ICT Communications Essentials – Clozed Notes

Lesson 1
Using the Internet and the World Wide Web

Internet vs. World Wide Web

The internet is a very large network of networks.

Networks consist of servers that store information accessed by various clients.

Essentially hardware machines and data.

The World Wide Web is a system of tools and services that enable us to access the information on the Internet.

Web browsers is a tool that retrieves the information using the Internet

Hyperlinks are a key part of the web which connects data resources together, enabling users to "browse" from page to page.

Other Services

The internet can also be used for the following services:

- Gaming
- Instant Messaging
- FTP (file upload or download)
- Email
- Live streaming
- Home Security (Apps)

Cloud

The advantages of the cloud are:

- Data is stored on servers accessed from any location with an Internet connection.
- Files are in a central location, accessible regardless of their current Internet connection.
- Enables people around the world to collaborate on projects without having to travel.
- Need access rights to the server and a browser.
- Some common cloud storage services include Google Docs, Dropbox, Microsoft Cloud, and Apple iCloud.

Connecting to the Internet

6 elements necessary to connect to the Internet:

- A computing device
- An operating system — the software that enables you to interact with your device. Windows and Apple the most common
- TCP/IP (Transmission Control Protocol/Internet Protocol) — allows your device to communicate with other devices on the Internet – generally in place in the device when you purchase it.

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- Client software — software on your device, such as your browser, e-mail program or an "app" on your phone or tablet
- An Internet Service Provider (ISP) — a free or fee-based service that provides the gateway between your device and the Internet.
- An Internet address — provided for your device by your ISP. You also need addresses for the Web site servers you want to visit.

Types of Connections

- Dial-up access - The modem attached to the computer uses a standard telephone line to connect to the Internet.
- Cable - A cable company that provides TV service also provides Internet connection on the cable, instead of using a phone line.
- Digital Subscriber Line (DSL) - A high-speed Internet connection using regular copper telephone lines.
- Broadband satellite - A high-speed connection to the Internet via satellite.
- 3G/4G - High-speed wireless connections for smartphones, tablets and other devices.
- Wireless Fidelity (Wi-Fi) - A network uses radio signals to provide Internet connections to wireless computers and devices.
- FiOS (Fiber-Optic Service) broadband - The newest type of Internet connection. It connects to the Internet using light pulses over a fiber-optic network.

URL – DNS – IP address

URL - www.google.com
IP Address - 216.239.39.99
DNS – converts IP address to a domain name

Web Addresses

- Server name: name given to a server (usually "www" can be anything that helps distinguish it from other servers on the same network
- Domain name: the name registered to a specific web site – usually a common name like "Google" "IBM" "Nike"
- Top level domain: the 3rd part of a URL that tends to identify what "type" of web site it is: edu, gov, com, etc…

All 3 parts together create a "unique" address just like a street address

Top level domains

.com - Commercial organizations, businesses or company sites

.edu - Educational institutions

.org - Organizations; originally clubs, associations and non-profit groups

.mil - U.S. military

.gov - U.S. civilian government

.net - Network sites, including ISPs

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.jp - Japan

.us - United States

.uk - United Kingdom

.de - Germany

.ch - Switzerland

.ca - Canada

Key Web Technologies
- Hypertext Markup Language (HTML) — the code used to format Web pages and create hyperlinks between documents.
- Uniform Resource Locators (URLs) — the unique addresses for resources on the Web. Also called Uniform Resource Identifiers (URIs).
- Hypertext Transfer Protocol (HTTP) — the communication rules for sending and receiving information online.

Web Browsers
Enables your computer to retrieve and display Web pages

Examples are: Chrome, Firefox, Safari, Internet Explorer, and Opera

Not all browsers render the HTML page formatting with absolute consistency

Navigating the Web - Hyperlinks
Hyperlinks are built-in connections to other related Web pages, programmed into the text on the page.

They can also link:
- To another location within a page.
- To another page within the same site
- To a completely different site.

Identifying Hyperlinks
- Cursor changes to the shape of a hand when you hover it over a hyperlink
- Sometimes the hyperlink text will change colors.
- Underlined text is a common convention for hyperlinks on older pages
- Once clicked, the hyperlink text pointing to that page will change to a different color, indicating that the page has already been viewed.

Other Uses for Links
- Download a file to your computer.
- Open an e-mail client and send a message pre-addressed to a person or service department

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- Access content from search results when you search for information