

Discovering Computers 2003
Concepts for a Digital World
Web and XP Enhanced

Chapter 2 Objectives

- Discuss how the Internet works
- Define Webcasting
- Understand ways to access the Internet
- Describe the uses of electronic commerce (e-commerce)
- Identify a URL
- Identify the tools required for Web publishing
- Search for information on the Web
- Explain how e-mail, FTP, newsgroups and message boards, mailing lists, chat rooms and instant messaging work
- Describe the types of Web pages
- Identify the rules of netiquette
- Recognize how Web pages use graphics, animation, audio, video, and virtual reality

Next p. 22

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The Internet What are some services found on the Internet?

- e-mail (1)
- chat (4)
- Web (2)
- message board (5)
- file transfer (3)
- instant messaging (6)

Next p. 22

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History of the Internet How did the Internet originate?

ARPANET
Networking project by Pentagon's Advanced Research Projects Agency (ARPA)

Goal:
To allow scientists at different locations to share information

Goal:
To function if part of network were disabled

Became functional September 1969

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History of the internet Who provides the Internet's structure today?

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History of the Internet How has the Internet grown?

Today
More than 100 million host nodes

1984
More than 1,000 host nodes

1969
Four host nodes

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Ketabton.com

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History of the Internet

Who controls the Internet?

- Nobody; it is public, cooperative, and an independent network
- Several organizations set standards

World Wide Web Consortium (W3C)

- Oversees research, sets standards and guidelines
- Tim Berners-Lee, director

Internet2 (I2)

- Internet-related research and development project
- Develops and tests advanced Internet technologies

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How the Internet Works

What are ways to access the Internet?

- 1 Regional ISP
- 2 National ISP
- 3 OSP (Ex. AOL)
- 4 Wireless Internet Service Provider

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How the Internet Works

How can you connect to the Internet?

Very high-speed connection

Digital subscriber line (DSL) and cable modem

Dial-up access

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How the Internet Works

What are three parts of an Internet connection?

Client

Backbone

Server

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How the Internet Works

- 1: Request data from the a server on Internet.
- 2: Modem converts digital to analog signals.
- 3: Data travels through telephone lines to a local ISP.
- 4: Data passes through routers.
- 5: Regional ISP uses leased lines to send data to a national ISP.
- 6: National ISP routes data across the country.
- 7: National ISP passes data to local ISP.
- 8: Server sends data back to you.

Next p. 27 Fig. 23

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How the Internet Works

What is an Internet protocol (IP) address?

- Number that uniquely identifies each computer or device connected to Internet

IP address → 199.95.72.10

first part identifies network
last part identifies specific computer

Next p. 28 Fig. 24

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What is a domain name?

- Text version of IP address

IP address → 199.95.72.10
 Domain name → scs.site.com

Next p. 2.8 Fig. 2.4

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What is the World Wide Web (WWW)?

- A worldwide collection of electronic documents
- Also called the Web
- Each document is called a Web page
- Can contain text, graphics, sound, video, and links to other Web pages
- A Web site is a collection of related Web pages



Next p. 2.9

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What is a Web browser?

- Program that allows you to view Web pages
- Netscape
- Internet Explorer



Next p. 2.9 Fig. 2.6

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How can you establish a connection and start the Web browser?

- 1: Click the Web browser program name
- 2: If necessary, connect to Internet
- 3: Connection to the Internet occurs and a home page displays




Next p. 2.10 Fig. 2.7

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How do handheld computers and cellular telephones access the Web?

- Must be Web-enabled
- Uses a microbrowser that displays Web pages that contain mostly text

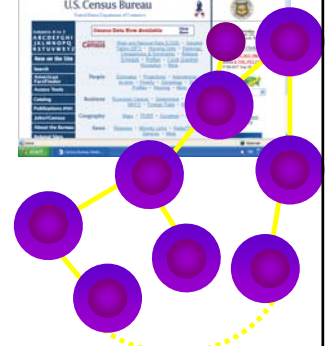


Next p. 2.11 Fig. 2.8

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What is a hyperlink?

