

Telecommunications— Technology and Etiquette

LEARNING GOALS

1. Describe how telecommunications affects individuals' lives today and in the future.
2. Describe the major telecommunication pipelines.
3. Identify messaging services.
4. Use proper cell phone and standard telephone etiquette.

This chapter will help you understand the importance of telecommunications in the world. Additionally, the chapter will help you be conversant about certain telecommunications technology and selected telecommunications equipment and services that are used daily. Although individuals communicate frequently through cell phones, email, and standard telephone service, they do not always use proper telecommunications etiquette. In fact, you may have experienced incidences of rude telephone and email behavior. Due to the prevalence of such behavior, this chapter also focuses on proper telecommunications etiquette for using standard telephone service, cell phones, and instant messaging.

Telecommunications—Its Impact

If you ever doubted the impact that **telecommunications** (the transmission of text, data, voice, video, and images—graphics and pictures—from one location to another) has on individuals, you are probably well aware of its significance since 9/11. As you utilize air travel and pick up friends or relatives from airports, you are aware of the changes telecommunications has brought about in the way airports do business. These changes are merely the beginning of major telecommunication usage in making airplanes and airport terminals safer. According to an article published in *Popular Science*[™], the following changes will likely occur by 2007 in airport security procedures.

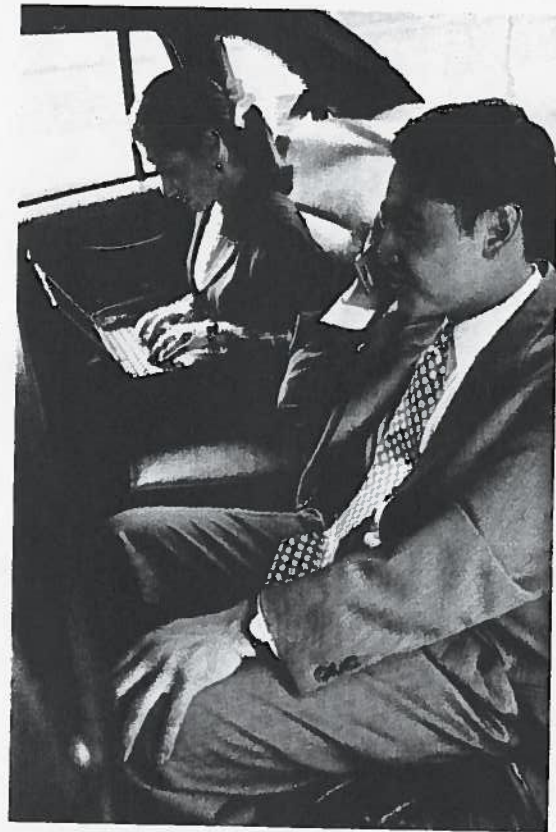
- Scanners at toll booth-like structures along access roads that aim lasers at vehicles to determine whether they are carrying explosives.
- An ID kiosk (as the first stop for passengers) with a camera and computer linked to facial recognition software that generates a tamperproof, easily trackable photo-ID smart card with a chip containing flight and gate number, check-in time, and a digital version of the facial scan.

- Scans cross-checked against a database of terrorist suspects.
- Checked and tagged luggage examined by a laser scanner that excites the molecules of items inside the bag, then compares the light those molecules emit against a database of chemical components, looking for suspicious combinations of materials.
- Security experts at an airport's command center receiving data from monitors linked to the airport's computer network that process all ID cards, tags, and security devices.
- ID smart cards controlling passenger entry to jetways.
- Cameras monitoring the airport's perimeter, using algorithms that distinguish between, for example, a dog harmlessly brushing against a fence and a human attempting to climb over the fence.
- Jets loaded with hidden cameras in the cockpit, galleys, and cabins, recording activity during flights and sending live feed to security personnel on the ground.
- Passengers, considered dangerous due to biometrics on a smart card that match those on a database of suspects, being sent to a secure area where they commit to an Iris scan to confirm their identity.¹

Star Wars, you say. Not at all. Much of the technology is available today, and the remainder will be available very soon. The gut of the system includes these technological innovations, along with others not mentioned.

- Biometrics—the science of measuring characteristics unique to each individual.
- Iris recognition—a biometric that measures the unique furrows, wrinkles, and cracks in the iris and the muscular part of the eye that surrounds the pupil. (Since no two irises are identical, this biometric is nearly 100 percent accurate.)
- Facial recognition—a biometric that identifies an individual based on a digitized image

¹Dan Tynan, "Blueprint for a Sterile Airport," *Popular Science*, September 2002, 49-54.



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Telecommunications is a major part of people's daily existence, affecting much of how they work and live.

of that person's face. (Facial recognition is generally 80 to 90 percent accurate.)

