless

# 3.Ways to Access the Internet and the web – Cont.

## 3.3 Web Browsers

- To view Web pages, you need a Web Browser.

- **Web Browser** is a software program that requests, downloads, and displays Web pages stored on *Web Server*.

# 3.Ways to Access the Internet and the web – Cont.

- You can access a Web page by entering its unique address, called the **Uniform Resource Locator (URL)**, in a browser's address bar.

- URL consist of a *domain name* and *top-level domain designation*.

- Many URLs also included, folder and files names are separated by forward slash characters following the top-level domain designation.

# 3.Ways to Access the Internet and the web – Cont.

- A URL identifies a computer on the Internet

| protocol | domain name | folder |
|----------|-------------|--------|

# http://www.ipoh.com/news

# 3.Ways to Access the Internet and the web – Cont.

- An **IP address** is the numeric address for computer connected to the Internet.

- Every device in a computer network has an IP address.

- A **domain name** is the text version of a computer's numeric IP address.

# 3.Ways to Access the Internet and the web – Cont.

- Different between IP Address and Domain Names

| IP ADDRESS | DOMAIN NAMES |
|---|---|
| • An identifier for a computer or device on a TCP/IP network. Networks route messages based on the IP address of the destination. The format of an IP address is four numbers separated by periods. Each number can be zero to 255. <br> • For example, 1.140.10.230 could be an IP address. | • A name that identifies one or more IP addresses. For example, the domain name notifycorp.com represents several IP addresses. Domain names are used in URLs to identify particular Web pages. <br> • For example, in the URL http://www.notifycorp.com/index.htm, the domain name is notifycorp.com. |

# 4. Types of Web Sites

- **Top-level domain (TLD)**
- A **top-level domain (TLD)** designation indicates the type of organization or general domain.

| Top-Level Domain | Domain Type |
|---|---|
| .biz | Business |
| .com | Commercial, personal |
| .edu | Education |
| .gov | Government |
| .mil | Military |
| .net | Network providers |
| .org | Non-commercial community |

# 4. Types of Web Sites – Cont.

- Some countries have their own TLDs.

| | |
|---|---|
| .my | Malaysia |
| .sg | Singapore |
| .jp | Japan |
| .us | United State |
| .de | German |
| .fr | France |
| .au | Australia |

# 4. Types of Web Sites – Cont.

- In URL, the *domain name* and *top-level domain* designation are preceded by a **protocol**.

- For Web pages, that protocol is the **Hypertext Transfer Protocol (HTTP),** which is the communications standard for transmitting Web pages over the Internet.

- Most Web browsers will insert the HTTP protocol automatically as the requested Web page is downloaded into the browser.

# 3.Ways to Access the Internet and the web – Cont.

3.4 Alternative Web Page Viewing Devices

- In the past, the most common way to view Web pages is using desktop or laptop.

- Today, you also can view Web pages using *handheld computer*.

- **Handheld computers** are wireless, portable computer designed to fit in a user's hand.

    - A **personal digital assistant (PDA)** is a type of handheld computer used to manage personal information and access the Internet. Today, most PDAs are Smartphone's.

- **Smartphone** is a mobile phone that offers other features, such as a camera, calendar, and Internet access for e-mail, music downloads and access to Web pages in addition to cellular voice telephone service.

# 3.Ways to Access the Internet and the web – Cont.

# 4. Types of Web Sites

- Web can be categorizes as personal, organizational and commercial.
- A Web site's type differs from a Web site's purpose.

# 4. Types of Web Sites – Cont.

4.1 Personal Web Sites

- Individual create their own personal Web sites for a range of communication purpose.

- You might use personal Web site to promote your employment credentials, share news and photos with friends and family, or share a common interest or hobby with fellow enthusiasts.

# 4. Types of Web Sites – Cont.

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# 4. Types of Web Sites – Cont.

4.2 Organizational Web Sites

• An organizational Web site is one that owned by any type of group, association, or organization, whether it is professional or amateur group.

• For example, if you belong to the Advertisement Photographers Association of North Malaysia, you might volunteer to create and organizational Web site to promote member accomplishments or to encourage support and participation.

