


Chapter Two


The Internet and World Wide Web

Discovering Computers 2012
Your Interactive Guide to the Digital World



The Internet

- The **Internet** is a worldwide collection of networks that links millions of businesses, government agencies, educational institutions, and individuals



Page 74
Figure 2-1

Discovering Computers 2012: Chapter 2

Evolution of the Internet

- The Internet originated as ARPANET in September 1969 and had two main goals:

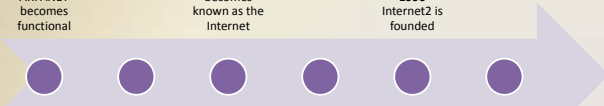
Allow scientists at different physical locations to share information and work together

Function even if part of the network were disabled or destroyed by a disaster

Page 75

Discovering Computers 2012: Chapter 2

Evolution of the Internet



1969 ARPANET becomes functional	1984 ARPANET has more than 1,000 individual computers linked as hosts	1986 NSF connects NSFnet to ARPANET and becomes known as the Internet	1995 NSFNet terminates its network on the Internet and resumes status as research network	1996 Internet2 is founded	Today More than 550 million hosts connect to the Internet
---	---	---	---	-------------------------------------	---

Pages 75 - 76

Discovering Computers 2012: Chapter 2

Evolution of the Internet

- Each organization is responsible only for maintaining its own network
 - The World Wide Web Consortium (W3C) oversees research and sets guidelines and standards
- Internet2 connects more than 200 universities and 115 companies via a high-speed private network

Page 76 5
Discovering Computers 2012: Chapter 2

Evolution of the Internet

- Many home and small business users connect to the Internet via high-speed broadband Internet service

Page 76 6
Discovering Computers 2012: Chapter 2

Evolution of the Internet

ISP (Internet service provider)	Online service provider (OSP)	Wireless Internet service provider
Regional ISPs provide Internet access to a specific geographical area	Has many members-only features	Provides wireless Internet access to computers and mobile devices
National ISPs provide Internet access in cities and towns nationwide	Popular OSPs include AOL (America Online) and MSN (Microsoft Network)	May require a wireless modem

Page 78 7
Discovering Computers 2012: Chapter 2

Evolution of the Internet

- An **IP address** is a number that uniquely identifies each computer or device connected to the Internet
- A **domain name** is the text version of an IP address
 - Top-level domain (TLD)
- A **DNS server** translates the domain name into its associated IP address

Pages 79 – 80 8
Figure 2-4 Discovering Computers 2012: Chapter 2

Evolution of the Internet

Examples of Generic Top-Level Domains

Generic TLD	Intended Purpose
aero	Aviation community members
biz	Businesses of all sizes
cat	Catalan cultural community
com	Commercial organizations, businesses, and companies
coop	Business cooperatives such as credit unions and rural electric co-ops
edu	Educational institutions
gov	Government agencies
info	Business organizations or individuals providing general information
jobs	Employment or human resource businesses
mil	Military organizations
mobl	Delivery and management of mobile Internet services
museum	Accredited museums
name	Individuals or families
net	Network providers or commercial companies
org	Nonprofit organizations
pro	Certified professionals such as doctors, lawyers, and accountants
tel	Internet communications
travel	Travel industry

Page 80
Figure 2-5

Discovering Computers 2012: Chapter 2

9

The World Wide Web

- The **World Wide Web**, or **Web**, consists of a worldwide collection of electronic documents (**Web pages**)
- A **Web site** is a collection of related Web pages and associated items
- A **Web server** is a computer that delivers requested Web pages to your computer
- **Web 2.0** refers to Web sites that provide a means for users to interact

Pages 80 - 81

Discovering Computers 2012: Chapter 2

10

The World Wide Web

- A **Web browser**, or **browser**, allows users to access Web pages and Web 2.0 programs



