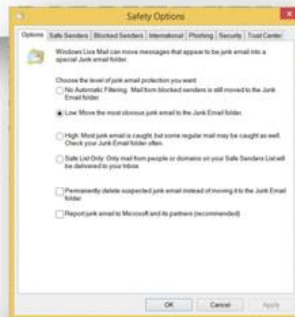
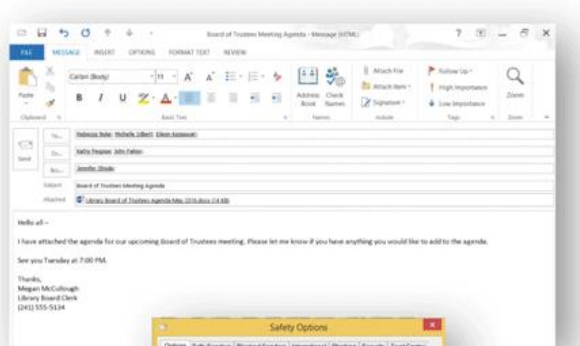


4

Communicating Online (Lecture \$6)



Discovering the Internet, 5th Edition

Objectives

- Describe the components of email systems and email messages
- Use email to send, receive, and organize email messages and contacts, and discuss email viruses
- Describe various online social media and communication tools and discuss how they are used

Email Systems

- Email is one of the most efficient and commonly used online communication tools
 - Indispensable for businesses, schools and other organizations
 - Used by people for nonbusiness communications
- Volume of daily email exceeds the number of pieces of paper mail handled by major postal systems
 - Problems include spam (unsolicited junk email)

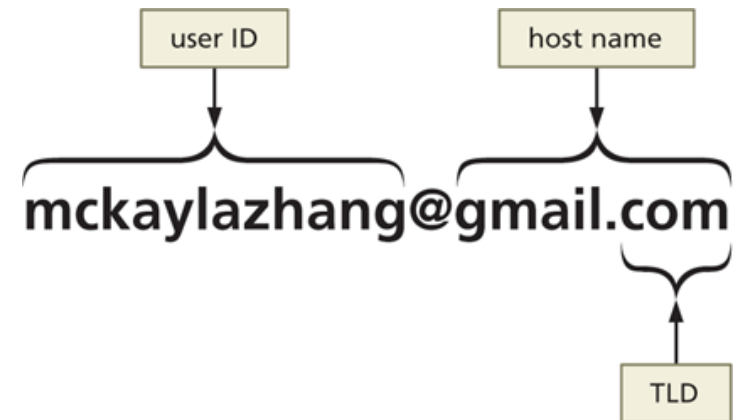
Spam is the use of electronic messaging systems (including most broadcast media, digital delivery systems) to send unsolicited bulk messages indiscriminately

Email Systems

- Email has several distinct benefits
 - Speed of delivery
 - Low cost
 - Accessibility
 - Convenience
 - Ease of management
- Components of an email system
 - Addresses, clients, servers, protocols

Email Systems

- Email Addresses
 - **User name or user ID**
 - **Host name**
 - **TLD (top level domain)**



Components of an e-mail address

Email Systems

➤ Email Clients, Servers, and Protocols

– Email Client

- Program used to create, send, and receive email messages
- Typically offers tools to:
 - Create and send outgoing email messages
 - Read, save, and print messages and attachments
 - Sort, archive, and delete messages
 - Create folders to organize messages

Email Systems

- Email Clients, Servers, and Protocols
 - Email protocols include:
 - **POP (Post Office Protocol)**
 - **SMTP (Simple Mail Transfer Protocol)**
 - **IMAP (Internet Message Access Protocol)**
 - **HTTP (Hypertext Transfer Protocol)**

Email Systems

How an Email Message May Travel from a Sender to a Receiver

Step 1

Using an email program, you create and send a message on a computer or mobile device.



Step 2

Your email program contacts software on the outgoing mail server.



Step 3

Software on the outgoing mail server determines the best route for the data and sends the message, which travels along Internet routers to the recipient's incoming mail server.



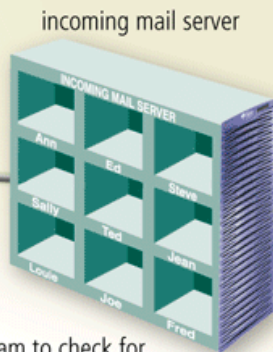
Internet router



Internet router

Step 4

When the recipient uses an email program to check for email messages, the message transfers from the incoming mail server to the recipient's computer or mobile device.