- Text or graphic that displays a related Web page
- Also called a link

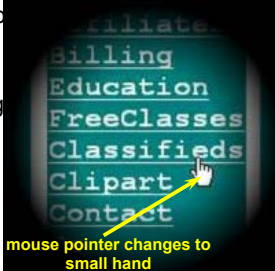


Next p. 2.12

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How can you identify a hyperlink (link) on a Web page?

- ❖ Mouse pointer changes to a small hand when you point to a link
- ❖ Click the link to display the associated Web page
- ❖ Link can be a word, phrase, or image




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How do you recognize links?

1. Some links display a different color when you point to them
2. Some links are underlined
3. Some links are graphical images



Next p. 2.12 Fig. 2-9

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What can links display?

- Item found elsewhere on same Web page
- Different Web page at same Web site
- Web page at a different Web site

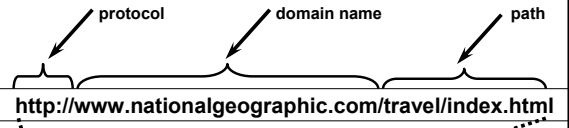



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What is a URL?

- Unique address for Web page located on Web server

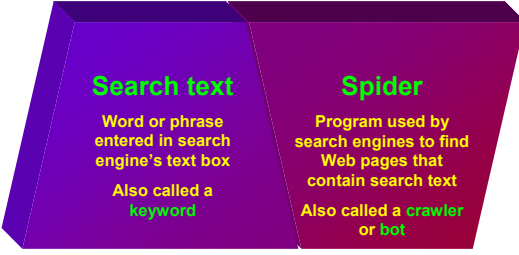



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What is a search engine?

- Program used to find Web pages pertaining to a specific topic

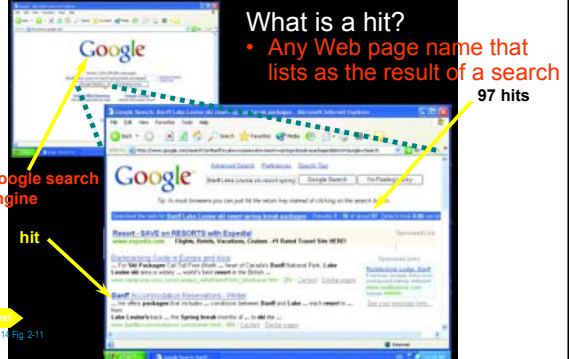


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What is a hit?

- Any Web page name that lists as the result of a search



Next p. 2.14 Fig. 2-11

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The World Wide Web

What are some widely used search engines?

| | |
|------------|----------------|
| AltaVista | altavista.com |
| Excite | excite.com |
| Google | google.com |
| GoTo.com | goto.com |
| HotBot | hotbot.com |
| Lycos | lycos.com |
| WebCrawler | webcrawler.com |
| Yahoo! | yahoo.com |

Next
p. 2.15 Fig. 2-12

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The World Wide Web

What is a directory?

- Search tool with organized set of topics and subtopics
- Lets you find information by clicking links rather than entering keywords

organized topics from which you select

Next
p. 2.15 Fig. 2-13

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The World Wide Web

What are the six basic types of Web pages?

Next
p. 2.16

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The World Wide Web

What is a portal Web page?

- Offers a variety of Internet services from a single, convenient location
- Often called a portal

Yahoo! is a portal

Next
p. 2.16 Fig. 2-14a

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The World Wide Web

What is a news Web page?

- Contains newsworthy material
- Stories and articles relating to current events, life, money, sports, and weather

ESPN.com is a sports news page

Next
p. 2.16 Fig. 2-14b

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The World Wide Web

What is an informational Web page?


- Contains facts
- Created by organizations and governments

Next
p. 2.16 Fig. 2-14c

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What is a business/marketing Web page?

- Contains content that promotes products
- Allows you to purchase products online




Next p. 2.16 Fig. 2-14d

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What is an advocacy Web page?

- Contains content that describes a cause, opinion, or idea




Next p. 2.16 Fig. 2-14e

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What is a personal Web page?

- Web page maintained by private individual
- Reasons: sharing life experience with the world



Next p. 2.17 Fig. 2-14f

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What services are often found on a portal?



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What is a Web community?