- LIBS (laser-induced breakdown spectroscopy)—A process that shoots a beam of light at an object, exciting its molecules. (As the molecules relax, they emit a pattern of light that is unique for every material.)²

Clearly, telecommunications invades every area of people's lives, both personally and professionally.

Pipelines

The telecommunication pipelines discussed here are pipelines that carry video as well as voice. Over the past several years, these

²ibid., 56.

pipelines have changed considerably. In the not-too-distant past, one pipeline carried voice and another pipeline carried video. Telephone companies such as AT&T® and Southwestern Bell™ (one of the Bell family of companies) were giant firms that dealt solely with the delivery and service of telephones and telephone lines. Today traditional telephone companies do not exist. Companies have transformed themselves from delivering a service that connects people via traditional telephone lines to connecting people to people and people to machines through traditional telephone lines and through cable, digital subscriber lines, satellite, fixed wireless, and wireless pipelines. Gone are the days when one or two extremely large companies owned the entire network support infrastructure.

Now there are numerous large communication companies with very diverse missions. To understand this statement better, consider the mission statement of SBC Communications, Inc.TM, which includes AmeritechSM, Nevada BellSM, Pacific BellSM, Southwestern Bell, and SNETSM. The mission statement is available in its entirety on the Web at www.sbc.com.

SBC's mission is to meet our customers where they are—and help them get to where they need to be. That mission starts with the critical local connections SBC provides through its subsidiaries' brands—SBC Southwestern Bell, SBC Ameritech, SBC Pacific Bell, SBC Nevada Bell and SBC SNET, and builds from there with a full range of voice, data and ebusiness services and solutions to meet a wide range of business and consumer needs.

At the same time, SBC is working to be the provider of choice for consumers by enabling access to an integrated package of broadband access, premium data and Internet services and telephony.

As technology and business needs evolve, SBC is continually expanding its data and ebusiness services and capabilities. For our business customers, that means providing services ranging from wide-area networks and IP telephony to applications hosting and emarketplace tools. For residential customers, it means providing instant,

*high-speed Internet access that paves the way for home videoconferencing and for online education and entertainment.*³

Notice how broad in scope the mission statement is, encompassing various pipelines, ebusiness, and global connectivity—a long way from connecting telephones together through lines strung from one location to another.

Analog Dial-Up

Modem technology that uses **analog dial-up** (connecting devices to a network via a modem and a public telephone network) has been around for many years. The modem allows computers to communicate with each other by converting their digital communications into an analog format to travel through the public phone network. The information then reverts back to a digital format the computer can understand. The word **modem** is an acronym that stands for modulate/demodulate. A computer modem *modulates* data so it can be transmitted over telephone lines in analog form, and a modem *demodulates* incoming signals so the computer's digital processor can understand them. Modems exist in the computer, and a regular telephone line connects the modem from the computer to the external telephone lines. Of the pipelines available for transmitting data and voice today, the modem is the slowest.

The Internet used modem technology from its infancy. However, with the large number of people using the Internet and the continued growth of users (expected to increase to 2 billion in the next few years), modems are considered too slow by many users. Other pipelines, such as cable, digital subscriber line, and satellite (all explained in this section) are much faster.

Cable

Before discussing cable, digital subscriber line, satellite, and wireless, you need a general

³"SBC-Data Capabilities," accessed November 14, 2002; available from www.sbc.com.

understanding of **broadband**, which is short for broad bandwidth. Broadband is a form of digital data transmission that uses a wide range of frequencies to achieve added bandwidth. Broadband is not a pipeline, but is used in DSL, cable, satellite, and wireless pipelines to carry a wide range of frequencies. Inherent in broadband technology, as opposed to modem technology, is greater speed and capacity. By definition, broadband designates a transmission speed of at least 2 million bits per second.

Cable is a pipeline that connects to computers and to a coaxial cable line to provide voice and data transmission. Although cable has been available for years, its original design was as a pipeline for TV only—not for high-speed data traffic. Cable was also designed for one-way television programming. In order to go from one-way service to two-way service, cable pipelines required extensive upgrading. Only in the past few years has this

two-way service become available for most of the United States. In certain rural areas, cable pipelines are still not available.

DSL

DSL (digital subscriber line) is similar to cable. It is fast and it uses wires that run to an organization or a home. For example, traditional telephone companies provide DSL service through broadband. Broadband can carry voice, video, images, and data. Cable and DSL pipelines provide extremely fast access to the Web.

Satellite

Television service through a **satellite** (an orbiting vehicle that relays signals between terrestrial communication stations and the earth) has been available for many years. Now satellite service as a high-speed Internet solution is available to everyone in the United States.



Cable was initially designed as a pipeline for TV.