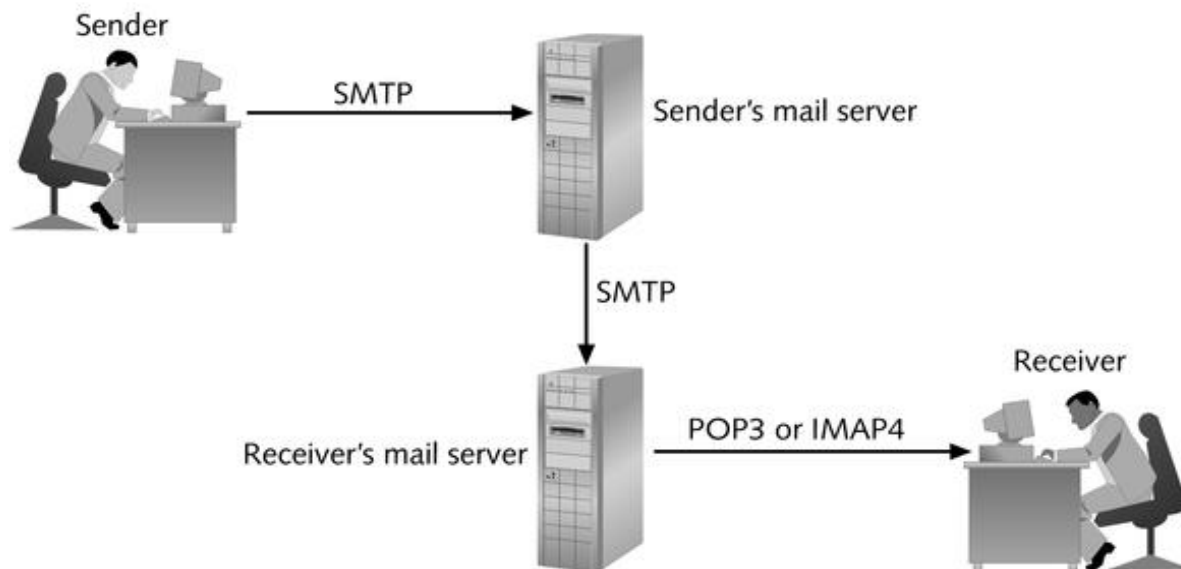
incoming mail server

E-mail Clients and E-mail Servers: How They Interact

- How a sender's email client software finds the e-mail server and ways you can control the process
- Users can have one e-mail server or two e-mail servers (one for sending and one for receiving)

How E-mail Clients and Servers Interact

- Three e-mail protocols
 - SMTP (*Simple Mail Transfer Protocol*)
 - POP (*Post Office Protocol*), e.g. POP3
 - IMAP (*Internet Message Access Protocol*)



SMTP

- Used to send e-mail over the Internet
- Character-based commands are issued from the client; server replies with numeric codes
- A stateful protocol (it can recognize and interpret the nature of the material being sent)

POP

- Used when a client downloads its e-mail messages from a server
- Server replies to each command with a positive (+OK) or negative (-ERR) response
- Four states
 - Connecting state: Connection is established
 - Authentication state: A session is established
 - Transaction state: Mail is delivered
 - Update state: The session is closed
- Slowly being outdated by IMAP

POP

➤ Disadvantage

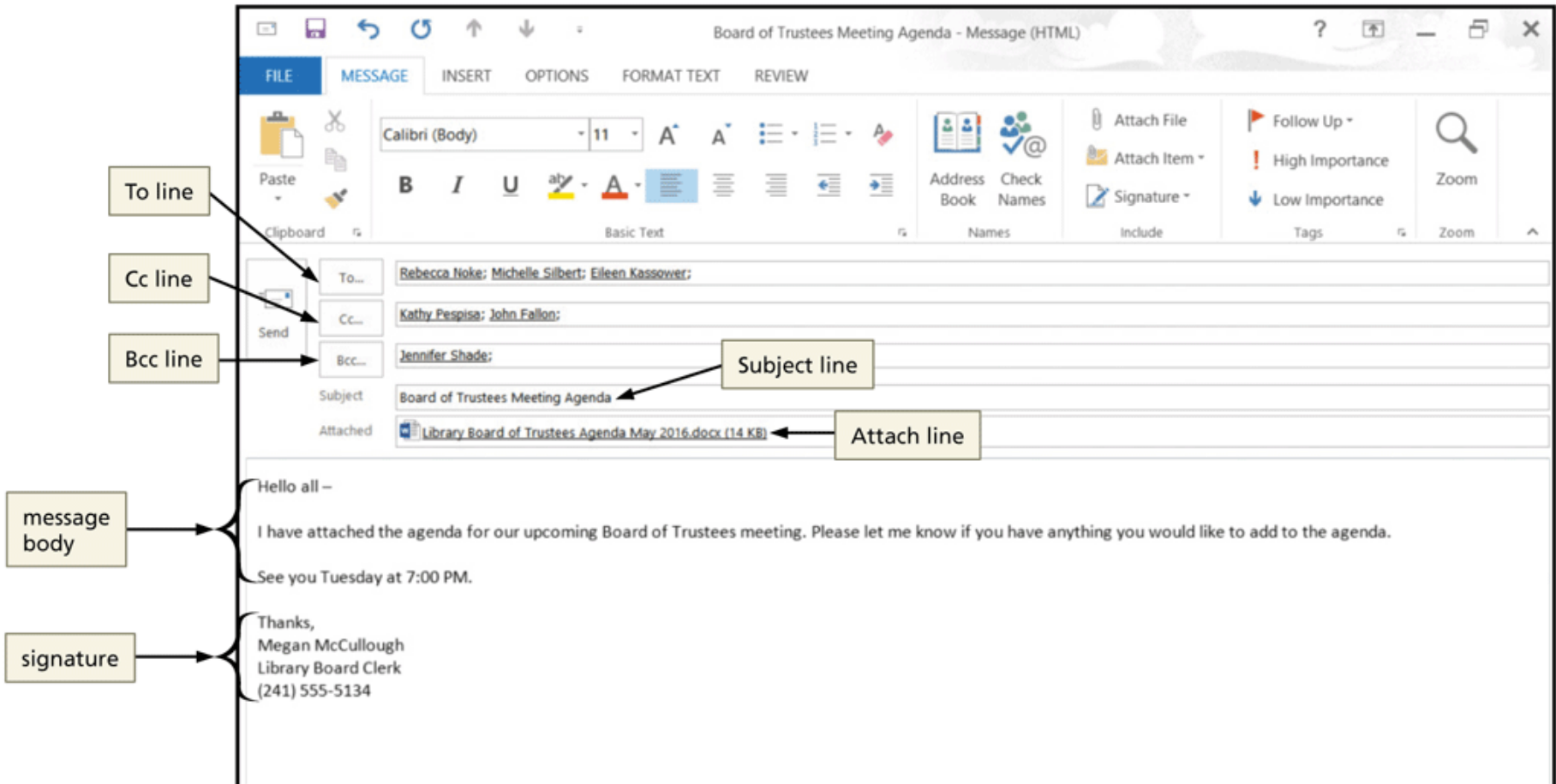
- After the client retrieve all messages, store them on the user's device as new messages, messages will be deleted from the server
- User can only view and manage the messages only using that device
- Although most POP clients have an option to leave mail on server after download