- Web site joining specific group of people with similar interests or relationships

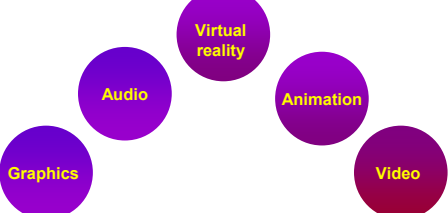


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What is multimedia?

- Application integrating text with other media elements
- Often used on Web pages to add appeal



Next p. 2.18

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What are graphic file formats?

GRAPHICS FORMATS USED ON THE INTERNET

| Acronym | Name | File Extension |
|---------------------------|----------------------------------|----------------|
| BMP | Bit Map | .bmp |
| GIF (pronounced JIFF) | Graphics Interchange Format | .gif |
| JPEG (pronounced JAY-peg) | Joint Photographic Experts Group | .jpg |
| PCX | PC Paintbrush | .pcx |
| PNG (pronounced ping) | Portable Network Graphics | .png |
| TIFF | Tagged Image File Format | .tif |

Next
p. 2.18 Fig. 2-16

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What is a thumbnail?

- Small version of a larger graphical image
- Usually click thumbnail on Web page to display full-sized image

full-sized image

Next
p. 2.19 Fig. 2-17

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What is animation?

- Appearance of motion created by displaying a series of still images in rapid sequence

Next
p. 2.19

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What is audio?

- Music, speech, or any other sound
- Individual sound files that you download to your computer

Next
p. 2.20

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What are MP3 files?

- Compresses audio to one-tenth of original size while preserving quality of sound
- Allows for transfer of music over Web

MP 3 player plays music stored on CD

MP 3 player plays music stored on klik! disk

Next
p. 2.20 Fig. 2-18

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What is streaming audio?

- Enables you to listen to the sound as it downloads to your computer
- Radio stations use streaming audio to broadcast over the Web

RealAudio

RealAudio link

radio station Web page

Next
p. 2.21 Fig. 2-19

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The World Wide Web

What is video?

- Consists of full-motion images with sound played back at various speeds
- MPEG is popular video compression standard

streaming video

Next
p. 222 Fig. 2-20

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The World Wide Web

What is a Web cam?

- Combined video camera and software that outputs video to a Web page

Web cam video display

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The World Wide Web

What is virtual reality (VR)?

- Use of computers to simulate real or imagined environment
- Used for games and many practical applications

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p. 222 Fig. 2-21

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The World Wide Web

What is Webcasting?

- Delivers information via the Web at regular intervals without user making a request
- Also called push technology

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Electronic Commerce

What is e-commerce?

- Financial business transaction that occurs over an electronic network such as the Internet

Target Web site

shopping at Target in the comfort of home

Next
p. 224 Fig. 2-23

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Electronic Commerce

What are the three types of e-commerce?

- Business to consumer (B-to-C or B2C)**
Sale of goods to general public
- Consumer to consumer (C-to-C or C2C)**
One consumer sells directly to another
- Business to business (B-to-B or B2B)**
Businesses providing goods and services to other businesses

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p. 225

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Electronic Commerce

What are e-commerce features?

- Electronic storefront
- Shopping cart
- Online auction



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p. 225

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Web Publishing

What is Web publishing?

- Development and maintenance of Web pages

- 1 Plan
- 2 Analyze and design
- 3 Create the Web site
- 4 Deploy the Web site
- 5 Maintain the Web site



Next
p. 226 Fig. 2-24

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Web Publishing

How do you deploy a Web site?



Locate Web server to store your site

Upload, or copy, site to Web server

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p. 227

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Other Internet Services

What is an e-mail address?

- Combination of user name and domain name that identifies user so he or she can receive e-mail

User name or user-ID at Domain name

A unique combination of characters that identifies you Identifies the mail server




Next
p. 231 Fig. 2-27

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Other Internet Services

How can you get e-mail?