One of the disadvantages of DSL and cable is that broadband pipelines are not run to certain areas of the country, particularly rural ones; thus, DSL and cable are not accessible to businesses and individuals in these areas. Satellite service makes high-speed Internet access available through an outside antenna and transmit-and-receive electronics integrated into a small indoor unit. The outdoor equipment connects by coaxial cable to an indoor receiver. Broadband by satellite allows users to have access to the Web, to download files in seconds, to enjoy Web music and video, and to free up the phone line so users can receive calls while on the Web.

Wireless

Wireless connectivity is possible through either **mobile wireless** or **fixed wireless** (conversion of data to wireless signals that customers receive through a network of transceivers mounted on utility poles, streetlights, and so on). Mobile wireless pipelines have been available for some time and are the pipelines used by cellular phones. With cellular phones, you move in and out of service areas. Mobile wireless service breaks a large service area into smaller areas called cells. For example, when a customer places a call from a mobile unit, the nearest cell, or transmitting station, relays it to a central computer that, in turn, directs the call into the local telephone system. When a customer leaves one cell area and enters another, the computer automatically switches the transmission to the next nearest cell.

Fixed wireless does not utilize client devices moving in and out of coverage areas. Fixed wireless differs from cellular/mobile telephony in that its end-user terminals have a fixed location (for example, affixed to a building); it does not support mobility because the terminals require a power connection. Each fixed wireless subscriber has a small receiver and directional antenna oriented toward the nearest microcell. In the last few years, the number of fixed wireless users grew significantly in the United States—from

approximately 200,000 subscribers in 1992 to millions of users today. Fixed wireless networks dropped in price and became more reliable. They are now affordable for homes, home offices, and small businesses. For example, wireless networks, using a wireless access point and a cable/DSL router can support a broadband connection for a small office network. The future is bright for the use of this technology in homes and small businesses.

Future Directions—Unlimited

The rapid growth of telecommunication capabilities from 1995 to 2000 suggests that the capabilities and speed of information transmission by 2020 will have increased **exponentially** (relating to an expression in terms of a designated power of the base). For example, the projection is that Internet users will grow to 2 billion by 2005 and the amount and speed of information transmitted by telecommunications will increase significantly. Presently a **terabyte** (a trillion bytes per second), when sent down a conventional fiber, transmits the equivalent of the entire Library of Congress in a second. To put this in context, rough estimates are that the world's production of information is at around 2 **exabytes** (1,000 **petabytes**, with petabytes being equal to 1,024 terabytes) per year. Fiber-optic communication capacity presently doubles every nine months.

Projections for the future include the following:

- By 2010 the planet will be embedded in a largely unbroken system of data exchange.
- Costs of telecommunication services will continue to fall.
- Numerous new products and services will become available to the general public and to business users. The sophistication of these products and the changes they will bring to people's personal and business lives will be tremendous. Here are only two of the many home products presently under development.

- (1) A house with a mind—With a house's heating and cooling, electrical, and security systems plugged into a computer and the Internet, the house has a mind of its own. If you are at your off-site workplace and are worried you left your lights on, you can call your house to tell it to turn the lights off.
- (2) Researchers are at work on closets and refrigerators that match information from the Web with your personal data to advise you on daily dilemmas such as what to wear and what to cook.

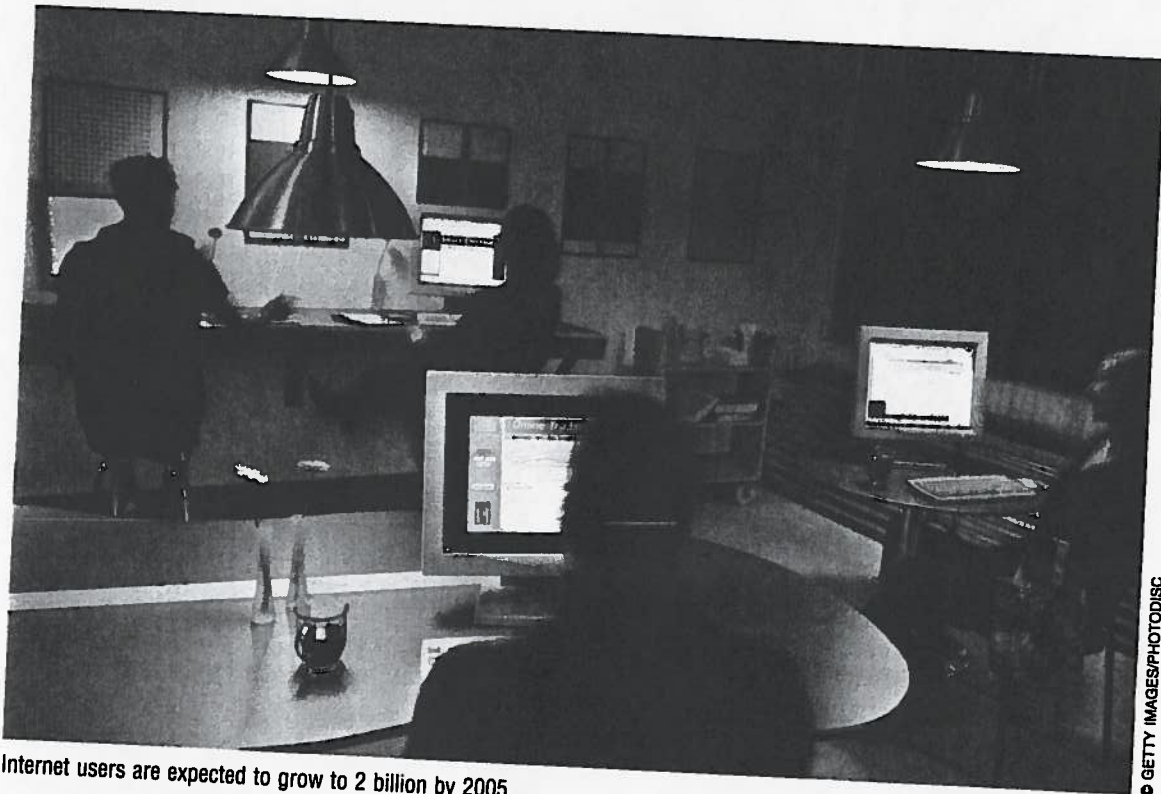
Telecommunication Messaging Services and Etiquette

