The telephone plays a key role in communicating at work. Data, text, images, and video as well as voice can be transmitted across the country or around the world using telephone channels. Mobile phones allow users to place calls easily from many locations away from the office.

You will use the telephone and related technologies for sharing information at work. As these technologies change, you must learn about new equipment and features that are available. In this chapter, you will become familiar with telephone equipment and services. You will learn to use effective telephone procedures and become aware of available telephone technology.

### Online Resources

- **The Office Web site:**
  - Data Files
  - Vocabulary Flashcards
  - Sort It Out, Telephone Procedures
  - Chapter 12 Supplementary Activity

- **Search terms:**
  - facsimile
  - online telephone directory
  - smart phone
  - telecommunications
  - telephony
  - video conference
Office workers often need to share information with others quickly and reliably. This information is often shared using telecommunications technology. **Telecommunications** is the electronic transfer of data over a distance. This data can be in the form of voice, video, text, or images. You are very familiar with the most popular telecommunications device ever invented—the telephone. Because voice transmission by telephone is a common form of telecommunications, the technology is often simply called telephone technology.

New telephones and systems are being equipped with features to meet the ever-changing variety of user wants and needs. Some widely used systems and equipment will be discussed in this chapter. However, technology is rapidly changing. Office workers must be prepared to become acquainted with new telephone features and equipment as they become available.

**Transmitting Data Using Telephone Channels**

Telephone technology allows workers to send information across the country or around the world. When you place a telephone call or transfer data to a remote computer, the data usually travels over telephone channels. The data may travel as either **analog** or **digital** signals. Many companies are replacing older analog lines with digital lines. Digital signals can transmit large quantities of data at speeds much faster than analog signals. This means your electronic message (a letter, a long report, or a chart) is received quickly and reliably. Data that can be read by a computer is in digital form.

Some communications systems use only analog signals. They require a device called a **modem** to send digital data. This device is used to convert the digital data into analog signals that can be transmitted over telephone channels. A modem can be an internal device installed inside the computer case. It can also be an external device that is attached to the computer.

Satellites play an important part in worldwide telecommunications systems. Satellites send voice, video, and other data in the form of microwave signals. A communications **satellite** is a data relay station that orbits the earth. A satellite dish is a data relay station that remains stationary, on earth. Data from your telephone or computer may travel through telephone lines to a satellite dish. From a satellite dish, data can be sent to an orbiting satellite. The orbiting satellite transmits the data to another satellite dish in another part of the world. Data from the second satellite dish may travel through telephone lines to the receiving telephone or computer.
Telephony: integration of computer and telephone technologies

Telephony

As technology changes, businesses are using new equipment and procedures to improve communications. The integration of computer and telephone technologies is called telephony. In a modern communications system, a computer may be used to control and access telephone functions. Such a system may also allow users to access computer functions by telephone. Telephony technology offers features such as:

- Two-way video, audio, and computer communications that let callers open, view, and edit computer files and send notes to each other as they talk
- Computer software that lets users manage telephone activity at a personal computer
- Caller ID service that allows the user to see the number of the caller and allows incoming calls to be screened—whether from within or outside the company

WORKPLACE CONNECTIONS

Chin must send a price quote from his office in Miami to a customer in London. Using an e-mail attachment, he sends the price list to London in minutes. That data travels via a worldwide satellite communications network. The customer reviews the quote and sends Chin an order by return e-mail. This time savings allows Chin to receive and fill the customer’s order quickly.
- Conference calling that can be placed by using names from the user’s computer phone directory
- Access to the Internet and World Wide Web
- Management of all voice, fax, or e-mail messages with either a touch-tone phone or a personal computer
- Multimedia tutorials that help users learn how to use advanced system features

Some businesses take advantage of current technology by using voice over Internet protocol (VoIP). **VoIP**, also called Internet voice, allows users to make telephone calls using a high-speed Internet connection instead of standard telephone channels. A traditional telephone with an adaptor or a computer with a modem is used to place calls. The voice signal is changed to a digital signal. The digital signal travels over the Internet. The signal is then changed back into voice and delivered to the receiving phone or computer. Some VoIP services allow users to call only other people who have the same service. However, other services allow users to call anyone.

An advantage of using VoIP is that it can help a business save money. The business can use a broadband Internet connection and other equipment that is already in place for sending data to make phone calls. The business may be able to reduce or even cancel the services purchased from a standard telephone company. Some VoIP providers offer plans that allow unlimited local and long-distance calls to anywhere in the United States for one set fee. Also, some VoIP providers offer features such as caller ID, call waiting, and voice mail at no added charge. These services are often an extra charge when purchased from standard telephone companies.
A disadvantage of using VoIP is that service may be lost during a power outage. Problems with the company’s network or high-speed Internet connection may also mean that service will be disrupted. Backup power supplies and network servers can be used to help avoid these problems.

Using the 911 emergency number with VoIP from remote locations is also a concern. When the emergency 911 number is called using a standard telephone line, the 911 service can find the location from which the call is placed. If the caller is using VoIP, the 911 service may not be able to find the location of the caller. A VoIP call may be placed from any location with a high-speed Internet connection.

**Voice Communication Systems**

The telephone is an important tool for sharing information for businesses. In a small company, the telephone system may be as simple as having one or two telephone lines for the company. In other companies, the telephone system may include many lines and be integrated with a computer system.

**Centralized Telephone Systems**

Centralized telephone systems route calls coming into and going out of an organization. All calls in a centralized system are handled by a single computer or operator switchboard that routes calls to the requested location. Older systems required the assistance of a human switchboard operator to answer and transfer calls. Some systems that are handled by computer give callers the option of speaking to a human operator.

Many telephone systems in businesses today are answered by an automated attendant. An automated attendant is a computerized system for handling telephone calls. When an incoming call is answered by an automated attendant, a recorded message is played. Messages vary depending on company needs. However, the message usually instructs the caller to dial the extension number of the person being sought. It may provide the caller with various menu options. Callers make selections using the telephone number keypad. Some systems also allow users to select menu options by speaking a word or term into the receiver. A computer will identify the spoken command and perform the chosen action. This feature is called speech recognition. Additional messages may then instruct and direct the caller.

The option of speaking with a person is no longer always a choice for the caller. However, many companies continue to offer an option to speak with a person to provide better service for customers. Some callers prefer to talk with a person rather than with a computer. Other callers may not have a touch-tone phone, which is usually required for the automated system.

Many callers have adjusted to computerized systems. However, some callers become frustrated with systems that seem to block human contact. Businesses must deal with these complaints and do their best to meet callers’ needs and preserve goodwill.
Mobile Telephones

Mobile telephones are an important tool commonly used for both personal and business communications. Mobile phones use wireless, radio frequencies to transmit data across geographic areas called cells. These phones are also called cellular telephones or cell phones. When you dial a mobile telephone number, the radio signal “switches” from cell to cell until the right number is reached. Mobile service providers furnish the user with the transmission. Because modern cell phones use digital technology, they are sometimes referred to as digital phones.

Cell phones are designed to be portable, lightweight, and small. You may use them in your car or carry them in your briefcase to use wherever you are. In some areas, cell phones may not be close enough to a transmission tower to receive a signal. A no signal message may be displayed to indicate that a call cannot be made from that location.

A camera phone (or camphone) is a mobile phone that has a built-in camera. This device can be used to take photographs and send these images to other phones. The user may be able to connect the phone to a computer to download pictures for printing or storage.

In Chapter 3 you learned about handheld computers called PDAs (personal digital assistants). These small, portable computers are used to track appointments, record contact data, take notes, access e-mail, and perform many other tasks. A device that combines the features of a PDA and a mobile phone is called a smart phone. With a smart phone, users have one device (rather than two) to handle calls and manage data. Some smart phones have a small keyboard on the outside of the device. Other smart phones have an on-screen keyboard and use handwriting recognition. When buying a smart phone, the user should be aware of the device’s operating system and additional programs available that can be loaded onto the device.
Travelers may need to call their offices or customers while flying. Some airplanes are now equipped with telephones that are available for use by passengers for placing calls. Telephones may be positioned at passenger seats or at a location made available by the flight staff. Because these telephones work while in flight, they are sometimes called airphones.

