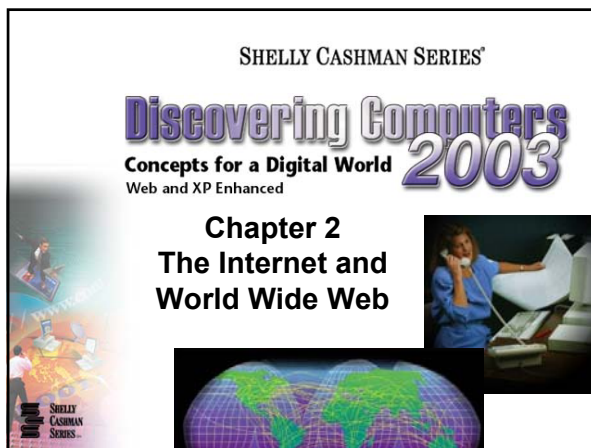




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### Chapter 2 Objectives

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

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### The Internet What are some services found on the Internet?

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

Next p. 23

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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

Next p. 23

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

Next p. 24

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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

Next p. 24

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

**Next**  
p. 24

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## How the Internet Works

### What are ways to access the Internet?

- Regional ISP
- National ISP
- OSP (Ex. AOL)
- Wireless Internet Service Provider

**Next**  
p. 25 Fig. 2-2

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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

**Next**  
p. 25

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## How the Internet Works

### What are three parts of an Internet connection?

Client

Backbone

Server

**Next**  
p. 26

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## How the Internet Works

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

**Next**  
p. 27 Fig. 2-3

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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. 2-4

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## How the Internet Works

What is a **domain name**?

- Text version of IP address

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

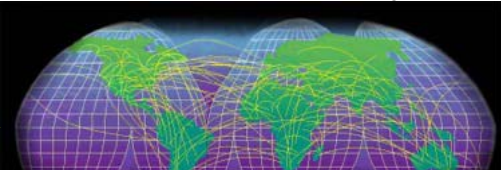
Next  
p. 2.8 Fig. 2.4

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## The World Wide Web

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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## The World Wide Web

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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## The World Wide Web

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

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



Next  
p. 2.10 Fig. 2.7

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## The World Wide Web

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



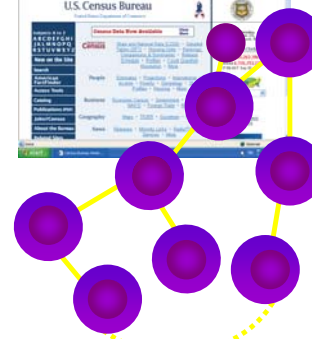
Next  
p. 2.11 Fig. 2.8

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## The World Wide Web

What is a **hyperlink**?

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



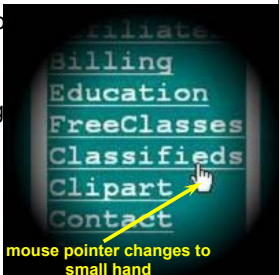
Next  
p. 2.12

## Discovering Computers 2003 The World Wide Web

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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



mouse pointer changes to small hand

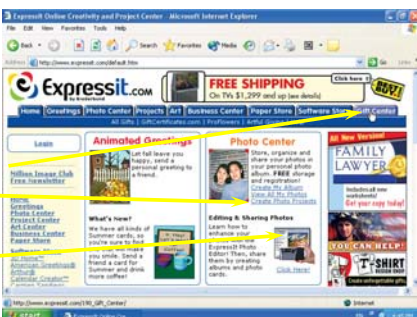
Next p. 212

## Discovering Computers 2003 The World Wide Web

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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



1. link  
2. link  
3. link

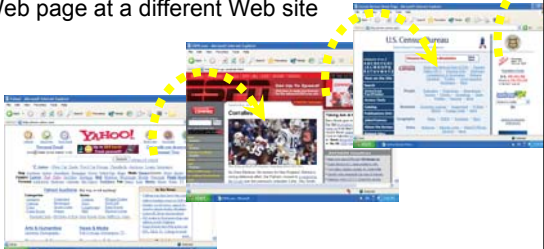
Next p. 212 Fig. 2-9

## Discovering Computers 2003 The World Wide Web

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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



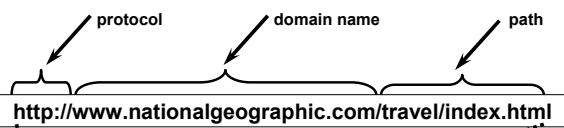
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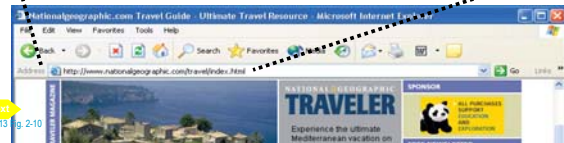
### What is a URL?