Telecommunication messaging systems presented in this textbook include email (pre-

sented in Chapter 6), fax (presented in Chapter 12), and instant messaging, cell phones, and standard telephones. Each of these messaging systems has a prominent place in businesses and home offices. Additionally, individuals use these systems extensively for their own personal use.

As you use these messaging services, you must use proper etiquette. Clearly, the growth of telecommunications changes the way you communicate. In the past individuals spent more time talking to people face-to-face or over a standard telephone. Today individuals are involved in telework, working from home offices or occasionally going into the office but frequently communicating with people through email, instant messaging, and cell phones—often leaving a voice message.

When talking face-to-face, you can generally correct any errors you make since you are able to observe the person's reaction to your statements. It is much easier to be

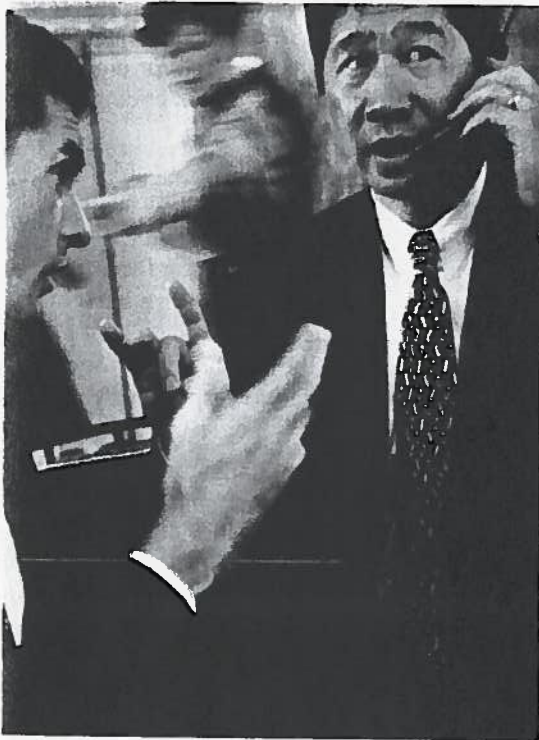


Internet users are expected to grow to 2 billion by 2005.

discourteous to someone when you cannot see him or her. You may quickly lose your patience and find yourself shouting at the person on the other end of the cell phone or using harsh, inflammatory language with the person receiving your email. Since telecommunication messages are more impersonal, you must consider the individuals receiving the messages. Take time to read the numerous suggestions given in this chapter for using proper etiquette.

IM Systems

IM (instant messaging) is changing the way individuals communicate. With IM, immediately after you connect to the Internet and log on to your IM account, you see a **contact list** or **Buddy List** (IM users with whom you communicate frequently). This list lets you know who is online and lets your buddies know



You may find it easier to be rude while talking to a person over a cell phone than when talking with him or her in person.

you are online. Figure 8-1 illustrates how IM works. Most IM services are free on the Internet. For example, Yahoo!®Messenger is available for free at <http://messenger.yahoo.com>.