**Pagers**

Pagers are very small devices that alert the user of the need to respond by telephone to whomever has sent the signal or “page.” Early pagers got the attention of the user with audio beeper signals. They became known as “beepers” because of the sounds they made. Today’s pagers use a variety of signals such as vibrations, voice, and digital readout. The recipient of the signal should respond as soon as possible by finding the nearest telephone to call the number on the readout or to call the office.
Common Features of Telephone Systems

Many features are available that allow users to customize a telephone. Different features are available on different telephones or systems. A user's manual is generally provided. The manual gives steps for using the features available. To activate call forwarding, for example, you may be instructed to tap the * (asterisk, or “star”) and 4 keys, listen for a tone, dial the number to which you want all incoming calls routed, and hang up. Your incoming calls will then be forwarded and will ring at that number. Figure 12-1.1 lists common features of telephones or systems.

Conference Calls

At times it may be necessary to place calls that will have three or more participants speaking at different locations. These calls are known as conference calls. Conference calls may be handled in several ways: with the user's own equipment, operator-dialed service, or dial-in service.

<table>
<thead>
<tr>
<th>Common Telephone Features and Services</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Auto redial</strong></td>
<td>Redials automatically the last number dialed when the user presses a key</td>
</tr>
<tr>
<td><strong>Call block</strong></td>
<td>Restricts callers from making toll calls or calls for which an extra charge is made</td>
</tr>
<tr>
<td><strong>Call forwarding</strong></td>
<td>Sends calls automatically to another telephone number</td>
</tr>
<tr>
<td><strong>Caller ID</strong></td>
<td>Records or displays the telephone number of the caller</td>
</tr>
<tr>
<td><strong>Call queuing or camp on</strong></td>
<td>Re-establishes the connection after a busy signal when both parties are free</td>
</tr>
<tr>
<td><strong>Call return</strong></td>
<td>Allows users to press a code number, such as *69, to dial the number of the last incoming call</td>
</tr>
<tr>
<td><strong>Call waiting</strong></td>
<td>Signals an incoming call is waiting while a call is in progress</td>
</tr>
<tr>
<td><strong>Conferencing</strong></td>
<td>Allows the user to set up conversations with three or more people at the same time</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>Allows the user to store numbers and then dial a number with one button</td>
</tr>
<tr>
<td><strong>Speakerphone</strong></td>
<td>Allows the user to speak into a microphone on the telephone rather than the handset</td>
</tr>
<tr>
<td><strong>Camera phone</strong></td>
<td>Allows the user to transmit pictures at the same time as voice</td>
</tr>
<tr>
<td><strong>E-mail access</strong></td>
<td>Allows users to send and receive e-mail messages</td>
</tr>
<tr>
<td><strong>Internet access</strong></td>
<td>Allows users to access Web sites</td>
</tr>
<tr>
<td><strong>Text messaging</strong></td>
<td>Allows users to send text messages on mobile phones</td>
</tr>
<tr>
<td><strong>Application programs</strong></td>
<td>Allows users to perform various tasks on smart phones</td>
</tr>
</tbody>
</table>

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With some company telephone systems, users may be able to place a conference call. No outside help is needed from a telephone company service provider. The person setting up the call lets all those who will take part know the time to expect the call. At the appointed time, the user calls each person in turn and adds them to the call, following the appropriate steps for the phone system.

With operator-dialed service, a long-distance operator handles the setup and connections. After you inform the operator of the date, time, time zone, and estimated length of the call, the operator does the following:

- Informs all participants of the time that the conference call will take place
- Makes all the necessary connections at the prescribed time
- Calls the roll to make sure all callers are connected
- Can provide specialized services such as a recording or written transcript of the conference, or a translator for those who do not understand the main language used

Dial-in service allows participants to call a special number at a prearranged time without operator assistance. They may call from any telephone rather than wait for an operator to call them at one specific number.

Successful conference calls require advance planning to ensure that all the necessary information and equipment are at hand. Follow these guidelines in planning a conference call:

- Inform all participants of the date, time, and proposed length of the call.
- Verify everyone’s telephone number.
- Send any needed information or items for discussion to all participants in advance.
- Identify the objectives and intended outcomes of the call.
- If using a service provider, call in advance and give accurate numbers, names, date, time, and expected duration of the call.
Participating in a conference call requires use of your best communication skills. Think of the conference call as a type of meeting where you will both contribute to the conversation and listen to others. Follow these procedures during the call:

- Take roll. Call out names of all participants.
- Lead the call by presenting the agenda and conference guidelines.
- Have participants identify themselves when speaking.
- Speak clearly, spelling out difficult or unusual names and terms. Repeat numbers.
- Avoid interrupting other speakers. Only one person should speak at a time.
- Take notes of important points and comments.
- Apply good listening skills.
- Encourage discussion and participation from everyone.

**Voice Mail Systems**

**Voice mail** is a messaging system that uses computers and telephones to record, send, store, and retrieve voice messages. Voice messaging systems are popular because they eliminate the problems of time lost in playing “telephone tag.” Most voice mail systems operate 24 hours per day. They are an important communications tool.
Each user of a voice messaging system has a voice mailbox. A voice mailbox is a space reserved in a computer to hold recorded voice messages. A caller leaves a voice message that is recorded by the computer. The message is held in storage until the recipient of the message chooses to access it. Unless a message is deleted, it remains in storage and can be accessed later for reference. Some of the voice mail features that may be used by companies include:

- Long-term incoming message storage
- Message prioritizing

FOCUS ON . . .

Voice Mail

Voice mail is a computerized voice messaging system. It has many features that can be modified to meet individual needs. A standard personal computer, a special voice processing card, and voice software are needed. Both the sender and the receiver use the telephone push buttons to activate and use the features of voice mail.

Because of the convenience and efficiency of voice mail, its use has become widespread in business. Still, with all its advantages, voice mail does not replace human contact. Follow proper procedures to ensure that the negatives of voice mail are reduced and the full benefits are realized. When using your voice mail system:

- Prepare a message that presents you as a professional and delivers appropriate information and instructions to the caller. Include your name, department, and other necessary information. Give instructions as to how to get immediate assistance if the caller cannot wait for you to return the call.
- Record the message yourself. Speak clearly and distinctly. Pronounce words correctly and use correct grammar.
- If you are going to be out of the office for one or more days, refer callers to another worker who can provide help while you are away, if appropriate.
- Check your voice mail several times a day. Return all calls as soon as possible.
- Answer your telephone when you are at your desk unless you have visitors in your office or are involved in an important work project. Do not let voice mail answer your phone for you the majority of the time when you are at your desk.

Follow these procedures when leaving messages for others on their voice mail systems.

- Leave your name, telephone number, company, and a brief reason for your call. Make your message neither too lengthy nor too brief. You want the person you called to have enough information to return your call promptly and efficiently.
- Speak slowly and distinctly. Spell out any difficult names (your name, your company’s name).
- Do not communicate bad news or negative statements in the voice message. Wait until you actually speak with the person to give negative information.
Video conferences, sometimes called Web conferences, may also be conducted by computer. In a Web conference, people communicate using private computer networks or the Internet. These conferences are sometimes called virtual meetings. The user’s computers must have speakers, microphones, video cameras, and the appropriate software. See Chapter 8, Meetings and Travel, for more information about Web conferencing.

**Videoconferencing**

Videoconferencing is communicating with people at two or more locations using two-way voice and video data. A special conference room equipped with microphones, television cameras, and screens is used to conduct meetings in which data, text, voice, and documents may be exchanged.