➤ Slowly being outdated by IMAP

IMAP

- Provides mail management functions on the server
 - Messages can be archived in folders on the server
 - Mailboxes can be shared
 - Users can easily access multiple mail servers
 - Users can choose only to read header information about an attached file without opening the file
 - Attached files need not be downloaded with every message

Email Systems



To, Cc and Bcc

➤ To

- One or more email addresses of the message's recipient(s) will receive the message

➤ Cc (Carbon copy or Courtesy copy)

- Recipient(s) will receive a courtesy copy of the message

➤ Bcc (Blind carbon copy or Blind courtesy copy)

- Bcc recipient(s) will only see his/her email address or name and cannot see addresses for others in the Bcc line.

Using Email

A program that copies itself repeatedly, for example, in memory or on a network, using up resources and possibly shutting down the computer, device, or network

➤ Email Viruses and Worms

- **Worm**
- **Trojan horse**
- Use caution in opening email messages
- Install virus protection software on your computer and keep it up to date
- Virus hoaxes

A program that hides within or looks like a legitimate program

A virus hoax is a false warning about a computer virus. Typically, the warning arrives in an e-mail note or is distributed through a note in a company's internal network. These notes are usually forwarded using distribution lists and they will typically suggest that the recipient forward the note to other distribution lists.

Using Email

Phishing is a scam in which a perpetrator sends an official looking email message that attempts to obtain one's personal and/or financial information

Scams encouraging unwary investors to buy a specific stock, thereby artificially inflating the stock's value

Fraudulent requests for money

➤ Junk Email Options

- Malicious spam types include:
 - **Phishing**
 - **Stock-manipulation schemes**
 - **“Nigerian Sting” operations**
- **Spam-filtering services** allow you to filter out and either block or move messages to the Spam folder
- You can set options to block junk email and set exceptions to the blocking process

Social Media

Web 2.0 - technologies and practices are designed to make users' web experiences interactive by incorporating social media and user-driven content into web pages

- **Social media** refers to online tools that allow people to communicate, collaborate, and share over the Internet
- Social networking websites and apps, such as Facebook, LinkedIn, Google+, provide a medium in which friends, colleagues, and school alumni can share personal information or photographs, résumés and networking opportunities, or information about events

Social Media

➤ Social Networking

– Social networking sites typically offer a combination of online communication tools:

- Email
- Discussion groups
- Blogs
- Instant messaging
- P2P networking
- Real-time chat

Weblog (short form is **blog**) is a personal journal published on the World Wide Web consisting of discrete entries ("posts") typically displayed in reverse chronological order so the most recent post appears first.