Benefits of IM

Service and sales businesses are finding IM extremely beneficial for their businesses. IM allows these benefits for clients and businesses:

- Quicker and more complete answers to employee questions. For example, if service representatives do not have complete answers for customers' questions, they may check their online Buddy List to see who is online and then IM the appropriate person for a quick answer. With such an approach, a representative can quickly answer a question for a client while on the telephone with him or her. The service representative does not have to tell the customer he or she will call back later with an answer. The representative obtains an answer and communicates it to the customer quickly and efficiently.
- Increase sales. Ecommerce companies can expect to see their sales improve because of IM. Studies have reported that ecommerce businesses that adopt IM for communicating with customers can expect sales to rise immediately as much as 20 percent.

Research suggests that IM users will continue to grow and that IM will reduce the usage of standard email and telephones. In a study done by InsightExpressSM, 35 percent of respondents stated that they preferred IM to email and 49 percent said they preferred IM to the telephone.⁴

IM Etiquette

Communication is often difficult. When you are communicating face-to-face, you have the added advantage of being able to observe body language in addition to hearing the

⁴"Say Hello to Instant Messaging, The Technology That's Changing How We Communicate," *Smart Computing*, September 2002, 51-53.

INSTANT MESSAGING THE PROCESS

- STEP 1** Install software client and open the IM client.
- STEP 2** The IM client sends your computer address, the port assigned to the IM client, and the names of everyone on your **Buddy List** to your computer.
- STEP 3** The computer creates a file of your contacts and checks to see if any of your buddies are currently logged on. If so, it tells your buddies that you are also logged on.
- STEP 4** You then click on the name of the person on your **Buddy List** who is online and begin communication with the person. If several of your buddies are online, you can have a conversation with the group.
- STEP 5** When the conversation is complete, you close the message window and go offline. The server then sends a message to the client of each person on your contact list that is currently online, indicating that you have logged off.

FIGURE 8-1 Instant Messaging—The Process

words spoken. You can observe the person's facial expressions and the way he or she is sitting or standing and you can hear the person's tone of voice. With the telephone, you have the advantage of hearing a voice. With IM, you have none of these advantages. You must rely only on the keyed message sent to you. Thus, it is extremely important that you observe certain rules of etiquette. Here are several suggestions that will help make your IM communications more successful.

- Communicate with the buddy or acquaintance, informing the person that you are adding his or her name to your list. Do not merely add the name to your list. This approach lets the person know that you value his or her knowledge and will be asking for assistance or sending information occasionally.
- When you ask a buddy for assistance, be sensitive to the person's time demands. A person may become irritated to see a message appear on the computer screen while he or she is engrossed in something else. Ask whether the person has a few minutes to respond to you. Such politeness and sensitivity pays off in IM just as it does in person.
- Be concise with your IM message. State your request or point as succinctly as possible. Remember that the basic purpose of an IM message is to garner a quick response. A longer message is reserved for email, a memorandum, or a letter, depending on the length and subject.
- When you are not available for IM messages, let your buddies know through status settings offered on the system.
- If your buddy does not respond to a request, do not get angry and fire back an offensive or accusatory message. Try communicating with the buddy later. If the person continues to fail to respond to your requests, drop his or her name from your list of buddies.
- Put into action the effective correspondence techniques you learned in Chapter 6—completeness, clarity, accurateness, promptness, conciseness, courteousness, and positivism.

Telephones

The evolution of telephones from the time that Alexander Graham Bell spoke his famous words, "Mr. Watson, come here. I need you!" in 1876 to today is remarkable. Telephones



THOMSON LEARNING/SOUTH-WESTERN

Good communication techniques are important when communicating by IM.

are one example of the many changes in the telecommunications field. A few of the many features available on business and personal phones are these:

- Caller lists—allowing display of caller names, telephone numbers, and dates of calls
- Storage of names and telephone numbers
- Caller identification
- Voice mail
- Conference calls

Additionally, broadband technology, with its numerous pipelines for sending and receiving video, sound, text, and graphics, is providing options not available in the past. For example, **Internet telephony** (a category of hardware and software that enables people to use the Internet as a transmission medium for telephone calls) provides several applications. These products may be called **IP** (Internet protocol) **telephony**, **VOI** (voice over Internet), or **VOIP** (voice over Internet protocol). With IP, Internet service providers become

telephone providers. Here are some of the services offered with Internet telephony.

- Call waiting allows a subscriber surfing the Web to see a small window pop up identifying the caller and relaying a message from the caller.
- Cisco's™ IP phone includes a virtual assistant that can screen calls and send them to you or to voice mail.
- Software such as NetMeeting™ and CUseeMe™ and digital video cameras allow users to conduct meetings and see each other over their PC monitors while talking.

For individuals who want to use Internet telephony without being tethered to a computer, vendors sell phone cards that allow phone-to-phone traffic to be routed over the Internet.

Cell Phones

Cell phones, which use a wireless pipeline, are standard equipment for many people. They carry their cell phones with them constantly. Individuals enjoy being able to send and receive calls from any location at any time.