**Workplace Connections**

Will Flowers, Director of Sales, is located in Detroit. Will called a meeting with local managers, managers located at headquarters in San Francisco, and a third group of managers located at a branch in Hong Kong. Using videoconferencing, they could see and hear each other. Will wrote on an electronic whiteboard as he discussed sales projections. Will’s notes from the board appeared on a video monitor at the remote locations. The data were sent and later printed for the managers at each location. This meeting was very cost effective when compared to the expense and time that would be required for all the managers to travel and meet in one location.

Video conferences, sometimes called Web conferences, may also be conducted by computer. In a Web conference, people communicate using private computer networks or the Internet. These conferences are sometimes called virtual meetings. The user’s computers must have speakers, microphones, video cameras, and the appropriate software. See Chapter 8, Meetings and Travel, for more information about Web conferencing.
Features for Impairments

Special telephone equipment and services are available for the visually or hearing impaired. Features that enable the blind, deaf, hard of hearing, or speech disabled to communicate on the telephone with others include text telephone (TTY) and the telebraille telephone (TB). With these services, a person serves as an interpreter between the hearing person and the deaf or blind person. The interpreter may be an employee of a telephone company or of a state or other agency that provides assistive services. The messages are relayed by the interpreter by typing the spoken words, which are relayed to the TTY or TB user. The blind person reads the Braille; the deaf person reads the screen.

Other features for impaired callers include:
- Large-button phones
- Headsets or speakerphones for hands-free operation
- Speech amplifiers to make voices louder
- Loud bells and flashing light indicators to signal incoming calls

Facsimile Technology

Facsimile technology, often called fax, sends images (text, photographs, drawings) using telephone or VoIP channels. A fax machine works by combining scanning technology with telephone technology. The sending machine scans a page and encodes (electronically “takes a picture of”) the data to be sent. The data are transmitted over telephone channels to a receiving fax. Within seconds, the document is received.

Fax machines are easy to use and are commonly found in offices. A company may have one or several fax machines. Portable models may be used to send documents while workers are away from the office. Fax machines are also found in some homes for personal use. They provide an inexpensive, fast way to send and receive information.
Fax machine to fax machine is not the only method of sending documents as images. An image can also be sent from a computer directly to a fax machine or another computer. The computer must have a fax card and software to control the process.

**Features**

Fax machines offer many features. Among the more common features are:

- Laser or full-color printing
- Store-and-forward capability
- Automatic dialing and redialing if the receiving number is busy
- Automatic answering
- Automatic document feed
- Activity-reporting of date, time, and number of pages sent and received
- Small screens that display messages such as data about sending and errors or problems with the system
- Security features

The automatic answering feature makes fax systems almost self-operating. Many users leave their machines on 24 hours a day, unattended, for receiving messages.

Lana Perez works for an environmental waste firm in Phoenix. The company has branch offices in Denver, St. Louis, and Salt Lake City. This morning she receives a typical assignment. An engineer in her office needs to send a copy of project plan changes as soon as possible to a worker. The worker is on location at a customer’s construction site outside Denver. Using her computer equipped with a fax card, Lana is able to send the document within minutes from her computer to the portable fax machine at the work site.

Fax machines speed the process of sending and receiving messages.
Procedures

Procedures for using fax machines vary from office to office and from machine to machine. Many procedures depend on the sending and receiving equipment to be used. When you send a fax, include a cover sheet or note with the following information:

- Current date
- Total pages being sent, including the cover sheet
- Name, company, fax number, and address of the recipient of the message
- Name, company, address, telephone number, and fax number of the sender
- Subject of the document or message
- Special remarks as needed

Check the accuracy of your count of the number of pages to be sent and the number of pages you recorded on the cover sheet. Confirm the number carefully before dialing the fax number of the recipient. Enter your name, department, date, and number of pages sent or other required data on a fax log sheet if one is used in your office.

After all pages have been sent, your fax machine will let you know that the transmission has been completed. You may hear a series of beeps or a message may be displayed telling you that your message has been received at the location you dialed. If a report form is printed, attach it to the fax cover sheet and return it with the original materials to the sender. In Figure 12-1.2, the report includes the date, start time of the message, fax number dialed, number of pages sent, and time used to transmit pages. Note that the results are reported as “OK,” the transmission was successful.

Telephone Equipment and Service Providers

Telephones and systems may be purchased from many vendors. A variety of equipment is available and varies in price. Some vendors will customize features to meet user needs. Some vendors will also conduct training and offer product support after the sale.

When purchasing mobile phones, the phones should be tested in the areas where they will be used often. If the areas do not receive a strong signal, users may have trouble making calls. Some companies allow users to borrow a mobile phone for a short trial period before purchasing a phone. This allows the user to test the phone in various areas.

A local telephone company provides services to users within a set local area. A business may have no choice as to which company to use for local service through standard telephone channels. Companies can choose a long-distance company and optional features. Companies can also choose whether to use standard telephone service, VoIP, or a combination of both types of service. A wide variety of features and pricing plans is available. Companies should carefully compare services and prices when choosing a telephone service provider. For mobile phones, the service area and roaming charges are important considerations when choosing a provider.
FAX

To: John Mayfield
From: Sherman Kuntz

Fax: 513-555-6956  Pages: 3
Phone: 513-555-6988  Date: March 9, 20--
Re: Quarterly Report  Time: 11:35 a.m.

Comments:
Please review this report and send me your comments.

<table>
<thead>
<tr>
<th>DATE</th>
<th>START TIME</th>
<th>REMOTE TERMINAL</th>
<th>MODE</th>
<th>TIME</th>
<th>RESULTS</th>
<th>TOTAL PAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar 09</td>
<td>11:38</td>
<td>513-555-6956</td>
<td>G3ST</td>
<td>02 min 02 sec</td>
<td>OK</td>
<td>03</td>
</tr>
</tbody>
</table>
1. Describe the role satellites play in transmitting data over telephone channels.
2. What is the purpose of a modem?
3. What is telephony? List three features that may be found in a telephony system.
4. How does using VoIP to place a call differ from using regular telephone lines?
5. What is the main function of a centralized telephone system? Describe how an automated attendant works.
6. What is a cellular phone? What is a smart phone?
7. List and describe three common features of telephones or telephone systems.
8. What procedures should you follow when participating in a conference call?
9. What procedures should you follow when creating a greeting message for your voice mail? What procedures should you follow when leaving messages for others on their voice mail systems?
10. What special telephone equipment and services are available for the visually or hearing impaired?
11. What information should be included on a fax cover sheet?
12. Why should a business compare services and prices when choosing a telephone service provider?

INTERACTING WITH OTHERS

Your sales team member, Jeremy, is letting voice mail answer his phone the majority of the time, even when he is at his desk. You and Jeremy share sales and service duties for several accounts. Your clients have complained to you that Jeremy seems never to be at his desk. Also, they complain that he takes several days to answer their voice mail messages. You realize that this is a problem situation. What should you do?

1. Should you inform your supervisor about Jeremy’s voice mail procedures? Why or why not?
2. Should you apologize to clients for Jeremy’s poor voice mail habits? Why or why not?
3. Should you tell clients to call you instead of Jeremy? Why or why not?
4. What could you say to Jeremy about the clients’ complaints to encourage him to handle his voice mail messages following professional procedures?

CHAPTER 12: TELEPHONE SYSTEMS AND PROCEDURES
REINFORCING ENGLISH SKILLS

Your knowledge of punctuation rules will be helpful as you prepare written messages on the job. Ten sentences follow that will reinforce your ability to use proper punctuation marks. Write or key each sentence, inserting the proper punctuation.

1. She faxed a report from Cheyenne Wyoming to Tucson Arizona
2. Our telephone bill was credited with two months interest
3. Did you place the call to Jeorge my friend from Mexico City
4. On Tuesday January 23 we began using our new computerized telephone system
5. To qualify for a position you must have a years experience using a computer telephone system
6. Showing you our new voice mail system was a pleasure we have a training session planned for all new users
7. We prefer using voice mail for recording messages not an answering machine
8. Conferencing lets you set up conversations with three four or more people at the same time
9. A speakerphone allows hands free speaking capabilities
10. Is the toll free number an 800 or an 888 number

Topic 12-1 | ACTIVITY 1

Fax Procedures

You work at the headquarters of Prudent Development Corporation. Your supervisor, Janet Naishitt, asks you to prepare a well-designed one-page list of common procedures to be followed for successful fax transmissions. The procedures list is to be faxed to the office manager at the Denver branch. She also wants you to compose a short memo to include with the procedures.