- Unique address for Web page located on Web server



protocol domain name path

http://www.nationalgeographic.com/travel/index.html



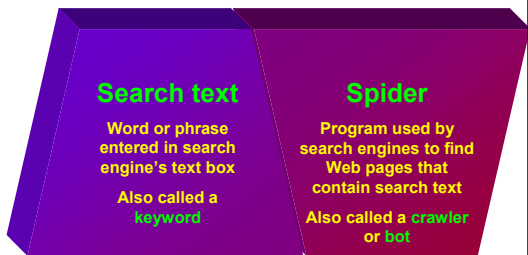
Next p. 213 Fig. 2-10

## Discovering Computers 2003 The World Wide Web

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### What is a search engine?

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



Search text  
Word or phrase entered in search engine's text box  
Also called a keyword

Spider  
Program used by search engines to find Web pages that contain search text  
Also called a crawler or bot

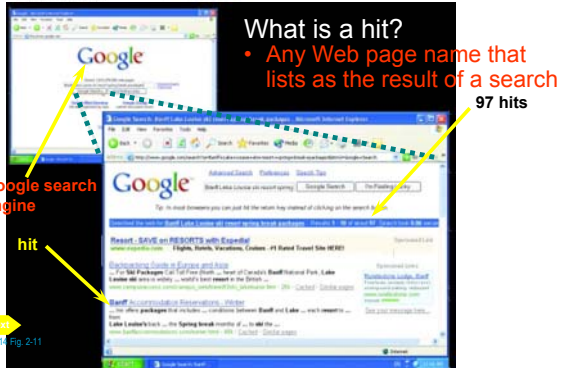
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## Discovering Computers 2003 The World Wide Web

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### What is a hit?

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



Google search engine  
hit  
97 hits

Next p. 214 Fig. 2-11

## Discovering Computers 2003 The World Wide Web

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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

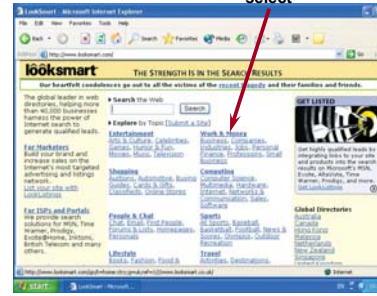
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What is a **directory**?

- 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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What are the six basic types of Web pages?

|          |                        |               |
|----------|------------------------|---------------|
| Advocacy | Business/<br>marketing | Informational |
| News     | Portal                 | Personal      |

Next  
p. 2.16

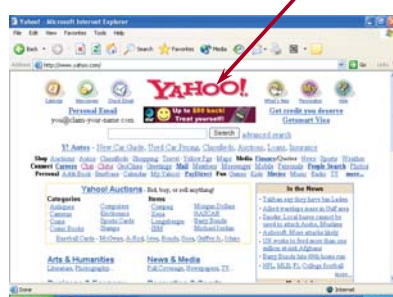
## Discovering Computers 2003 The World Wide Web

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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

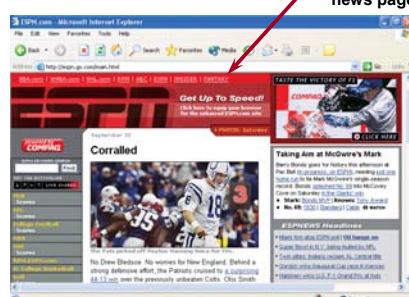
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What is a **news** Web page?

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

ESPN.com is a sports news page



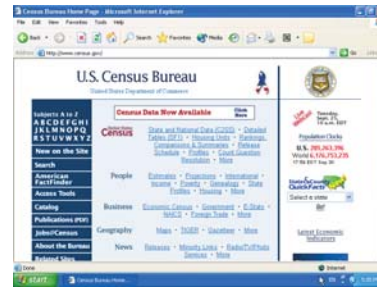
Next  
p. 2.16 Fig. 2-14b

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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?



**Next**  
p. 2.17

## Discovering Computers 2003 The World Wide Web

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### What is a Web community?