In 2002 it became possible for customers of any of the major U.S. cellular carriers to send short text messages via their cell phones. The service, known as **SMS** (short message service), is widely used in Europe and Asia. More than 19 billion communications by short message service were sent worldwide in 2002. Multimedia messaging, a new service recently developed for cell phones, allows cell phone users to send small images. Another cell phone service is the ability to handle financial transactions from point-of-sale terminals and vending machines.

Individuals also enjoy combination cell phones and **PDA**s (personal digital assistants), with the units having some of these capabilities:

- Phone, fax, and email messages delivered into a single mailbox reachable from the phone.
- Digital assistants to forward messages and manage how and when you can be reached.



IMAGE BANK/STEVE NIEDORF PHOTOGRAPHY

Digital video cameras allow users to conduct meetings and see each other over their PC monitors.

- Web browsing.
- Speakerphone for hands-free calls.
- IM email.
- Multitasking by talking on the telephone using an earpiece and working on PDA applications simultaneously.

To use your cell phone or your combination cell phone and PDA effectively, become informed on what capabilities the system has by doing the following:

- Reading the manual carefully.
- Checking the information available on the cell phone manufacturer's Website.
- Obtaining the number of your cell phone service provider, which is usually toll-free.

Cell Phone Etiquette

Have you ever been in a crowded airport where the person seated next to you was talking on a cell phone while you were attempting

to hear boarding instructions for your flight? Have you ever been out for a quiet dinner with friends and had to contend with a constantly ringing cell phone at the table next to you? If so, you understand that as a society, people are often less than courteous when using their cell phones. Individuals seem to forget that others around them have needs also. You can improve your cell phone etiquette by following these simple but important suggestions.

- In public places, make calls only when necessary, and ask your friends to follow the same rule.
- Keep your telephone voice as low as possible. If, due to the noise around you, you find yourself speaking loudly while using your cell phone, seek a quiet place if possible.
- Keep your calls short.
- Turn off your cell phone when not in use; the constant ringing of a cell phone can become an irritant to others in public.

places. If you are expecting an important call, check your messages frequently.

- Avoid talking on a cell phone while driving, and do not call friends or acquaintances who are in their cars. Cell phone conversations can be distracting, which may cause an accident. If you must make a call while driving, keep the call as short as possible.

Voice Messaging

Today many individuals in the workplace use voice messaging to route calls efficiently. When voice messaging is set up with an effective routing system and a pleasant voice giving directions, the system can be very efficient. However, some voice systems today are not well constructed. You may find yourself in a loop that never allows you to connect with the office or person you want to talk with and unable to speak with an operator.

Additionally, some systems attempt to give too much information, resulting in confusion for the caller.

If you find yourself in such a situation, you may get angry. The call is an important one; yet you are not able to complete it due to an inefficient voice messaging system. When you finally do get to the department or person you need, you may (due to your frustration) find yourself being rude to the person who answers the phone. That person may become angry also, with a verbal fight ensuing between the two of you. Frustrating? Yes—for both individuals. Common? Yes—altogether too common. In fact, according to a January 2002 survey by Public Agenda, 61 percent of Americans believe that rudeness is on the rise in the United States.⁵

⁵Leslie Farnsworth, "Why Courtesy Counts," *Parade Magazine*, August 25, 2002, 10.

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When using a cell phone in a public place, be courteous to the people around you by keeping your voice as low as possible.

Voice Messaging Advantages

Organizations do not need to eliminate voice messaging. It is an effective technology when used appropriately. There can be numerous advantages of voice messaging, including the following:

- Greater productivity of workers by eliminating repeated telephone calls when the individual being called is not available
- Greater productivity due to calls being routed to the appropriate individuals and the elimination of calls being transferred
- Less extraneous conversation, with voice messages averaging 30 seconds as compared to regular phone conversations averaging 4 to 5 minutes
- Faster delivery of communications by messages getting through even with time zone changes

Voice Messaging Etiquette

If voice messaging is to be effective, system designers must pay attention to the message content, length, and branching system. If you, as an administrative professional, are involved in helping to design a voice messaging system, you must be certain it is both effective and efficient. Carefully consider the ability of the system to respond to the needs of clients and customers. Here are some disadvantages of a poorly designed system and of employees using a system inappropriately, along with suggestions for making the system more effective.

- A voice message may be too long and complex. The voice message should be succinct and clearly stated. Do not give the caller superfluous information.
- A voice message may have a poorly designed routing system. With each step of the routing system, give callers no more than four options. Instructions should be short, under 15 seconds if possible. Give the most important information or answer the most frequently asked questions first. Tell the callers what they need to do first; then tell them the key to press. For example, a message might be as follows: *To*

transfer to the operator, press zero. If you give the number first, the caller may forget what number to press.