2. Create a memo form for the company using appropriate headings. Compose a memo to Ed Stoddard, Office Manager. In the memo, explain that this list is to be distributed to all fax users at the Denver location. Also, ask him to write any additions or comments on the list and return it to you within three days.
3. Create a fax cover sheet to send with the memo and the fax procedures document. Use the cover sheet in Figure 12-1.2 as an example, or use a fax cover sheet template from your word processor software.

**Your company’s information:**
Prudent Development Corporation, 8700 Martin Luther King Blvd., Austin, TX 78765-0800
Fax number: 512-555-0139
Telephone number: 512-555-0142

**Mr. Stoddard’s information:**
Prudent Development Corporation in Denver, CO
Fax number: 303-555-0102
Telephone number: 303-555-0122

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**Activity 2: Voice Mail Messages**

You are the manager for the Accounting Department at Ryan Associates. While you were away from the office on a trip recently, you called several employees in your department. You noticed that the voice mail messages used by some department members were not very helpful and did not sound professional. You have decided to give department members suggestions for improving their messages and to provide sample messages.

1. Review the guidelines for effective voice mail messages found in this topic.

2. Compose a memo or an e-mail message to the Accounting Department from you. Use the current date and an appropriate subject line. (If you are using e-mail, save and print the message. Do not actually send the e-mail.)

3. In the memo or e-mail, mention tactfully that the voice mail messages used by some department members could be improved. Explain reasons why department members should record an effective voice mail message to be heard by persons reaching their voice mail. Discuss why they should leave effective messages for others. Include guidelines for effective voice mail messages in the memo or e-mail. Include a sample message that you might record for persons reaching your voice mail. Also include a sample message you might leave when you reach another person’s voice mail. Ask department members to prepare and record effective and professional voice mail messages.
A company may receive and place many calls each day. Workers talk with others both inside and outside the company to discuss common concerns, to place orders, or to request information. Messages must be taken and recorded either manually or electronically. Telephone calls are often less time consuming than a memo, a letter, or even an e-mail message.

All office workers should use proper techniques when answering or placing calls. When you place a call to a business, your first impression of the company is often based on how you are treated by the person answering your call. If the person is courteous and interested in helping you, you probably form a good impression of the company. If the person is abrupt, rude, or unwilling to help, you probably form a negative impression. When you answer the telephone or place an outgoing call, you may be making an initial customer contact. You will want to give callers a positive impression by what you say and how you say it.

To help control telephone costs, companies must choose carefully from the equipment and services that are available. Office workers should be aware of the local and long-distance services available in the office. In this topic, you will learn to create a good first impression when using the telephone. You will practice proper techniques and procedures for placing and receiving telephone calls.

Making a Favorable First Impression

When you handle telephone calls at work, you are representing your company. To the individual who is calling, you are the company. To create a positive image, you should develop good communication skills. Your voice, pronunciation, grammar, and vocabulary, as well as your attitude, contribute to the impression you make when using the telephone.

Your Voice

When you talk with others in person, you make them feel welcome by smiling and perhaps by shaking hands. You show interest and alertness by making eye contact with them during the conversation. When you talk by telephone, however, all you have to convey interest and courtesy is your voice. Elements of your voice that you must pay attention to include tone, pace, and volume.

The tone of your voice refers to the changes in pitch used to emphasize words and to get your meaning across to the listener. You have, no doubt, listened to speakers who talked in a monotone. Paying attention is difficult
when someone is speaking in a monotonous voice. The listener may become bored or may perceive the speaker as indifferent or inattentive. Vary the tone of your voice to express feelings and emphasis of ideas but avoid using extremes. An animated voice reflects interest in the caller and helps you achieve successful communication. Avoid speaking in a very high-pitched voice, a very low-pitched voice, or with an up-and-down, “singsong” manner.

Pace is the rate or speed of speech. The rate at which you talk to someone on the telephone can affect the ability of the listener to understand your message. If you speak too rapidly, the listener may not hear all the information. This is true especially if the information is technical or detailed. On the other hand, if you speak too slowly, the listener may become bored, insulted, or inattentive.

Consider the listener when determining a proper pace for speech. You may be speaking with people from different parts of your nation and with people from countries all over the world. You may be conversing with people who, even though they speak the same language as you, have speech patterns and regional dialects that are different from your own. You must learn to adjust your pace to fit the needs of the listener.

Extremes in volume should be avoided when speaking on the telephone. Do not shout or speak so softly that the listener cannot hear what you are saying. Control the volume of your voice so that you are speaking neither too loudly nor too softly. Speak directly into the telephone receiver or mouthpiece.
Your Speaking Skills

Your voice and speaking skills are put to the test when you speak on the telephone. Speaking skills such as word pronunciation, grammar, and vocabulary usage affect the impression you give over the phone. Although you may have a pleasant tone, a good pace, and a well-modulated voice, communication is difficult if the person you are speaking with cannot understand your words.

Pronunciation

Correct pronunciation of words is essential for understanding. Proper enunciation is also important. When you enunciate effectively you pronounce words clearly and distinctly. For example, you should say what do you instead of whaddaya, and you should say going to instead of gonna. Always enunciate word endings such as ing, ed, possessives, and plurals.

You will find that many people speak with a regional accent. An accent involves a certain rhythm, speed, and pronunciation of vowels that is native to a particular region. You probably have an accent even though you may not be aware of it. If you find that you have trouble communicating because of an accent, several strategies can help you succeed:

- Pronounce words correctly and enunciate clearly.
- Speak slowly, but not so slowly that you insult or annoy the caller.
- Avoid long words, complicated phrases, or long sentences.
- If you are unsure of any word’s pronunciation, look it up in the dictionary.
Grammar

Although some rules of grammar are relaxed for spoken communications, you should follow basic grammar standards. Doing so will help you project a favorable impression of yourself and your company. Avoid use of slang or regional expressions that may not be widely known or understood, especially if the call is an international one. Other people may use terms that you do not recognize. When you do not understand an expression or phrase, always ask for an explanation.

Vocabulary

You should strive to improve your professional and personal vocabulary. You can learn new terms that relate to your position or your company. You can also learn words that will help you express your feelings, ideas, and needs. Remember that clear and courteous communication is always your goal. Avoid using trendy, slang expressions in formal business communications. State your ideas simply without using highly technical terms or lengthy words.

Many companies deal directly with clients, customers, or suppliers from other countries. Your company may even be an international one whose owners or headquarters are located outside the United States. Learn some simple courtesy phrases to use when speaking with international callers. Your attempts at learning and using some simple, basic phrases will be appreciated by foreign callers. Using these terms will help you make a favorable impression. Keep a list of basic phrases along with their translations and pronunciations. Practice them and make sure that you are saying them correctly.

Your Attitude

When you speak to someone over the telephone, all you have is your voice to give information and express your feelings. Even though you may not be seen by the person with whom you are speaking, your attitude is reflected in your speech and tone of voice. Any boredom, anger, or indifference you are feeling may be obvious to the person on the line. On the other hand, a smile and an upbeat, caring attitude are also clearly projected to the person with whom you are speaking. You should put any negative feelings aside and respond to the caller with a sincere, positive attitude.

Incoming Telephone Calls

Handling incoming telephone calls requires skill in using proper telephone techniques and effective procedures. When answering the telephone, you usually do not know who is calling or what the caller wants. Your work may be interrupted, or you may have a visitor in your office. You should know how to handle a variety of situations and take care of caller requests, needs, and problems.
**Proper Telephone Techniques**

You now know that your voice, your speaking skills, and your attitude all affect a caller’s impression of you and your company. Your call may be an initial customer contact—the first time the customer has spoken with someone at your company. How well you handle the call may determine, at least in part, whether the customer will do business with your company. Using proper telephone techniques will help you make a positive impression.