Page 81

Discovering Computers 2012: Chapter 2

11

The World Wide Web

- A **home page** is the first page that a Web site displays
- Web pages provide **links** to other related Web pages
 - **Surfing the Web**
- **Downloading** is the process of receiving information



Pages 82 - 83
Figure 2-7

Discovering Computers 2012: Chapter 2

12

The World Wide Web

- A Web page has a unique address called a **URL** or **Web address**



Pages 82 – 83
Figure 2-8

Discovering Computers 2012: Chapter 2

The World Wide Web

- Tabbed browsing** allows you to open and view multiple Web pages in a single Web browser window



Page 84
Figure 2-9

Discovering Computers 2012: Chapter 2

The World Wide Web

- Two types of search tools are search engines and subject directories

Search engine

Finds information related to a specific topic

Subject directory

Classifies Web pages in an organized set of categories

Page 85

Discovering Computers 2012: Chapter 2

The World Wide Web

Widely Used Search Tools

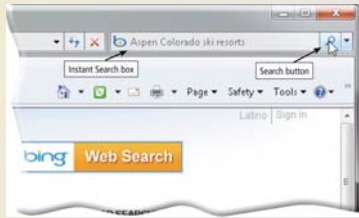
Search Tool	Web Address	Search Engine	Subject Directory
A9	a9.com	X	
AltaVista	altavista.com	X	
AltaVista	altavista.com	X	
AOL Search	search.aol.com	X	
Ask	ask.com	X	
Bing	bing.com	X	
Cull (pronounced cool)	cull.com	X	
Dogpile	dogpile.com	X	
Excite	excite.com	X	X
Gigablast	gigablast.com	X	X
Google	google.com	X	X
Lycos	lycos.com	X	
MSN	msn.com	X	X
Open Directory Project	dmoz.org	X	X
WebCrawler	webcrawler.com	X	
Yahool!	yahoo.com	X	X

Page 85
Figure 2-10

Discovering Computers 2012: Chapter 2

The World Wide Web

- Some Web browsers contain an Instant Search box to eliminate the steps of displaying the search engine's Web page prior to entering the search text



Page 87
Figure 2-12

Discovering Computers 2012: Chapter 2

The World Wide Web

- Search operators can help to refine your search

Search Engine Operators			
Operator	Description	Examples	Explanation
Space or +	Display hits that include specific words.	art + music art music	Results have both words art and music — in any order.
OR	Display hits that include only one word from a list.	dog OR puppy OR canine	Results have either the word dog or puppy or canine.
()	Combine hits that include specific words with those that include only one word from a list.	Kalamazoo Michigan (pizza OR subs)	Results have both words Kalamazoo Michigan and either the word, pizza, or the word, subs.
-	Exclude a word from the search results.	automobile -convertible	Results include automobile but do not include convertible.
" "	Search for an exact phrase in a certain order.	"19th century literature"	Results have the exact phrase, 19th century literature.
*	Substitute characters in place of the asterisk.	writer*	Results include any word that begins with writer (e.g., writer, writers, writer's).

Page 87
Figure 2-13

Discovering Computers 2012: Chapter 2

The World Wide Web

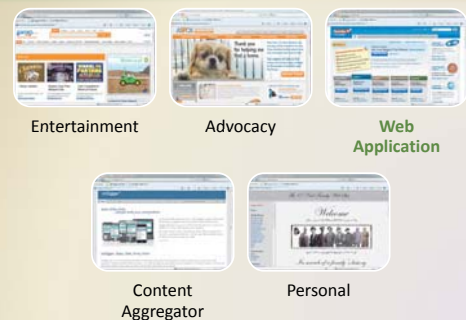
- There are thirteen types of Web sites



Pages 88 – 91
Figure 2-15

Discovering Computers 2012: Chapter 2

The World Wide Web



Pages 91 – 92
Figure 2-15

Discovering Computers 2012: Chapter 2

The World Wide Web

- A **graphic** is a digital representation of nontext information
- Graphic formats include BMP, GIF, JPEG, PNG, and TIFF