- A voice message may not allow the caller to talk with a person. No one likes to be lost in a voice messaging system that does not allow the caller to talk to a human being. Be certain your system allows for exits to a person at appropriate intervals.
- The voice on a voice message may not sound pleasant. You must create a favorable impression with a voice message not only with what you say, but also with the tone of your voice. Do not talk in a monotone; vary your vocal tone. Also be careful not to record any unpleasant or inappropriate background noise with your message.

In addition to a voice messaging system that routes outside calls to the appropriate department or person, organizations may use voice



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Do not use a voice messaging system as an excuse for not answering your phone.

messaging systems on individual phones. Such systems allow employees to receive messages while they are away from their desks and return calls later. Unfortunately, sometimes these systems are misused by employees who put their phones on voice mail regularly, even when they are available at their workstations. At times, you may need to use voice messaging while in the workplace, particularly if you are working on a project where interruptions cause problems. However, make certain that these situations are rare. Do not use a voice messaging system as an excuse for not answering your phone. You can save yourself and the caller time by answering the phone when you are at your workstation. Courtesy to callers demands that you consider their needs and time constraints.

Telephone Etiquette

As an administrative professional, you will spend countless hours on the telephone. If you are to be effective in your telephone communications, you must use proper etiquette. Study the suggestions given in the following sections, and apply these suggestions as you use the telephone.

Develop a Pleasant Voice

Regardless of how busy you are, you should answer the telephone with a smile. Have you ever noticed how happiness shows through in the tone of your voice? A smile has the same effect; the caller becomes the beneficiary of your pleasant tone of voice. Treat the voice on the telephone as you would a person sitting across from you requesting information or assistance. Let all callers know you want to help with whatever needs they have.

When you are curt and rude in answering the telephone, you set the stage for a negative conversation. You may be busy, but that does not give you an excuse to be rude. Chances are the person you are talking with is just as busy. Instead, answer the telephone with a smile in your voice that says, *I am happy you called. How may I help you?*

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Answer the telephone with a smile in your voice.

Answer Promptly

When your telephone rings, answer promptly—between the first and second ring if possible and certainly before the third ring. You may lose a potential customer if you are slow in answering the telephone. Even if you do not lose a customer, you may not make a good impression on the person calling. Have you ever been on the receiving end of a telephone that rings five or six times before someone answers? If so, you understand how irritating it can be when the person does not answer the phone promptly.

Speak Distinctly

Your voice carries clearly when you speak directly into the mouthpiece with your lips about an inch away from the transmitter. You cannot speak distinctly with something in your mouth. Do not have gum, food, or a pencil in your mouth when you answer the telephone. Speak in a normal tone of voice; do not shout or mumble. Callers may become irritated if they must ask you continually to repeat what you said or if they need to hold the telephone one or two inches away from their ear.

Identify Yourself and/or the Organization

Your employer will usually instruct you in how to answer the telephone. Many large organizations have voice messaging systems that identify the organization and give callers the options available. Other large companies have individuals who personally answer the phone with the name of the organization and route the person calling. When your telephone rings, identify your office and yourself. For example, you might say, "Human Resources, Carla MacIntosh." If you are using a voice messaging system when you are away from your desk, the message should include the appropriate information. For example, *This is Carla Macintosh. I am away from my desk now. Please leave your name, number, time of your call, and any necessary information. I will return your call as soon as possible. Thank you.*

Record Messages Carefully

Your employer will not be pleased if you provide him or her with an incomplete or incorrect message. When answering the telephone, you are responsible for getting all necessary information from the caller and recording it accurately. You need to get the following information:

- Person's name (spelled correctly). (If you do not know how to spell the name, ask the caller to spell it and then repeat the spelling to the caller to be certain you recorded it correctly.)
- Organization of the person calling.
- Telephone number, with area code if long distance. (Repeat the telephone number to be certain you heard it correctly.)
- Any message. (If the person leaves a message, get the necessary details. For example, if the caller says he will call your employer tomorrow, you may respond, "May I tell him when to expect the call?" This approach helps avoid delays if your employer is going to be out of the workplace. Your task is to get the two individuals connected as expeditiously as possible and to eliminate numerous repeat calls when your employer is not in.)

Organizations usually provide message pads for recording telephone calls. Another possibility is to send an email to your employer (if the person checks email frequently) containing his or her telephone messages.

Place Calls on Hold Effectively

A caller sometimes requests information that you do not have at your fingertips. You may need to check with someone else or go to your computer file to get the information. When this happens, do not place the caller on hold without his or her permission. You may say, "I need to pull the information from my files. Would you like to hold for a moment while I get it, or shall I call you back?" If the caller agrees to hold, get back to the person as soon as possible. If you are taking longer than you anticipated to find the material, check with the caller within no more than a minute to ask whether he or she would like to continue to hold. When you return to the line, let the caller know you are back by saying "Thank you for waiting."