**Answer Promptly**

Answer all incoming calls promptly and pleasantly. If possible, answer the telephone after the first ring. When you reach for the receiver, also pick up a pen or pencil and a notepad or message form. You must be ready to take notes or a message.

**Identify Yourself**

Many companies use automated telephone systems that answer the calls and route them to the requested person. In this case, you may not need to identify your company when you answer a call. However, if you are the person to whom all incoming calls are routed, you should identify first the company, then yourself.

A telephone conversation cannot begin until the caller knows that the correct number, department, or person has been reached. Following are examples of improper and proper telephone answering responses.

- **Improper:** “Hello,” or “Yes?” (*These greetings do not give any identification of the person or of the company.*)
- **Improper:** “Hello, bold please.” (*This greeting does not give any company identification to the caller. Also, abruptly placing the caller on bold is rude and abrasive.*)
Improper: “Good morning. International Electronics. Our company is number one in the field of international electronics products sales and service. Pat Lopez speaking. May I be of help to you?” (This greeting is too long and distracting.)

Proper: “Good morning. International Electronics, Pat Lopez.” (Use this greeting when you are answering an outside call.)

Proper: “Marketing Department, Leon DiMarco.” (Use this greeting when you are answering an inside or outside call in a company where all calls are routed through a switchboard operator or an automated attendant that has already identified the company.)

Proper: “Ms. Yamaguchi’s office, Lisa Stein.” (Use this greeting when you are answering the telephone for a coworker.)

Assist the Caller

Your job is to help the caller as efficiently as you can. Never assume that you know what the caller wants. Instead, listen attentively to the caller’s questions and comments. If you know that it will take several minutes to find the information needed for the call, do not keep the caller waiting. Explain the situation to the caller and offer the choice of being placed on hold or hanging up and receiving a return call. Follow through on any promise you make to return a call.

Make sure that you give accurate information to callers. If you do not know the answer to a question, admit it. Either tell the caller that you will obtain the information and call back, or offer to transfer the call to someone who can answer the question. Avoid passing off a caller to someone else if there is any way that you can be of help yourself.

Have reference materials handy to assist callers.
Conclude the Call

As a general rule, the person who places a call is the one who should end the call and hang up first. If you follow this rule, you avoid making the caller feel as if the conversation has been “cut off” before he or she was ready to hang up.

Use the caller’s name as you end the conversation. For example: “Yes, Ms. O’Toole, I will be sure to mail you a copy of our latest catalog today,” or, “Thank you for calling, Mr. Haliz. I will be sure to give Ms. Schmidt the information.” Such a practice personalizes the conversation.

Effective Telephone Procedures

As you answer incoming calls, you need to handle many tasks efficiently. You may be requested to screen calls, give information, or take messages. You may need to place a caller on hold, transfer calls, handle disconnected calls, and deal with difficult callers. Effective procedures make managing each of these situations easier.

Plan to place and receive calls on a mobile phone at appropriate times and places. Do not use your mobile phone in an area where you will disturb other people. Meetings, movies, concerts, and restaurants are examples of places where using mobile phones can disturb others. Do not discuss confidential information in a public area. Do not use a mobile phone while driving a car, as this may distract your attention from driving.

Screening Calls

In some offices, you may be asked to screen calls. Screening incoming calls is a procedure used to determine who is calling and, at times, the purpose of the call. For example, your supervisor may instruct you to screen calls and take a message from all salespeople who call. You may inform the caller that you will relay the message; however, do not promise a return call. Your supervisor may be in an important meeting and ask you not to interrupt except for certain callers. Screening can save you and the caller time because you may be able to help the person yourself or transfer the call immediately to another person.

When screening calls, find out who is calling. Be tactful, yet direct. To learn the caller’s name, ask questions such as “May I say who is calling?” or “Who is calling, please?”

Sometimes callers refuse to give their names. If your company requires you to identify each caller by name before transferring the call, you must be courteous, yet firm. Explaining the policy to the caller will usually encourage the caller to give you his or her name. Even if the caller becomes rude or still refuses to tell his or her name, you should at all times be courteous. Remain firm, however, in following the company’s policies.

screen calls: determine who is calling and the purpose for each call
Placing a Caller on Hold

At times, you must place a caller on hold while you answer another call. A telephone caller who is on hold is still connected but waiting for the other person to come back on the line. Ask the first caller if you may place him or her on hold. Then answer the second call. Ask permission to place the second caller on hold while you complete your conversation with the first caller.

Sometimes you will need to place a caller on hold while you look up information to answer a question. Politely inform the caller that you are placing him or her on hold. If you think several minutes will be needed to find the answer, ask if you should call back or if the caller would prefer to hold. When a caller is on hold, check back frequently to reassure the caller that he or she has not been forgotten.

Transferring Calls

Calls are usually transferred when the caller has reached a wrong extension or has a request that can be handled more effectively by another person. The caller may request the transfer, or you may determine that the transfer is necessary. Always tell the caller why the transfer is necessary. For example, you may say:

“I’m going to transfer your call to Mr. Rosen. He will be able to provide you with the information you need.”

You may prefer to place the caller on hold while you speak with the person to whom you intend to transfer the call. This will allow you to confirm that this person can help the caller and to introduce the caller for screening purposes. Calls can sometimes become accidentally disconnected during a transfer. You may wish to give the caller the extension number or name of the person to which the call is being transferred. Then if the call is accidentally disconnected, the caller can reach the appropriate person or extension when he or she calls again.
Handling a Disconnected Call

Occasionally, you will be disconnected while you are talking on the telephone or while you are waiting on hold. In general, the person who placed the call should call back immediately after the disconnection. That person has the telephone number of the party being called and should, therefore, be able to redial the call quickly.

The caller should report a disconnected long-distance call to the telephone company. Depending on the telephone company used, an adjustment may be made in the long-distance charge.

Giving Information

You may take calls for a manager or coworkers who are out of the office. In these situations, you must tactfully tell the caller that the person is not available and offer to take a message or assist the caller yourself. When coworkers are unavailable to receive calls, give the caller enough information to explain the person’s absence. However, do not give unnecessary or sensitive details.

*Improper* “Ms. Fox has a hair appointment this afternoon.”

*Improper* “Ms. Fox had to pick up her son from school.”

*Improper* “Mr. Chandler is playing golf with a prospective client.”

*Proper* “Ms. Fox is out of the office until tomorrow morning. May I take a message or ask her to call you?”

*Proper* “Mr. Chandler is in a meeting this afternoon and won’t be available the rest of the day. May I take a message or ask him to return your call?”
Taking Messages

In many companies, the use of voice mail eliminates some of the need for taking written messages. Even with voice mail, it will be necessary for you to record information for yourself such as the caller’s name, telephone number, and purpose of the call.

Message forms are usually available in offices for recording telephone messages. When you record a message, it is essential that it is accurate and complete. Verify names and telephone numbers by reading back the information to the caller. Ask for accurate spellings of names if you are in doubt. Key or write the message carefully. If the message is handwritten, make sure that your handwriting is legible so you do not waste time rewriting it later or fail to be able to read it. Each message should include the following data:

- Date and time of the call
- Name of the caller with the caller’s company (Check spellings of any names about which you are uncertain.)
- Caller’s telephone number, including area code if it is a long-distance call (Remember to repeat the number for verification.)
- Details of the message
- Your name or initials

Figure 12-2.1
Record information on message forms legibly and accurately.