- Obtain e-mail address from school or ISP
- Some Web sites, such as hotmail.com, provide e-mail services free of charge
- Basic components include:



Address Book
Allows you to store list of names and e-mail addresses

Mail Server
Server that contains mailboxes

Mailbox
Storage location usually residing on computer that connects you to Internet

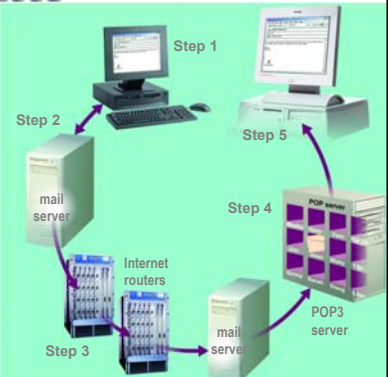
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p. 231

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Other Internet Services

How does an e-mail message travel?

- 1 Create & send message
- 2 Your software contacts ISP mail server
- 3 Mail server determines best route
- 4 Mail server transfers message to POP3 server
- 5 When e-mail software checks for e-mail messages, message transfers from POP3 server to recipient's computer



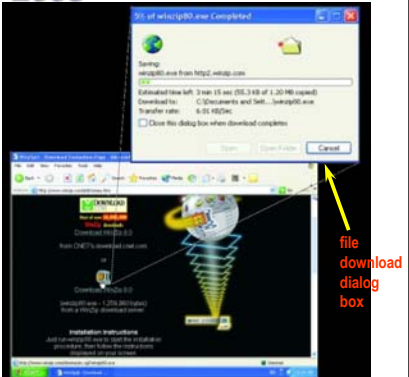
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p. 232 Fig. 2-28

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Other Internet Services

What is FTP?

- **File Transfer Protocol**
- Internet standard that allows you to upload and download files with other computers on Internet



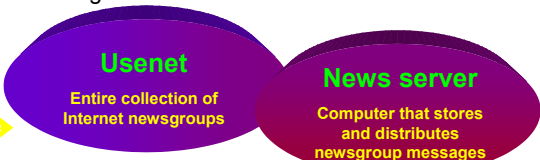
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p. 233 Fig. 2-29

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Other Internet Services

What is a newsgroup?

- Online area where users conduct written discussions about particular subject
- User sends message to newsgroup
- Other users in newsgroup read and reply to message



Next
p. 233

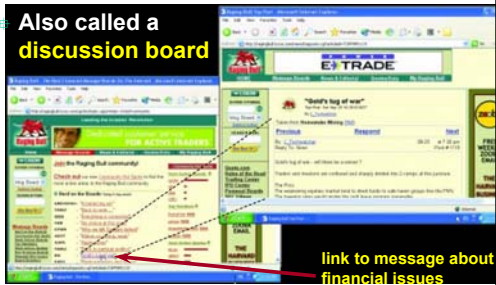
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Other Internet Services

What is a message board?

- Type of discussion group that does not require newsreader

Also called a **discussion board**



link to message about financial issues

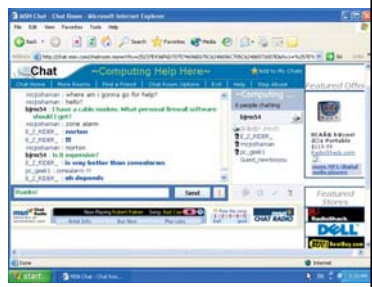
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p. 234 Fig. 2-30

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Other Internet Services

What is a chat?

- Real-time conversation that takes place on a computer
- Chat room is location on server that permits users to discuss topics of interest



Next
p. 235 Fig. 2-32

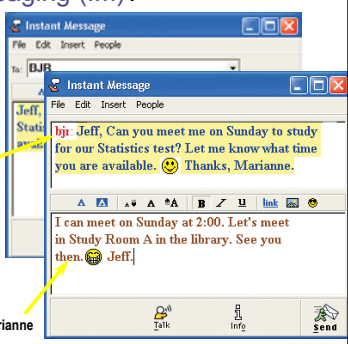
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Other Internet Services

What is instant messaging (IM)?

- A real-time Internet communications service

Marianne's message immediately displays on Jeff's computer screen because she is online



Jeff's response to Marianne

Next
p. 236 Fig. 2-33

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Netiquette

What is netiquette?

- Code of acceptable behaviors users should follow while on the Internet

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

Next
p. 237 Fig. 2-34

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2003 Summary of the Internet and World Wide Web

- History of the Internet
- How the Internet works
- The World Wide Web
- Electronic commerce
- Web publishing
- Other Internet services
- Netiquette

Chapter 2 Complete

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