Social Media

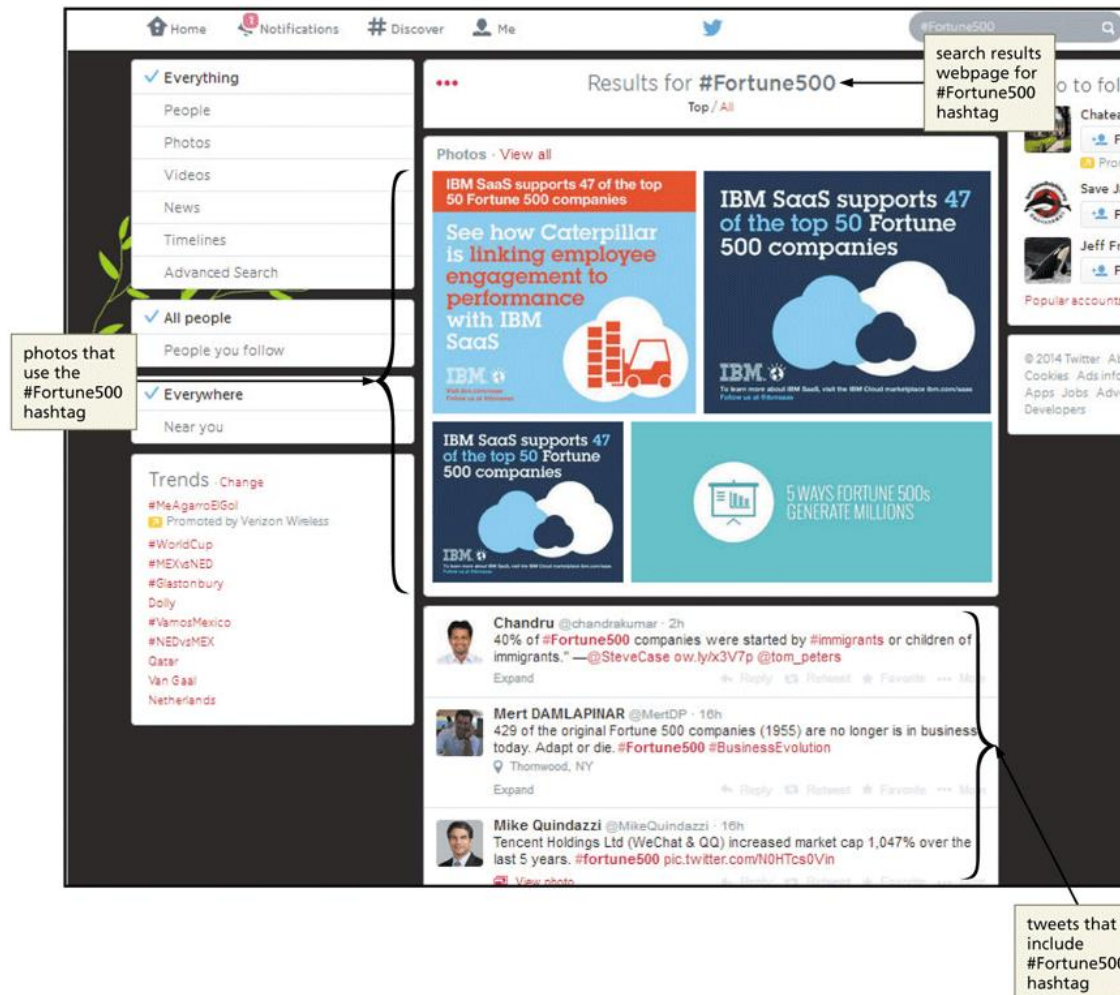


Social Media

➤ Blogging and Microblogging

- Variety of blogs available is collectively called the **blogosphere**
- Blogs are highly popular and powerful tools for sharing thoughts and ideas across a wide spectrum of interests and audiences
- Microblogging, which resembles a combination of blogging and instant messaging, involves broadcasting brief (typically 140 characters or less) messages to a public website or sending email or text messages to subscribers