<table>
<thead>
<tr>
<th>To</th>
<th>Mr. Lesinski</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>8/21/- -</td>
</tr>
</tbody>
</table>

WHILE YOU WERE OUT

Name         Ms. Rosanna Robbins
Of           Advanced Realty
Phone        606-555-3478   Ext. 248

<table>
<thead>
<tr>
<th>Telephoned</th>
<th>Please Call</th>
</tr>
</thead>
<tbody>
<tr>
<td>Called to See You</td>
<td>Will Call Again</td>
</tr>
<tr>
<td>Wants to See You</td>
<td>Returned Your Call</td>
</tr>
</tbody>
</table>

Message
Wants to discuss your meeting scheduled for next week.

By             DR
Your office may have software that can be used to complete an electronic message. Using a computer message offers these advantages:

- Less time is needed to key a message than to write it.
- The number of lost messages is reduced because messages can be transferred immediately to the intended receiver.
- Printed message forms are not needed.

Each computer message you key should include the same basic information as a handwritten message. As you key the message, make sure that is accurate and complete. Verify all names and numbers. The current date and time may be entered automatically by the system into the onscreen form, or you may need to enter this information. The message may be transferred to the receiver’s computer screen by keying in the correct extension number. A reminder or some form of electronic notation will appear on the receiver’s screen showing that a message is waiting. In some offices, e-mail is used to record and forward telephone messages.

WORKPLACE CONNECTIONS

Answering the telephone in an appropriate manner and taking accurate messages is important for effective telephone communications. Notice how the office worker answering this call gives enough information to satisfy the caller but does not give inappropriate information.

Office Worker: “Hello. Mr. Lesinski’s office. Jan House speaking.”

Caller: “May I please speak with Mr. Lesinski? This is Rosanna Robbins from Advanced Realty.”

Office Worker: “I’m sorry, Ms. Robbins, but Mr. Lesinski is out of the office until Thursday. I’m Mr. Lesinski’s assistant. Could I help you, or may I ask him to call you when he returns?”

Caller: “Yes. Please ask him to call me at 606-555-0178, extension 248, regarding our meeting scheduled for next week.”

Office Worker: “Thank you, Ms. Robbins. To confirm, your number is 606-555-0178, extension 248. I will give Mr. Lesinski the message.”
Handling Difficult Callers

On occasion you may receive calls from persons who are angry, unreasonable, rude, or demanding. These calls may be few, but they can be very stressful. You must control yourself and remain professional when dealing with difficult callers. Your goal is to diffuse the situation and to maintain goodwill with the caller, if possible. Follow these guidelines when dealing with difficult telephone callers.

- Try to resolve the matter if possible. Usually the caller just wants the company to solve a problem or fix a mistake. Do not hesitate to apologize to the caller for any problems or inconveniences that have been experienced.
- Always present a helpful, positive, and sincere attitude even in an adverse situation.
- If the caller is personally abusive to you or uses profanity, end the conversation quickly after identifying the caller and recording relevant information about the call.
- Remain outwardly calm and do not display defensive behavior. Usually, the caller is not upset with you but with the company or its actions. Do not take the caller’s anger personally.

Handling Personal Telephone Calls

Follow your company’s policy regarding making or receiving personal telephone calls at work. Many companies permit a limited number of personal calls. Other companies discourage personal calls. Workers may be expected to use a pay phone located in the building and make calls during break times. Generally, brief urgent or emergency calls are permitted. Long or frequent personal calls are typically not considered acceptable at work.

Outgoing Telephone Calls

As with incoming telephone calls, outgoing calls may be made to a person outside or inside the company. Calls may be interoffice, local, or long distance. You should understand the process and procedures for placing all outgoing calls. Your goal is efficiency and economy.

Planning Calls

Every call you make requires some preparation and planning. Most calls may be simple; however, others may require detailed planning. When preparing for any call, confirm the name and number of the person you are calling. Identify clearly the main purpose of the call. Outline briefly the points you want to cover during the call. Gather other information or items you need to have available before making the call, such as:

- Dates and times of any meetings or planned events that relate to the call
- Documents that relate to the topic discussed
- Questions that you want to ask
- Pen and paper or your computer to take notes during the call
Plan to place and receive calls on a mobile phone at appropriate times and places. Do not use your mobile phone in an area where you will disturb other people. Meetings, movies, concerts, and restaurants are examples of places where using mobile phones can disturb others. Confidential information should not be discussed in a public area. Do not use a mobile phone while driving a car as this may distract your attention from driving.

**Time Zones**

Be aware of time zone differences when placing long-distance calls. Note the current time in the location you are calling. Avoid calling when the time is before or after business hours or during lunch at that location. The continental United States and parts of Canada are divided into five standard time zones: Atlantic, Eastern, Central, Mountain, and Pacific. As you move west, each zone is one hour earlier. For example, when it is 1 p.m. in Washington, DC (Eastern zone), it is noon in Dallas (Central zone), 11 a.m. in Denver (Mountain zone), and 10 a.m. in Los Angeles (Pacific zone). If you are in San Diego and need to speak to a coworker in the New York City office, you will need to place the call before 2 p.m. Pacific time. Otherwise, the New York office may be closed because it will be 5 p.m. (Eastern time). A time zone map of the United States is included in most telephone directories. Web sites, such as Maps.com, display the current time in all U.S. time zones as well as providing a time zone map.

Twenty-four time zones are used throughout the world. To place a call to London, England, all you have to do is to dial the following sequence of numbers: 011 (international access code) + 44 (country code) + 71 (city code) + seven-digit phone number. Consult the International Calling or similar section of your local telephone directory for country codes.
If a caller is located in a time zone to which it is impossible for you to call during your regular business hours, you may have to make the call after your normal work time. If you make frequent international calls, you may want to keep a copy of a world time zone map at hand.

**WORKPLACE CONNECTIONS**

Sula works for Castor Imports. The company recently began doing business with a company in Mexico. Sula has tried to phone her contact at the company, Pedro Martinez, several times. Sula and Pedro cannot seem to find one another in the office. Sula usually calls Pedro between 1 p.m. and 2 p.m. when she returns from lunch. Pedro is always out. Pedro returns Sula’s calls between 5 p.m. and 6 p.m. and finds that she is not in. Sula and Pedro need to learn about one another’s customs and work schedules. For example, in Mexico during the hours of noon to 3 p.m., many offices are closed. Workers return at 3 p.m. and often remain in the office until 7 p.m. or 8 p.m. In the United States, the typical office work day ends at 5 p.m. Understanding these customs will help Sula and Pedro find a time to talk that is convenient for both of them.

**Using Directories**

Many resources are available for you to use when planning a call. Your local telephone company publishes a yearly directory. Local as well as national organizations publish a variety of business and professional directories. National telephone directories are available on CD, and directory information is available on the Internet. You should become familiar with the wide range of information contained in these resources.

**Local Directories**

Local telephone companies usually provide directories to their customers free of charge. You may want to find the telephone number of a business or individual in your local area. You can usually find the number in the white pages of the local directory. If you are searching for a particular service or product, you may find the number in the yellow pages section of the directory. You should become familiar with all sections of the local telephone directory. Typical directories contain the sections discussed in the following paragraphs.

Telephone directories with names of persons, businesses, and organizations arranged alphabetically are referred to as *white pages*. The front section of most directories is actually a user’s guide for the directory itself and a “how-to” guide for the telephone services consumer. Some of the information you will find here includes types of telephone services provided by the company, local emergency numbers, and directions for making many types of calls. You should read and become very familiar with this section.
The next section of the local telephone directory contains names, addresses, and telephone numbers of businesses, government agencies, and individuals in your city. In some locations, the white pages may be divided into two sections. The first section lists personal names and numbers only while the second section lists only business names and numbers. Sometimes these sections are each contained in separate books. When personal and business numbers are divided, another section called the blue pages also may be included. The blue pages serve as an easy reference for locating telephone numbers of government offices and other helpful numbers such as those of the chamber of commerce, consumer protection agencies, and weather service.

A type of directory called the yellow pages contains an alphabetic listing of businesses arranged according to the services they provide or the products they sell. For example, if you want to find names and telephone numbers of businesses in the area that might cater your company’s 50th anniversary dinner, you would look under caterers in the yellow pages.

