

CSE 100: Computer Skills

Lecture 9: The Internet

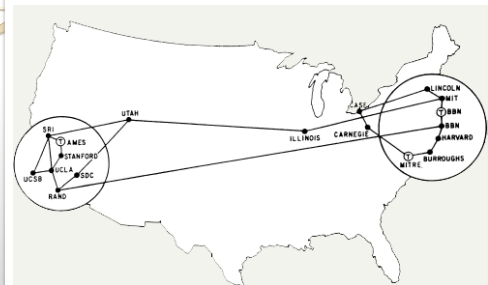
Shahadat Hussain Parvez

THE INTERNET AND THE WORLD WIDE WEB

The Internet's History

- 1969 – ARPANET
 - Developed by the Department of Defense
 - Connected universities and defense bases
- 1973 – ARPANET connects to Europe

ARPANET 1973

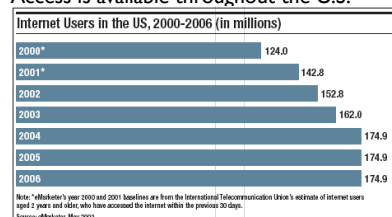


The Internet's History

- Mid-1980s – NSFNet
 - Network between supercomputers
 - Internet was the link to ARPANET
 - No commercial traffic allowed
- 1990s
 - ARPANET shut down
 - NSFNet abandoned
 - Commercial networks take over

Internet in the 2000's

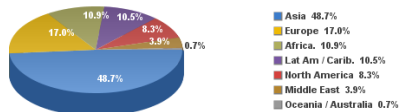
- 100,000 new web sites per month
- More than 50% of U.S. households online
- Access is available throughout the U.S.



Internet Today

- Over 4 billion people worldwide has internet access
- 54% internet penetration worldwide

Internet Users in the World by Regions - December 31, 2017



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Basis: 4,156,932,140 Internet users in December 31, 2017
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The Internet's Major Services

- The World Wide Web (WWW)
 - Developed in 1993 by Tim-Berners Lee
 - Allowed connection of documents
 - Required a browser to read documents
- Electronic mail (e-mail)
 - Instantaneous transmission of documents
- News
 - Often called newsgroups
 - Electronic discussions on several topics

The Internet's Major Services

- File Transfer Protocol (FTP)
 - Sends and receives files
- Chat
 - Public real time conversation
 - Messenger, whatsapp, etc are examples
- Instant messaging
 - Private real time conversation
- Peer-to-peer services
 - Allows sharing of files among users
 - BitTorrent and Napster are examples
 - Illegal to share copyrighted material

The Internet's Major Services

- Social Networking sites
 - Used for communication between users
 - Mostly replaces uses of email for personal purposes
 - Facebook, Twitter, Instagram are examples
- Video sharing sites
 - Used to share videos among other users
 - Youtube, Vimeo, etc are examples
- Content discovery/ Search engine
 - Used to discover new contents
 - Google, Bing, Reddit, etc are examples

Accessing The Internet

- Internet Service Provider (ISP)
 - Company that provides Internet access
- Dialup
 - Connects to Internet through phone line
 - Modem connects to the phone line
 - Slow connection
- High-speed access
 - Connect through a special line
 - 2 – 25 times faster than dialup
 - DSL, Cable, T1 are common

Understanding the Internet

- The Internet allows accessing resources
- The Web simplifies the Internet
- The Web connects documents
 - Hypertext creates links between documents
 - Documents are stored on a web server
 - HTTP delivers documents

Understanding the Internet

- Web site is a collection of documents
 - Document is a web page
 - Pages are published to the web
- Hypertext Markup Language
 - Creates web pages
 - Describes how pages should look
 - Content enclosed in tags
 - `<tag>content</tag>`

Understanding The Internet

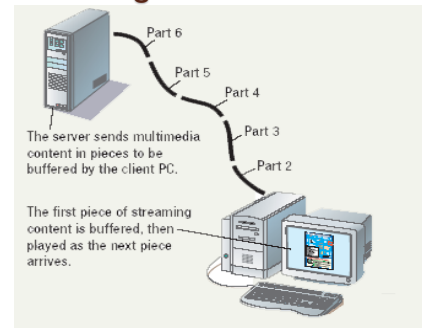
- Browsers
 - Read and translate the HTML
 - Display web content
- Uniform Resource Locator (URL)
 - Address of a web page

www.neub.edu.bd

Understanding The Internet

- Helper applications
 - Plug-ins
 - Enhance a browser's functionality
- Streaming audio and video
 - Sends the file in small chunks
 - Chunks downloaded while others play

Streaming Audio



Using a Browser And The WWW

- Browser starts on the home page
- Navigating the web
 - Enter a URL in the browser
 - Click a link
 - Links are typically blue underlined words
 - Image maps are picture links
- When finished, close the browser

Searching the Web

- The Web is unorganized
- Directories
 - Categorize the Internet
- Search engines
 - Find sites by keyword

Searching the Web

- Site searches
 - Large sites have an internal search
- Metasearch sites
 - Search several web sites at once
- Sponsored links
 - Sites pay for better search results

Search Techniques

- Quote the exact phrase
- Use the keyword AND
- Use the keyword NEAR
- Avoid common words
- Use the site's advanced tools