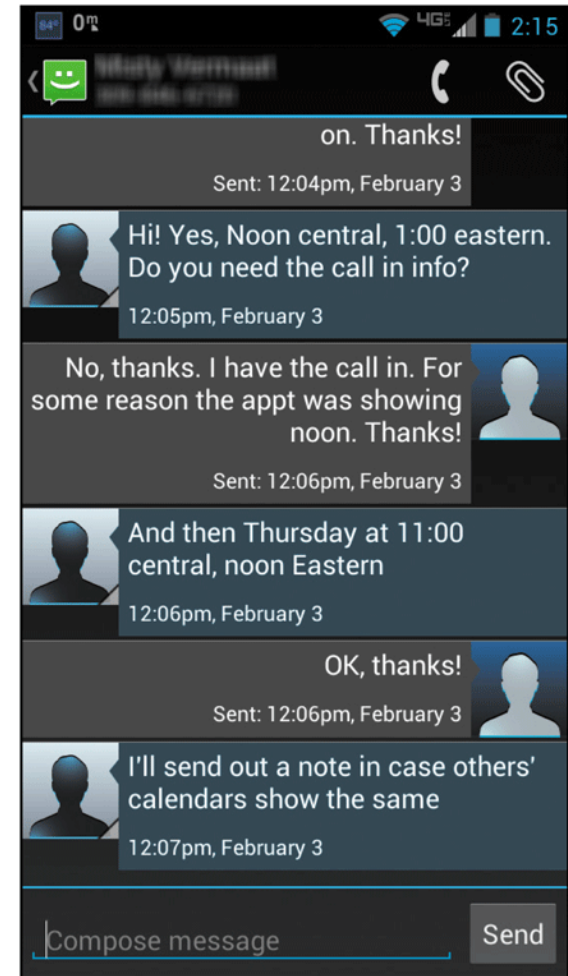
Blogging and Microblogging



Social Media

➤ Text Messaging

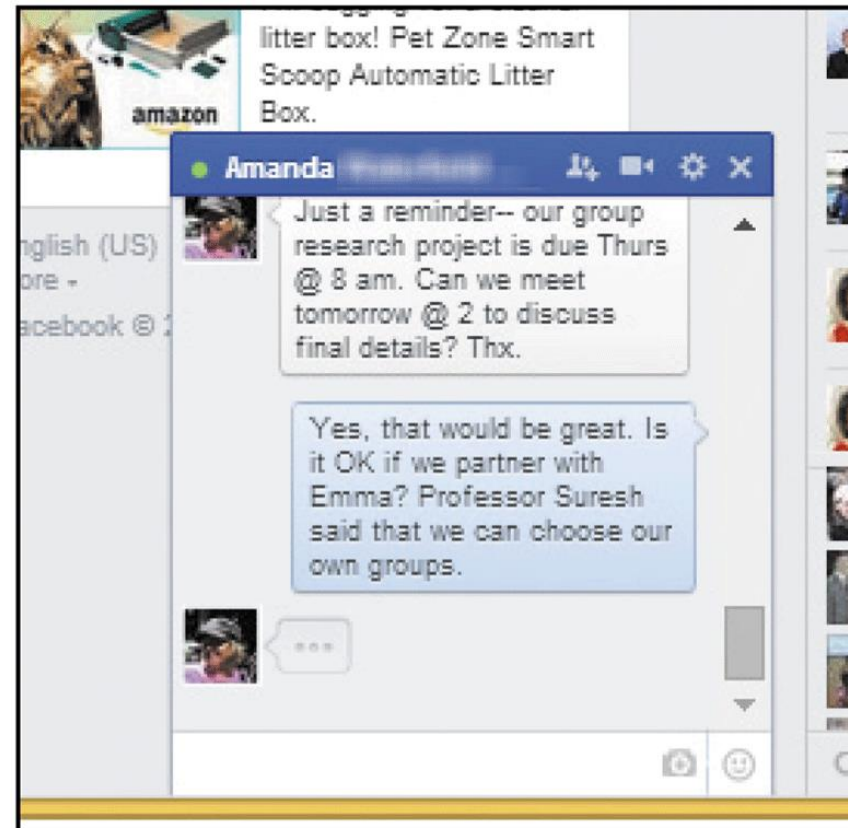
- Text and multimedia messaging, also called **Short Message Service (SMS)** and **Multimedia Messaging Service (MMS)**, respectively, allow users to send short messages containing text only or text, audio, and video to and from smartphones



Social Media

➤ Chat

- A facility that allows two or more people to exchange text or multimedia messages in real-time using a special client, or mobile or web app
- **Web-based chat** allows real-time communication using a web browser or web or mobile app



Social Media

➤ Chat (continued)

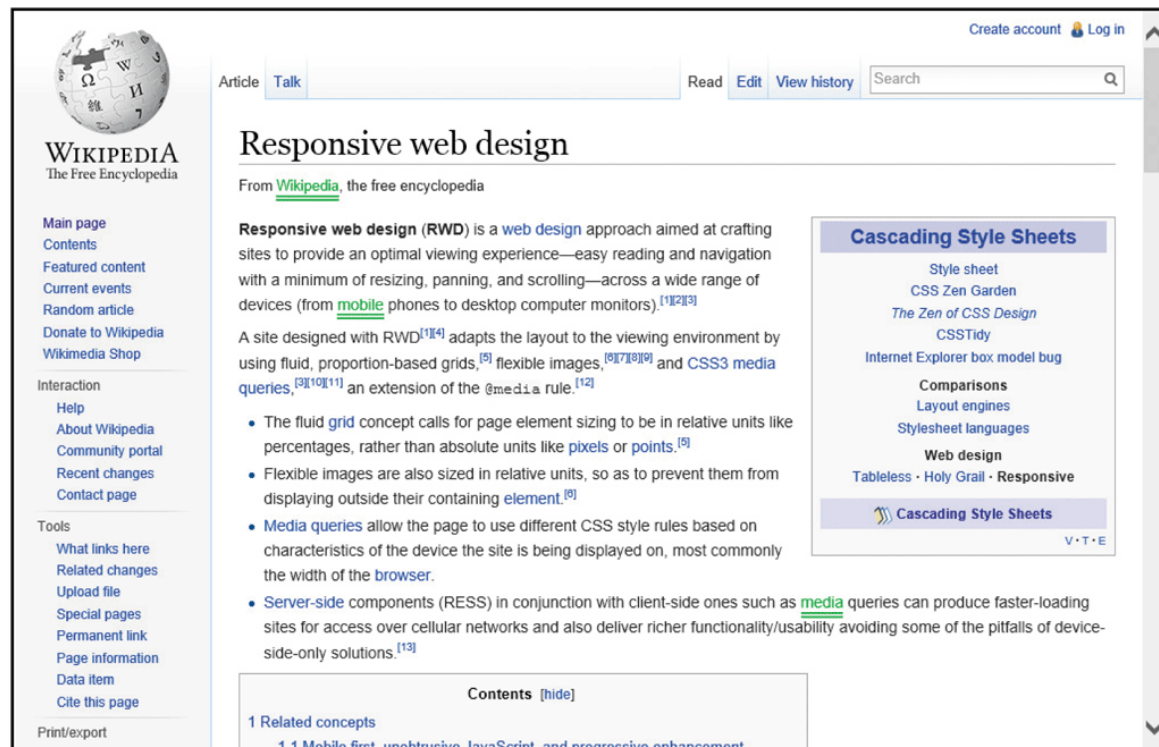
- **Instant messaging (IM)** is a private means of exchanging real-time messages with one or several people using the Internet