The World Wide Web

- A **thumbnail** is a small version of a larger graphic



The World Wide Web

- **Animation** is the appearance of motion created by displaying a series of still images in sequence



The World Wide Web

- **Audio** includes music, speech, or any other sound
 - Compressed to reduce file size
- You listen to audio on your computer using a **player**
- **Streaming** is the process of transferring data in a continuous and even flow

Audio Web File Formats			
Format	Description	Format	Description
AAC	Advanced Audio Coding	WAV	Windows waveform
AIFF	Audio Interchange File Format	WMA	Windows Media Audio (part of Windows Media framework)
ASF	Advanced Streaming (or Systems) Format (part of Windows Media framework)	RA	RealAudio sound file (supported by RealPlayer)
MP3	Moving Pictures Experts Group Audio Layer 3 (MPEG-3)	QT	QuickTime audio, video, or 3-D animation
Ogg	Free, unpatented audio and video format		

The World Wide Web

- **Video** consists of images displayed in motion



Page 96
Figure 2-22

Discovering Computers 2012: Chapter 2

The World Wide Web

- **Virtual reality (VR)** is the use of computers to simulate a real or imagined environment that appears as a three-dimensional space



Pages 96 – 97
Figure 2-23

Discovering Computers 2012: Chapter 2

The World Wide Web

- A **plug-in** is a program that extends the capability of a Web browser

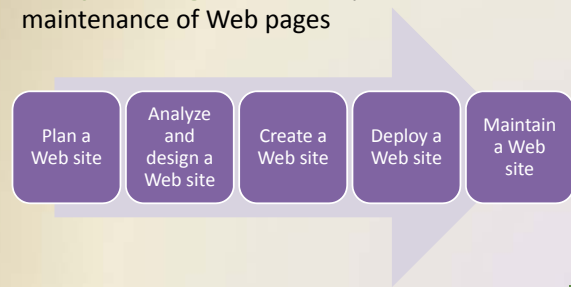
Plug-in Application	Description	Web Address
Acrobat Reader	View, navigate, and print Portable Document Format (PDF) files — documents formatted to look just as they look in print.	adobe.com
Flash Player	View dazzling graphics and animation, hear outstanding sound and music, display Web pages across an entire screen.	adobe.com
Java	Enable Web browser to run programs written in Java, which add interactivity to Web pages.	java.com
QuickTime	View animation, music, audio, video, and VR panoramas and objects directly on a Web page.	apple.com
RealPlayer	Listen to live and on-demand near-CD-quality audio and nearcast-quality video, stream audio and video content for faster viewing, play MP3 files, create music CDs.	real.com
Shockwave Player	Experience dynamic interactive multimedia, 3-D graphics, and streaming audio.	adobe.com
Silverlight	Experience high-definition video, high-resolution interactive multimedia, and streaming audio and video.	microsoft.com
Windows Media Player	Listen to live and on-demand audio, play or edit WMA and MP3 files, burn CDs, and watch DVD movies.	microsoft.com

Page 97
Figure 2-24

Discovering Computers 2012: Chapter 2

The World Wide Web

- **Web publishing** is the development and maintenance of Web pages



Page 98

Discovering Computers 2012: Chapter 2

E-Commerce

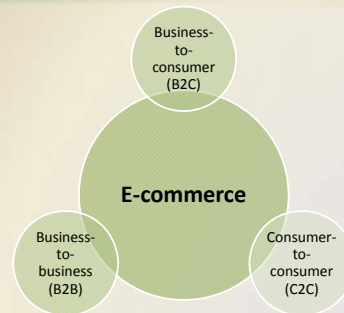
- **E-commerce** is a business transaction that occurs over an electronic network
 - M-commerce identifies e-commerce that takes place using mobile devices