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



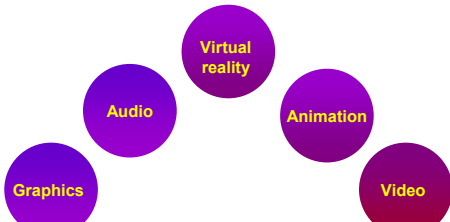
**Next**  
p. 2.17

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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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## The World Wide Web

### 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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## The World Wide Web

### 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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## The World Wide Web

### What is animation?

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

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## The World Wide Web

### 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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## The World Wide Web

### What are MP3 files?

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

Next  
p. 2.20 Fig. 2-18

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## The World Wide Web

### 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 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



Next  
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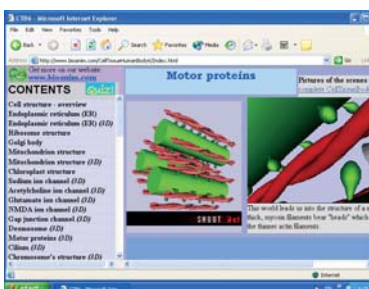
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### The World Wide Web

#### What is virtual reality (VR)?

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



Next  
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

real-time sporting event scores pushed to desktop from SportsLine.com Web site



Next  
p. 222

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### Electronic Commerce

#### What is e-commerce?

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

shopping at Target in the comfort of home

Target Web site



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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## Electronic Commerce

What are e-commerce features?

- Electronic storefront
- Shopping cart
- Online auction



**Next**  
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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**

**Next**  
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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

SallyJohnson@scsite.com

**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

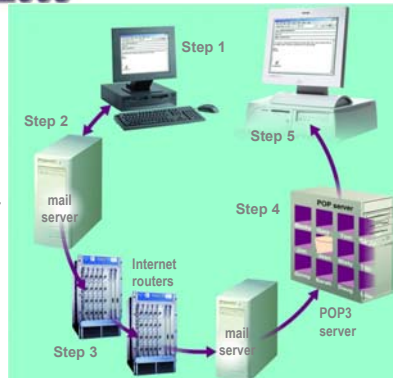
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## Other Internet Services

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



**Next**  
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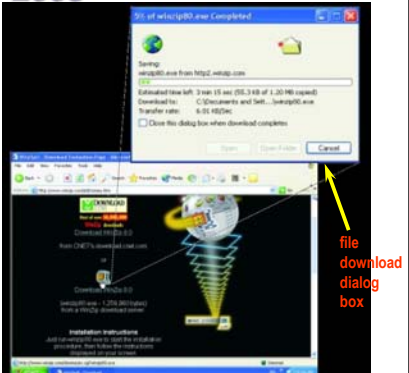
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### Other Internet Services

#### What is FTP?

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

Next  
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## Discovering Computers 2003

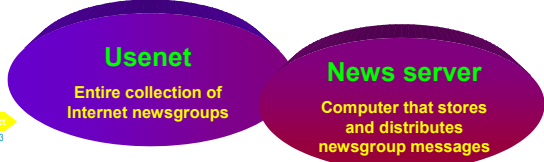
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### Other Internet Services

#### 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

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## Discovering Computers 2003

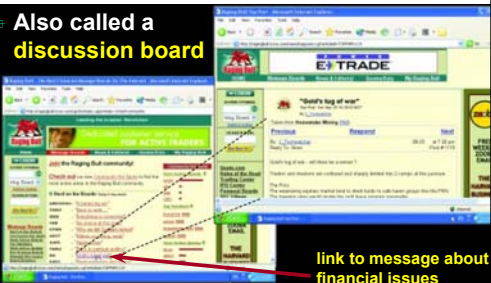
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### Other Internet Services

#### What is a message board?

- Type of discussion group that does not require newsreader
- Also called a discussion board

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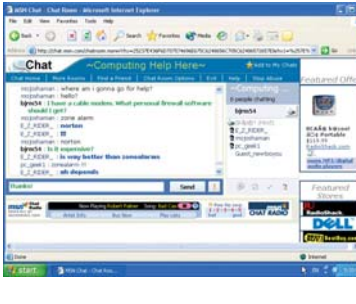
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### Other Internet Services

#### 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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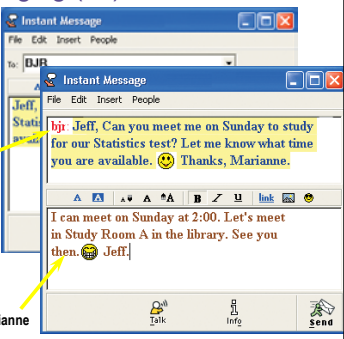
### Other Internet Services

#### 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

Next  
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## Discovering Computers 2003

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### Netiquette

#### What is netiquette?

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

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## 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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