Social Media

➤ Collaboration and Sharing

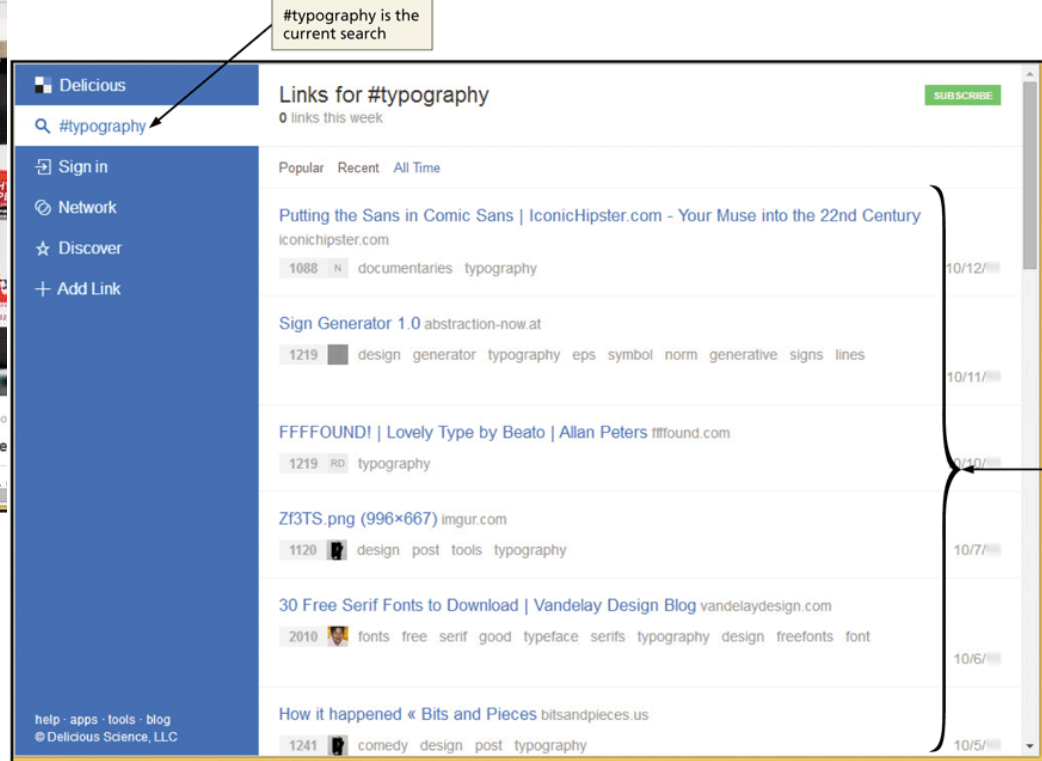
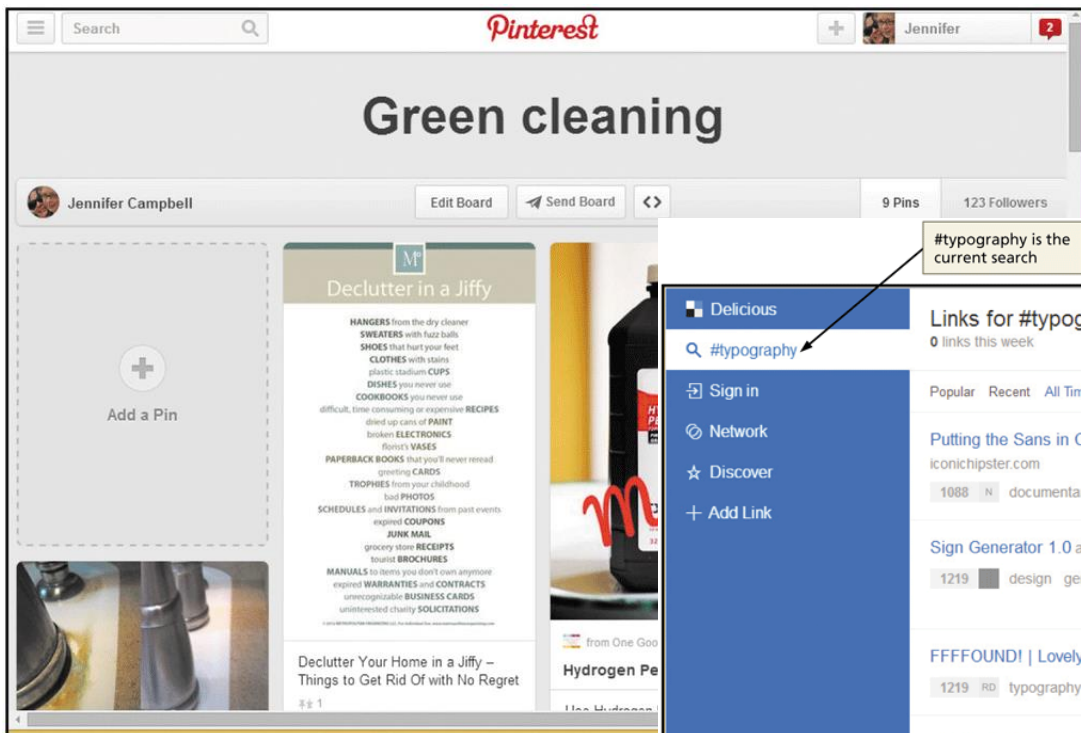
- A **wiki** consists of webpages in which authorized users can make edits to content