# 4. Types of Web Sites – Cont.
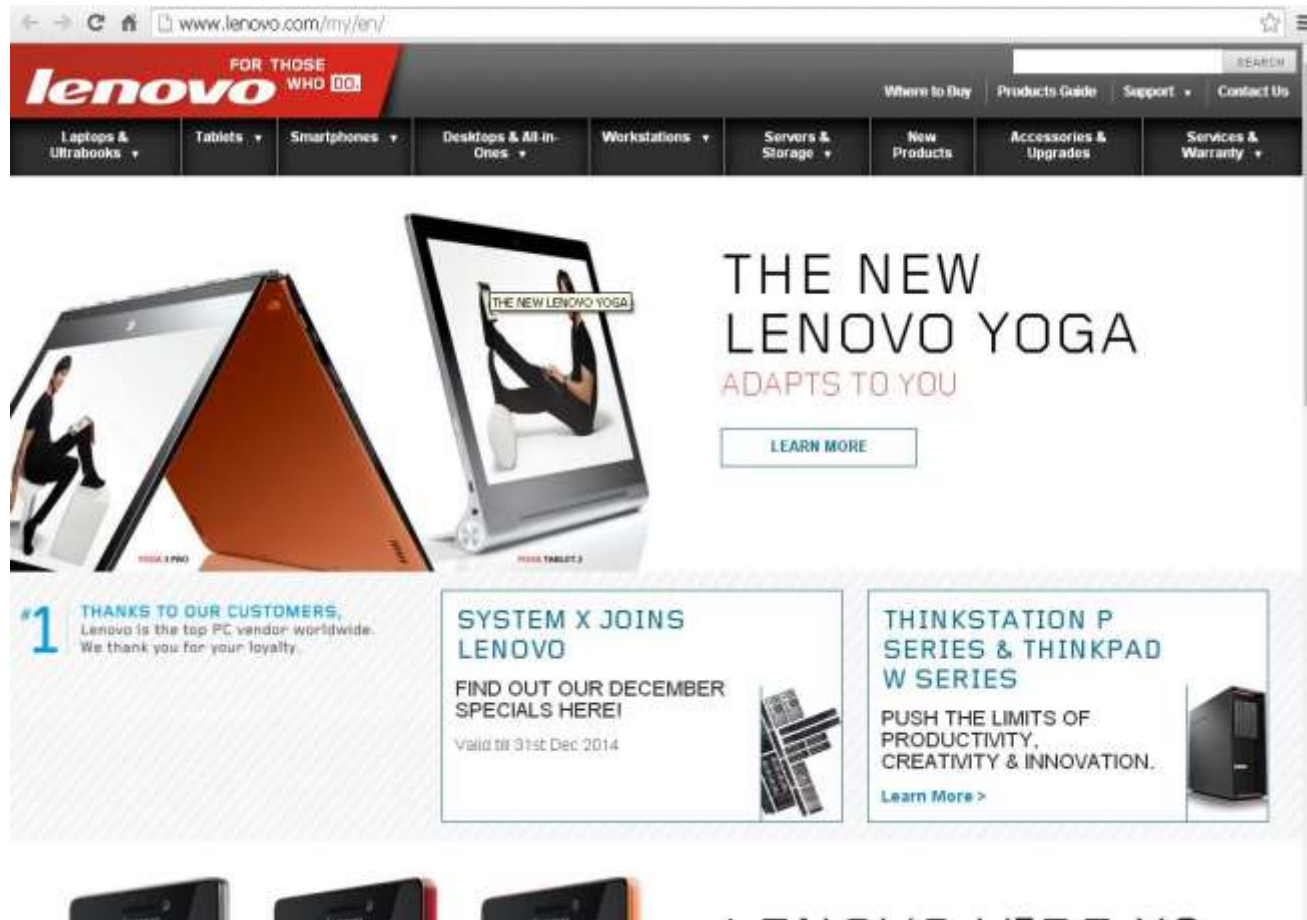
# 4. Types of Web Sites – Cont.

# 4. Types of Web Sites – Cont.

4.3 Commercial Web Sites

- The goal of many commercial websites is to promote and sell products or services of a business, from the smallest home-based business to the largest international enterprise.

- The design and content of a large enterprise's Web site might be much more sophisticated and complex than that of a small business's Web site.

# 4. Types of Web Sites – Cont.

- Sample of large enterprise Web site

# 4. Types of Web Sites – Cont.

- Sample of small business Web site

# 5. Other Internet Services

5.1 E-mail

- Short for **electronic mail**.

- E-mail is a message that may contain *text*, *images*, *files* or other *attachments* sent through a network to a specified individual or group of individuals.

- The first e-mail was sent by Ray Tomlinson in 1971.

# 5. Other Internet Services

5.2 Mailing List

- A **mailing list** is a collection of names and addresses used by an individual or an organization to send material to multiple recipients.

- An electronic mailing list might have several hundred 'other' people receiving the same piece of e-mail you do, there could be thousands of other people.

- In a real sense a mailing list takes one e-mail message that is sent to it and does a mass-mailing to everyone that has '**subscribed**' to the list. To remove your name, you **unsubscribe** from the mailing list.

# 5. Other Internet Services

5.3 Instant Messaging

- **Instant messaging(IM)** is a type of communications service that enables you to create a kind of private *chat room* with another individual in order to communicate in *real time* over the *Internet*.

- It notifies you when one or more people online and then allows you to exchange messages of files.

- Example: Yahoo Messenger, IRC or MSN instant messenger, WhatsApp, IMO etc.

# 5. Other Internet Services

5.4 Chat Rooms

- A designated *area* or *forum* on the *World Wide Web* that allows users to communicate with each other through instant messaging.

- Text is instantly displayed in the chat rooms conversation log after a user hits enter or send.

- Other users included in the chat session are able to see what another user types.

# 5. Other Internet Services

5.5 VoIP

- VoIP stands for **Voice over Internet Protocol**.

- Sometimes it's referred to as *Voice over Networks(VoN)* or *Voice over Broadband(VoB)* and sometimes *Internet Telephony*.

- VoIP allows you to make free, or very low cost, telephone calls over the Internet.

- You can call any telephone in the world and any telephone can call you - regardless of what equipment or network the person you are calling uses.

# 5. Other Internet Services

5.6 FTP

• Short for **File Transfer Protocol**, the protocol for exchanging files over the Internet.

• FTP works in the same way as HTTP for transferring Web pages from a server to a user's browser and SMTP for transferring electronic mail across the Internet in that, like these technologies, FTP uses the Internet's TCP/IP protocols to enable data transfer.

• FTP is most commonly used to download a file from a server using the Internet or to upload a file to a server (e.g., uploading a Web page file to a server).

# ANY QUESTION?

# THANK YOU !