**Personal and Company Directories**

You should make a list of all numbers that you call often. You may be able to program a limited number of frequently dialed numbers into your telephone. Your company may provide you with a directory of employees working at a particular location. A portion of a sample directory is shown in Figure 12-2.2 on page 504. The directory may also include procedures for using features of the telephone system. Tips for proper telephone techniques as well as how the company wants you to identify yourself and your department may also be included.
Electronic Directories

The types of data contained in the paper directories can also be accessed using a computer. National telephone directories can be purchased on CD. Several Web sites provide telephone numbers for individuals and businesses. Some sites also provide other services such as reverse lookup or a directory for toll-free numbers. Reverse lookup service allows users to enter a telephone number and find the person or company to which the number is assigned.

Directory Assistance

If you are unable to locate a telephone number, call the directory assistance operator for help. Dial 411 for a local directory assistance operator. For long-distance directory assistance, dial 1, the area code, and 555-1212. A directory assistance operator will ask you what city you are calling. Be prepared to supply the operator with as much information as possible about the person or business for which you need the number. Be prepared to give the correct spelling and street address if known. After giving the information, there will be a pause; then you will hear the number repeated twice. Make a note of the number for future reference. Because you may be charged for using directory assistance, use this service only as needed, not as a convenience.

Long-Distance Service

Long-distance calls are made to numbers outside the service area of your local telephone company. The time of day the call is placed, the length of the call, and type of long-distance service used may affect the cost of the call. Long-distance carriers provide a variety of pricing plans. The consumer or company chooses a long-distance provider. You may want to find out about the varied long-distance programs and prices available before selecting a carrier. Your local telephone directory may list several long-distance carriers and their numbers. You may also visit these companies’ Web sites to learn of pricing and special offers and regulations.
**Direct-Dial Calls**

Direct-dial calls, also called station-to-station calls, are those placed without assistance from an operator. To make a direct-dial call, first dial 1, which gives you access to a long-distance line. Then dial the area code and the number you are trying to reach. Charges for these calls begin as soon as the telephone is answered. If you make a direct-dial call and the person you need to speak with is unavailable, your company still will be charged for the call.

**Specialized Long-Distance Calls**

Specialized long-distance calls are more expensive than those you dial direct. Person-to-person, collect, credit card, and conference calls are all types of special long-distance calls.

**Person-to-person calls** are an expensive type of operator-assisted calls. To place a person-to-person call, dial 0 (zero), the area code, and the telephone number of the individual or business you are calling. When you have finished dialing, you will be asked what type of call you wish to place, such as a person-to-person or collect call. You will say “person-to-person call” and will then be asked to supply the name of the person you are calling. Pronounce the name clearly and accurately. You may have to spell it for clarity.

Charges for the call begin only after the person you have requested is on the line. If that person is not available, you will not be charged for the call. If you must call repeatedly before reaching the person, or if it takes the person several minutes to get to the phone, this type of call may be less expensive than a direct-dialed call. You do not pay until you begin speaking with the person you have indicated.
**collect call**: an operator-assisted, long-distance call paid for by the party being called

The charges for a **collect call** are billed to the telephone number being called, not to the number from which the call was placed. To place a collect call, dial 0 (zero), the area code, and the telephone number. You will be asked what type of call you are placing. Speak clearly into the phone, answering “collect.” You will then be asked to give your name. Once again, speak very clearly and distinctly into the phone. The call will be completed, and the recipient will be asked whether or not the call and the charges will be accepted. People who travel for a business may find it necessary to make collect calls to their offices. Customers or clients may be invited to call collect.

A conference call is placed when it is necessary to talk with persons at several different locations at the same time. With some telephone systems, you can use special features to arrange these calls yourself. In many cases, conference calls are set up in advance with a conference operator. To place a conference call with this type of assistance, dial the number of this specialized service. You can obtain this number from your long-distance service provider or dial the operator and request a conference call. Be prepared to give the names, telephone numbers, and locations (cities and states) of the participants as well as the exact time the call is to be placed. At that time, the operator will call you and indicate that the other parties are on the line. Review the tips for planning and carrying out conference calls that were presented in Topic 12-1 in this chapter.

For people who travel frequently for business or pleasure, telephone credit cards can be very practical. The user is able to charge telephone calls to the credit card. A special PIN (personal identification number) is issued to the cardholder for security. The PIN number is entered using the telephone keypad. Some telephones, such as those found in airports, are specially equipped to read a magnetic card number when the credit card is slid through a slot.

Another type of phone card that is often used by travelers is a **prepaid phone card**. This card is purchased in advance and used to pay for a certain number of minutes of phone use. The user receives a PIN number and a toll-free access number. The phone system will inform you of the amount of calling time remaining for the card. Prepaid phone cards may be purchased in many locations such as airports and convenience stores and from your long-distance carrier.

### Toll-Free Service

As a convenience to customers who call long-distance, a company may subscribe to toll-free service for callers. This discounted service applies to incoming calls only. No charge is made to the caller. For toll-free numbers, users dial 800 or 888 rather than an area code. To determine whether a company in the United States has a toll-free number, dial 1-800-555-1212 and give the company name. Several Web sites provide a lookup service for toll-free numbers. The Internet 800 Directory is an example of a site that offers this service. To find other sites, search the Internet using the phrase **lookup service for toll-free numbers**.

As with other telephone services, rate plans and regulations for toll-free service plans vary widely. Compare price plans and features from several companies to find the plan that will be most cost-effective for your company.
Controlling Telephone Costs

As an office worker, you will be expected to help control telephone costs. Some guidelines to follow for controlling telephone costs and improving efficiency are listed below.

- Use direct dialing most of the time. Make more specialized, expensive types of calls only when necessary.
- Plan your calls so the time spent during a long-distance or any other call is used efficiently.
- If possible, call when long-distance rates are least expensive.
- Notify the operator immediately after reaching a wrong number so you can receive credit for the call.
- Be an informed consumer of telephone services. Compare rate plans and promotional offerings.
- Learn how to use the equipment and features of your telephone system.
REVIEWING THE TOPIC

1. What factors influence the first impression you make when you respond to a telephone call?
2. Why should you use the caller’s name as the conversation ends?
3. What information should you record when taking a telephone message or retrieving telephone messages from your voice mailbox?
4. What should you do if you have placed a caller on hold and you think several minutes will be needed for you to locate the requested information?
5. What questions might you ask to learn a caller’s name?
6. Give three suggestions for handling difficult telephone callers.
7. Describe information found in a white pages telephone directory. How are organizations listed in a yellow pages telephone directory? For what purposes are the blue pages telephone directory used?
8. Name the five time zones into which the continental United States and parts of Canada are divided.
9. List five examples of information that may be needed before making a call.
10. Describe the procedure for dialing a domestic, long-distance direct-dial call.
11. Describe the procedure for dialing an international, long-distance direct-dial call.
12. List three guidelines for controlling telephone costs.

THINKING CRITICALLY

You are employed in a growing computer sales and service business, Hooser’s Computer Corner. Several calls are received daily for the fifteen sales associates, seven service technicians, and four office services employees. The owner is considering the purchase of an automated attendant telephone system. The office manager, Ms. Lin Wong, would like to hear your suggestions before deciding whether to purchase a system. You are aware of both advantages and disadvantages of using these systems. What do you recommend?

1. Make a list of the pros and cons of using an automated attendant at Hooser’s Computer Corner.
2. Prepare a memo or e-mail message to Lin Wong. Include your list of pros and cons. Give your recommendation as to whether or not you think the company should install an automated attendant. Give reasons for your recommendation.
You work for Carrlson-Greer, which has offices in Seattle, Houston, and St. Louis. You are responsible for monitoring the costs of the various forms of telecommunications used by the company. As part of your analysis, prepare a table showing the monthly long-distance telephone charges for each regional office for a period of six months.

1. Prepare a spreadsheet to record and calculate the telephone charges. Key the company name as the main title of the spreadsheet. Key *Long-Distance Charges for Regional Carriers* under the company name.