Social Media

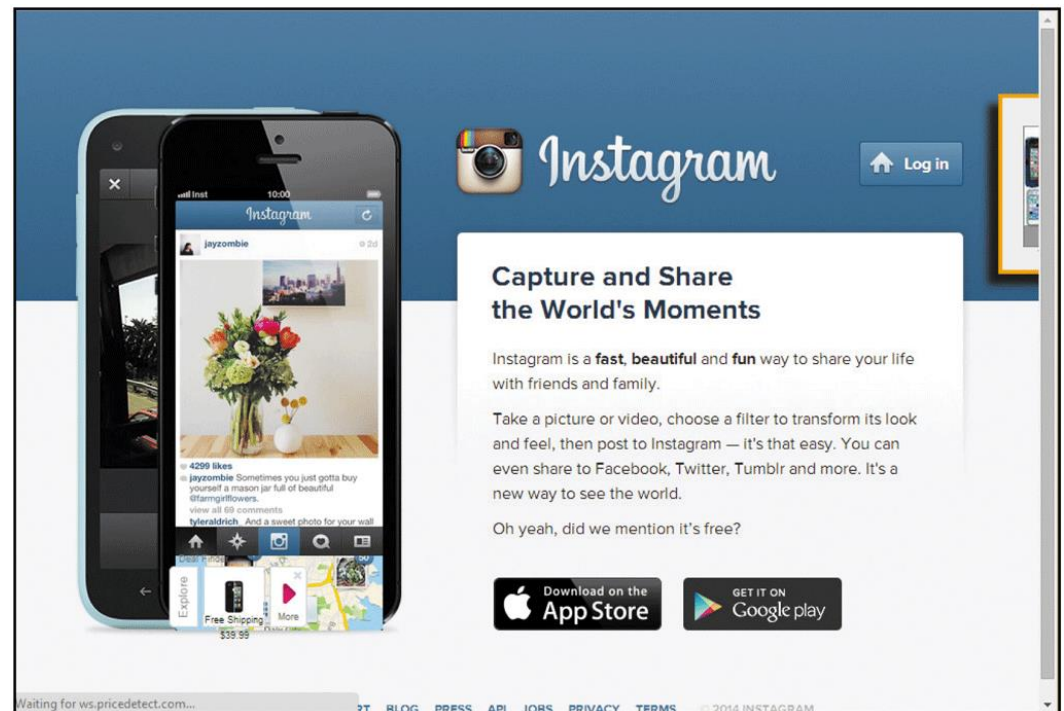
- Collaboration and Sharing (continued)
 - **Social bookmarking** and **content sharing websites**, also called **social tagging websites**, allow users to post a webpage link or image bookmark to a public website, then tag the bookmark with keywords or hashtags
 - Tagging helps organize the bookmarks and makes it easy to search by topic

Social Media



Social Media

- Collaboration and Sharing (continued)
 - People use photo sharing websites or apps to manage their photo and/or video collections
 - Flickr
 - Shutterfly
 - Instagram
 - YouTube





Social Media


- Collaboration and Sharing (continued)
 - Consumers visit **social opinion websites** to check out user reviews for products, movies, books, travel accommodations, local restaurants, appliances, and local service providers
 - Angie's List
 - Yelp
 - Amazon.com and TripAdvisor integrate social opinion features


Social Media


Best of Yelp: San Jose


 Restaurants
5,465 reviewed


 Food
3,341 reviewed


 Shopping
5,340 reviewed


 Nightlife
689 reviewed


 Japanese
325 reviewed


 Coffee & Tea
702 reviewed


 Chinese
562 reviewed


 Bars
432 reviewed


 Beauty & Spas
3,578 reviewed

 Automotive
2,912 reviewed

 Home Services
6,179 reviewed



 Health & Medical
5,207 reviewed



 Local Services
3,177 reviewed



 More Categories



Food



See More

1. **San Jose Tofu Company**
★★★★★ 215 reviews
 It's seriously the best soy milk I ever had.