◦ E-MAIL AND OTHER INTERNET SERVICES

Using E-mail

- Exchanges messages with other users
 - Messages reach destination in seconds
 - Mail waits in mailbox until opened
 - Text, audio, pictures and video messages
- Configuring e-mail
 - e-mail clients read and send e-mail
 - Outlook and Eudora are common
 - Need name of mail server
 - Need username and password
 - Hotmail and Yahoo are online clients
 - No configuration needed

Using e-mail

- e-mail addresses
 - Unique address
 - Allows sending and receiving
 - Username@isp.com
- Listserv
 - Lists of e-mail addresses
 - Each address gets the e-mail

Using e-mail

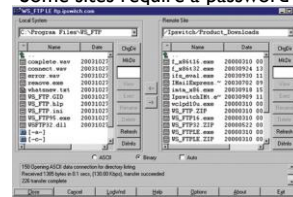
- e-mail actions
 - Create a new message
 - Send an attachment
 - Reply to e-mail
 - Open attachments
 - Forward an e-mail

Other Internet Features

- News
 - Public board devoted to a topic
 - Thousands of topics available
 - Messages are called threads
 - Users can create threads
 - Users can comment on threads
 - Need a news reader program

Other Internet Features

- File Transfer Protocol (FTP)
 - Copies files from a remote computer
 - FTP client is needed
 - Some sites require a password



Other Internet Features

- Internet Relay Chat (IRC)
 - Real time communication system
 - Multi-users with many channels (rooms)
 - Channels are dedicated to a topic
 - All users can read the comments
- Instant messaging (IM)
 - Private, real-time communication
 - Message sent only to listed users
 - Buddy lists contain IM names

Other Internet Services

- Online services
 - Company that offers access by subscription
 - Banks, games and research
 - America Online offers content and Internet
- Peer-to-peer (P2P) services
 - User computers are connected together
 - No centralized organization
 - Users can communicate directly
 - Users can share files

DOING BUSINESS IN THE ONLINE WORLD

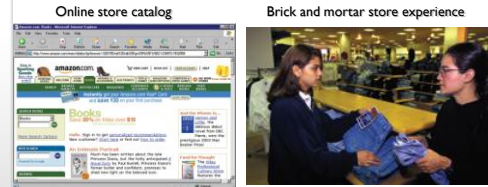
Consumer E-Commerce

- Online shopping
 - Purchasing through a web site
 - Also called Business to Consumer (B2C)
 - List of products is nearly endless
 - Features
 - Searchable catalog
 - Secure checkout
 - Customer support page

Consumer E-Commerce

- Online stores versus brick and mortar
 - Brick and mortar implies a physical store
 - Brick and mortar properties
 - Limited hours
 - Salespeople can offer assistance
 - Customers can handle the merchandise
 - Online store properties
 - Store is open 24 x 7
 - Salespeople usually not available
 - Can only view the merchandise

Online vs. Brick and Mortar



Consumer E-Commerce

- Using online catalogs
 - Good online stores have a catalog
 - Products are often arranged by category
 - Products can be found by keyword

Consumer E-Commerce

- Paying for purchases
 - Vendors accept several payment methods
 - Credit cards
 - Paypal
 - Electronic Fund Transfer
 - Cash on delivery
 - May need to create an account
 - Simplifies shipping
 - Encourages repeat shopping

Consumer E-Commerce

- Getting customer service
 - Needed to resolve problems
 - Understand the policies before ordering
 - Contact information
 - How you contact the vendor
 - Return policies
 - Availability and fee for returning items
 - Shipping policies
 - Charges and fees
 - Convenience fees

Consumer E-Commerce

- Online banking
 - Most teller services handled online
 - Balances can be obtained
 - Bills can be paid
 - Access is typically very secure
 - Not available at all banks

Consumer E-Commerce

- Online finance
 - Broker and investment services
 - Costs less than a traditional broker
 - Stocks and bonds can be traded
 - Loans can be procured
 - Tax returns can be filed

Business E-Commerce

- Business to business (B2B)
 - Business transaction between companies
 - Accounts for the majority of e-commerce
 - Initially private networks were used
 - Common transactions
 - Reorder inventory
 - Purchase stocks
 - Credit checks

Business E-Commerce

- Intranets and extranets
 - Business partners must work together
 - Networks must work together
 - Intranet uses Internet technologies
 - Only internal workers can access resources
 - Use a standard browser to access resources
 - Extranets open the Intranet to clients
 - Clients have password level access
 - Allows the same abilities as employees
 - Very simple to use and setup

Business E-Commerce

- Telecommuters
 - Employee working outside of the office
 - Connects to the office through technology
 - Several technologies are used
 - Home computer and the Internet
 - Key card changes passwords often
 - Encryption is used to protect data



Security

- Improved security measures
 - Before 1998, Web security was nonexistent
 - Now safer than restaurant purchases
 - All reputable sites protect their customers

Security

- Secure web pages
 - Allows safe transmission of credit card
 - Use the secure socket layer (SSL)
 - Encrypts data transmission to the server
 - Secure pages are easily identified
 - URL uses https://
 - Browser status bar shows a closed lock



Homework Based on Lecture 9

- Questions from Chapter 7, Introduction to computers by Mohammed Alamgir
- Exercise 35, 37, 38, 39, 41, 42, 43, 44, 49



END