2. Key *Months, Seattle, Houston, St. Louis,* and *Totals* as the column heads. Key the data for each office for each month as shown below step 4.

3. Enter formulas to calculate:
   - Total charges for the three offices for each month
   - Total charges for each regional office for the six-month period
   - Total charges for the six-month period for all regional offices
   - The average monthly charges for each regional office
   - The average monthly charges for all offices

4. Format the spreadsheet so it is attractive and easy to read. Print the spreadsheet.

<table>
<thead>
<tr>
<th>Months</th>
<th>Seattle</th>
<th>Houston</th>
<th>St. Louis</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>$201.56</td>
<td>$58.67</td>
<td>$250.78</td>
</tr>
<tr>
<td>February</td>
<td>190.45</td>
<td>75.34</td>
<td>277.56</td>
</tr>
<tr>
<td>March</td>
<td>175.66</td>
<td>68.90</td>
<td>265.19</td>
</tr>
<tr>
<td>April</td>
<td>188.34</td>
<td>92.51</td>
<td>281.40</td>
</tr>
<tr>
<td>May</td>
<td>205.22</td>
<td>61.61</td>
<td>275.37</td>
</tr>
<tr>
<td>June</td>
<td>199.29</td>
<td>74.27</td>
<td>259.39</td>
</tr>
</tbody>
</table>
2. Create a new database file named *CH12 Phone Directory*. Create a table named **Directory** with the following text fields: Name, Title, Department, and Extension. Make the Extension field the primary key.

3. Enter records for all the workers at your location using data from the printout.

4. Sort the records in alphabetical order by last name and print the directory showing all fields.

5. Sort the records in alphabetical order first by department and then by last name. Print the directory showing all fields.

**ACTIVITY 2**

**Directory Research**

Telephone directories provide a wealth of information for your use in planning telephone communications and locating people and services. Use your local telephone directory or online directories to find the information requested. Key and print your answers.

1. Number of the nearest Federal Bureau of Investigation office
2. Number to call to report telephone problems on your line
3. Number to call if you have questions about your telephone bill
4. List of the first three digits of the telephone numbers in your local calling area
5. List of all area codes for Illinois, Colorado, and Washington, D.C.
6. The time zones for Nashville, TN; Prince Edward Island, Canada; Seattle, WA; and Wichita, KS
7. The country codes for dialing the following countries: Japan, Mexico, Kenya, and Greece
8. Number for your state’s motor vehicle department
9. Number for the local public schools
10. Subject in the yellow pages where you would find:
   • Agencies that supply temporary office workers
   • A vision center that sells eyeglasses
   • A service station that will change your car’s oil
   • A company that will repair your computer
   • A company that sells voice mail equipment
   • A doctor who specializes in eye surgery
Summary

Telecommunications plays a vital role in business affairs. Because the technology changes rapidly, office workers should keep abreast of new services and equipment. Read the following key points to review what you learned in this chapter:

- Office workers rely on telecommunications technology to share information quickly and reliably. This information may be in the form of text, images, or video as well as voice.
- A modem can be used to convert the digital data into analog signals that can be transmitted over telephone channels.
- Satellites play an important part in worldwide telecommunications systems.
- The integration of computer and telephone technologies is called telephony. Telephony technology offers many features useful to businesses.
- VoIP, also called Internet voice, allows users to make telephone calls using a high-speed Internet connection instead standard telephone channels.
- Centralized telephone systems route calls coming into and going out of an organization. An automated attendant is a computerized system for handling telephone calls.
- Mobile telephones are an important tool commonly used for both personal and business communications. Camera phones and smart phones are variations of mobile phones.
- A conference call is one that has three or more participants speaking at different locations. Conference calls may be handled in several ways: with the user's own equipment, operator-dialed service, or dial-in service.
- Voice mail is a messaging system that uses computers and telephones to record, send, store, and retrieve voice messages.
- Specialized telephone equipment and services are available for individuals with speech and sight impairments.
- Facsimile technology, often called fax, sends images (text, photographs, drawings) using telephone or VoIP channels.
- A variety of telephones and systems may be purchased from many vendors. Companies should carefully compare services and prices when choosing a telephone service provider.
- When you answer or place a call for your organization, you immediately make an impression on the other person.
- Workers should use proper techniques and procedures so that all incoming and outgoing calls are handled professionally and efficiently.
Plan an outgoing call before placing it to make sure all the points you want to discuss are included.

Information needed for placing calls is contained in a variety of print and electronic directories.

You can help control telephone costs by using direct-dial calls, planning outgoing calls, and placing calls when rates are least expensive.

Key Terms

- analog
- automated attendant
- Braille
- cellular telephone
- collect call
- digital
- enunciate
- facsimile
- modem
- pager
- person-to-person call
- prepaid phone card
- satellite
- screen calls
- smart phone
- telecommunications
- telephony
- videoconferencing
- voice mail
- VoIP

Chapter 12 | ACTIVITY 1

Telephone Conversations

Role-playing telephone conversations will help you develop your telephone skills. For the role-playing activities, work with another member of your class. Rotate in each situation between being the caller and being the person answering the telephone.

1. Open and print the PDF file CH12 Phone from the data files. This file describes several dramatic situations that you will role play.

2. After you have read each dramatic situation, work with your teammate to prepare a script. Compose the dialog that each person might say in this situation and print a copy for each of you.

3. Practice the telephone conversations. If you have a tape recorder available, record the call. Evaluate yourself and your teammate using the form provided in the data file.

4. Present your call to the class or another team. Have classmates complete an evaluation form for each presentation. Your classmates will also be acting out the situations and you will complete forms to evaluate them.
Chapter 12  Activity 2

Long-Distance Rates Comparison

Your company, Dee-Lite’s Chocolates, is dissatisfied with its current long-distance service provider. Prices have risen on domestic calls over the last six months. The company remains open 24 hours a day, seven days a week to meet the demands of a growing market for its gourmet chocolates. Long-distance telephone calls are placed all during the seven-day work period.

Tina has researched several plans and recorded the domestic rates for long distance calls. You will complete the research by finding rate plans for two additional long distance carriers. You will use your spreadsheet software to find the average rates for each plan. You will also copy the spreadsheet table into a document with your recommendation for which plan to choose.

1. Create a spreadsheet sheet titled TELEPHONE RATES COMPARISON. Key Tina’s data shown below.

<table>
<thead>
<tr>
<th>Provider</th>
<th>Plan Name</th>
<th>Day Rate</th>
<th>Evening Rate</th>
<th>Weekend Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-CON-O-ME</td>
<td>All-4-U</td>
<td>$0.10</td>
<td>$0.10</td>
<td>$0.10</td>
</tr>
<tr>
<td>VARI-PLAN</td>
<td>Ten Plan</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>EAGLE LINE</td>
<td>Wings</td>
<td>0.11</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>VALU-COM</td>
<td>Circle</td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>BL&amp;T</td>
<td>Makes Cents</td>
<td>0.14</td>
<td>0.08</td>
<td>0.07</td>
</tr>
</tbody>
</table>

2. Complete the research for this project. Use the Internet or other resources to find rates charged by at least two telephone service providers for long-distance calls within the United States. Record rate amounts for the same times as shown for the companies Tina researched. Key the data into your spreadsheet.

3. Key the column heading Average at the right of the spreadsheet. Enter formulas to average each company’s day, evening, and weekend rates. Save the spreadsheet file as CH12 Rates.

4. Create a memo to Murray Washford from you. Use the current date and an appropriate subject line. Give your recommendation for the telephone service provider the company should choose. Point out the reasons for your choice. Include the rate comparison table from the spreadsheet in the memo to support your position.

5. Check the document for format and content. Save the file as CH12 Rates Memo. Print the document.

After completing all the chapters in Part 4, complete the Part 4 simulation, At Work at Buckhorn Mountain Outfitters. The simulation is found in the Student Activities and Simulations workbook.