2. **Charlie's Cheesecake Works**
★★★★★ 327 reviews
 This place is sooo yummy I ordered the 35peice cheesecake poppers.

3. **Treat Ice Cream Company**
★★★★★ 154 reviews
 Tin Roof Sundae I can't wait to see you when I get home tonight.

4. **Shuei-Do Manju Shop**
★★★★★ 458 reviews
 Hands down my absolute FAVE place to get mochi.

5. **House of Bagels**
★★★★★ 296 reviews
 Fast and friendly service - love my bagel and soy latte.

Recent Activity

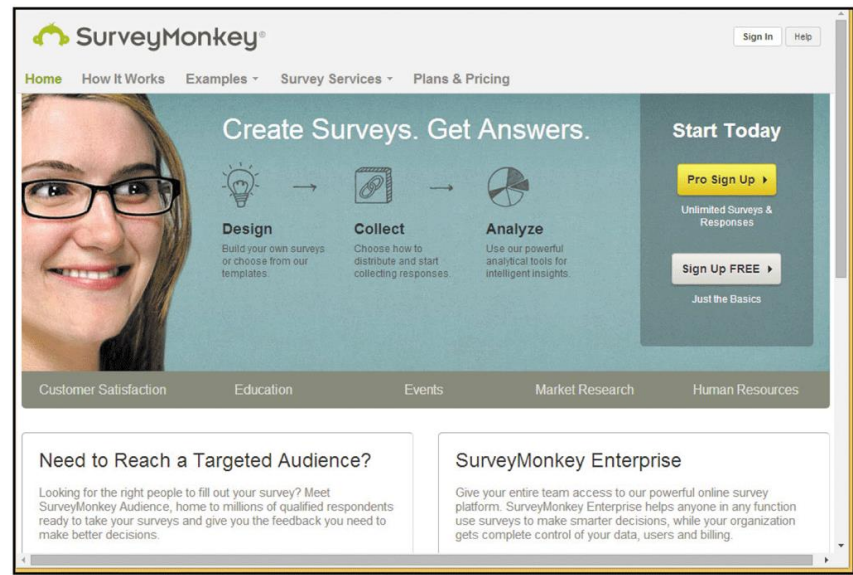
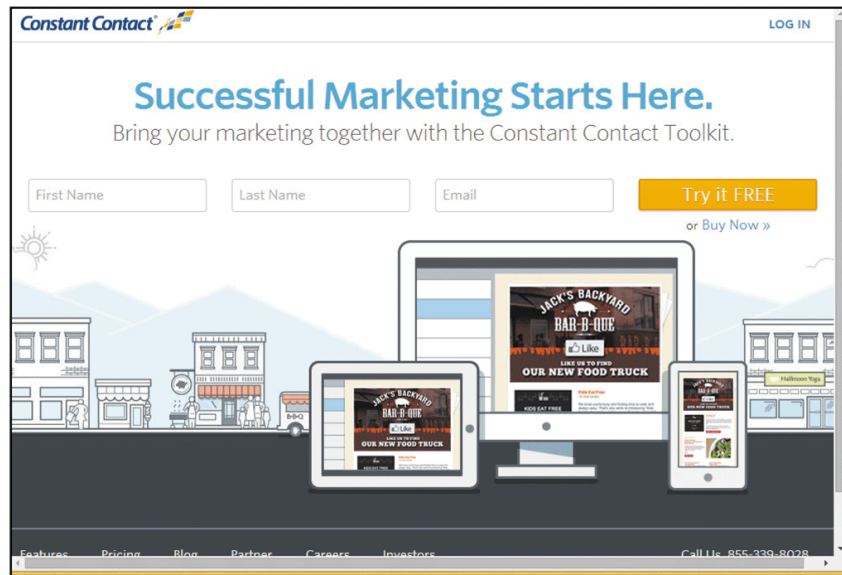
Chapter 4: Communicating Online

32

Social Media

- Email Marketing and Online Survey Technologies
 - **Email marketing software** helps organizations send email and track the success of a marketing campaign by keeping track of the number users who read the email, how many times the recipients tapped or clicked a link in the email, and how many times the recipients purchased a product or enrolled in a service
 - **Online survey technology** companies offer companies and organizations the ability to send an online survey using email

Social Media



Social Media

➤ VoIP

- **VoIP (voice over Internet telephony)** is technology used to make phone calls over the Internet
- To use, you must have:
 - Broadband connection
 - Microphone
 - Speaker
 - Software or app (such as Skype)

Usenet is a worldwide distributed Internet discussion system

- Newsgroups and Web-Based Discussion Groups
 - **Web-based discussion groups** are online discussion forums often hosted by a portal
 - Outgrowth of **newsgroups**, which are online bulletin boards first made available in the 1980s over the **Usenet network**
 - Usenet consists of a number of servers that use the **Network News Transfer Protocol (NNTP)** to send newsgroup messages over an IP network
 - Users access newsgroup content using a **newsreader**