Page 98

Discovering Computers 2012: Chapter 2

29

E-Commerce



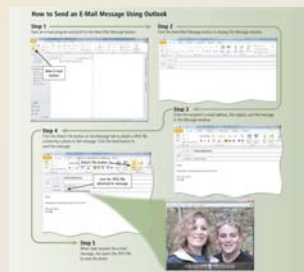
Pages 98 - 99

Discovering Computers 2012: Chapter 2

30

Other Internet Services

- **E-mail** is the transmission of messages and files via a computer network
- An **e-mail program** allows you to create, send, receive, forward, store, print, and delete e-mail messages

Page 101
Figure 2-26

Discovering Computers 2012: Chapter 2

31

Other Internet Services

- A **mailing list** is a group of e-mail names and addresses given a single name
 - **Subscribing** adds your e-mail name and address
 - **Unsubscribing** removes your name

Page 103
Figure 2-28

Discovering Computers 2012: Chapter 2

32

Other Internet Services

- **Instant messaging (IM)** is a **real-time** Internet communications service



Page 104
Figure 2-29

Discovering Computers 2012: Chapter 2

33

Other Internet Services

- A **chat** is a real-time typed conversation that takes place on a computer
- A **chat room** is a location on an Internet server that permits users to chat with each other



Page 105
Figure 2-30

Discovering Computers 2012: Chapter 2

34

Other Internet Services

- **VoIP (Voice over IP)** enables users to speak to other users over the Internet
 - Also called Internet telephony



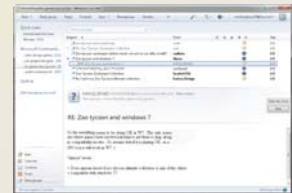
Page 106
Figure 2-31

Discovering Computers 2012: Chapter 2

35

Other Internet Services

- A **newsgroup** is an online area in which users have written discussions about a particular subject
 - Typically requires a newsreader
- A **message board** is a Web-based type of discussion group



Page 107
Figure 2-32

Discovering Computers 2012: Chapter 2

36

Other Internet Services

- **FTP** (File Transfer Protocol) is an Internet standard that permits file **uploading** and downloading with other computers on the Internet
- Many operating systems include FTP capabilities
- An FTP server is a computer that allows users to upload and/or download files using FTP

Page 107 37
Discovering Computers 2012: Chapter 2

Netiquette

- **Netiquette** is the code of acceptable Internet behavior

NETIQUETTE — Golden Rule: Treat others as you would like them to treat you.

1. In e-mail, chat rooms, and newsgroups:
 - Keep messages brief. Use proper grammar, spelling, and punctuation.
 - Be careful when using sarcasm and humor, as it might be misinterpreted.
 - Be polite. Avoid offensive language.
 - Read the message before you send it.
 - Use meaningful subject lines.
 - Avoid sending or posting flames, which are abusive or insulting messages. Do not participate in flame wars, which are exchanges of flames.
 - Avoid sending spam, which is the Internet's version of junk mail. Spam is an unsolicited e-mail message or newsgroup posting sent to many recipients or newsgroups at once.
 - Do not use all capital letters, which is the equivalent of SHOUTING!
 - Use **emojis** to express emotion. Popular emojis include

☺	Smile	☹	Indifference	😮	Surprised
☹	Frown	👎	Undecided		
- Use abbreviations and acronyms for phrases:

btw	by the way
imho	in my humble opinion
fyi	for your information
afaik	as far as I know
fw	for what it's worth
tyvm	thank you very much
- Clearly identify a spoiler, which is a message that reveals a solution to a game or ending to a movie or program.

2. Read the **FAQ** (frequently asked questions), if one exists. Many newsgroups and Web pages have an FAQ.
3. Do not assume material is accurate or up-to-date. Be forgiving of other's mistakes.
4. Never read someone's private e-mail.

Page 108 38
Figure 2-33 Discovering Computers 2012: Chapter 2

Chapter Two

The Internet and World Wide Web

Discovering Computers 2012

Your Interactive Guide to the Digital World

Chapter 2 Complete