Do Not Discriminate

If you are presently employed or have been in the past, have you ever found yourself being nicer over the telephone to the president of the organization than to a client you do not know? If the answer is yes, make a point of being friendly before you know who is on the other end of the line. Tell yourself before answering the phone that a friend is calling.

Avoid Gender Bias

Some people still assume that all assistants are female and all executives are male. If you answer the telephone and the voice on the other end is female, do not assume she is an assistant and ask to speak to her employer. When addressing anyone, use terms that connote respect. Do not refer to a woman as a girl, a young lady, a gal, or any other term that implies gender bias. Do not refer to a man as a boy or a guy.

Be Helpful and Discreet

When someone calls and your employer is not in the workplace, tell the caller approximately

how long your employer will be gone or ask if someone else can help. Let the person know you are trying to help. Here are two examples of how to handle such a call—the wrong way and the right way.

Incorrect Handling of Call

Pablo Rodriguez: This is Pablo Rodriguez. May I speak with Shareen Edwards?

Administrative Assistant: Ms. Edwards is out of the office.

Pablo Rodriguez: When will she be back?

Administrative Assistant: I expect her back in about two hours.

Pablo Rodriguez: Ask her to call me when she comes in.

Administrative Assistant: Okay.

What is wrong with the conversation? You may be thinking that you do not see any glaring errors. The assistant answered Pablo Rodriguez's questions, which is precisely the point. Mr. Rodriguez had to ask all the questions; he probably thought the assistant was uncooperative. The closing "okay" by the administrative professional was too informal. Additionally, the administrative professional did not get a phone number. Notice the improvement in this conversation.

Correct Handling

Pablo Rodriguez: This is Pablo Rodriguez. May I speak with Shareen Edwards?

Administrative Assistant: Ms. Edwards is out of the office now; however, I expect her back in about two hours. Please give me your telephone number, and I will have her call you when she returns.

Pablo Rodriguez: That would be helpful. My number is 555-0129.

Administrative Assistant: Thank you, Mr. Rodriguez. I will give her the message.

The administrative professional has saved time for Mr. Rodriguez and Ms. Edwards and has probably left a positive impression with Mr. Rodriguez.

Another important point to remember in such a situation is to be discreet. In other words, do not give unnecessary information to the caller. Consider the same situation.

Pablo Rodriguez: This is Pablo Rodriguez. May I speak with Shareen Edwards?

Administrative Assistant: Ms. Edwards went to see Ralph Ijiri at IPI about an advertising matter. She should be back in two hours. Can someone else help you, or may I have her call you when she returns?

What went wrong? The administrative professional gave out entirely too much information. It was not necessary to tell Mr. Rodriguez where Ms. Edwards went, whom she went to see, and why. The assistant could be revealing confidential information. You want to help the caller, but you also must protect your employer by not revealing too much information.

Ask Questions Tactfully

It is your responsibility to learn the caller's name. Usually, a caller identifies herself or himself. If not, ask for a name tactfully. Do not say, "Who is this?" Say, "May I tell Ms. Edwards who is calling, please?" *May* and *please* completely change the approach. The caller usually understands that you are responsible for finding out who is calling and does not resent your asking. Try to put yourself in the other person's place, and ask questions the way you would want to be asked.

Screen Calls

Many executives have two telephone numbers—one that is published and one that is not. The executive uses the inside number to make outgoing calls; the executive may also give the number to close friends or family members who can then dial the office directly. The administrative professional is to screen calls that come from the published number. For example, when the executive receives a call, the administrative professional must determine who is calling and why. The executive may refuse to take certain calls. If someone else in your company can handle the call, transfer it to that person after requesting permission from the caller. If no one is available to take the call or if no one is interested in taking it, let the person know courteously that your employer is not interested. One response might be this: *I appreciate the information; however, Ms. Edwards is not interested in pursuing the matter.*

Be Attentive

As you are talking with the caller, visualize the person. Speak *with* the person, not *at* the telephone. Listen politely to what the person is saying. Do not interrupt or continue to key a document. If the caller is unhappy about an experience with the company, listen to the person's complaint. You will have an easier time dealing with a disgruntled caller after you hear what the caller has to say. Use good listening skills.

- Listen for facts.
- Search for hidden or subtle meanings.
- Be patient.
- Do not evaluate.
- Try to understand the words the caller is using.
- Act on what the caller is saying.

Take notes during a long or involved conversation so you will remember all the information. Use words such as *thank you* often. Let the caller know you care.

Use Correct English

Pay attention to using correct English and pronunciation. People who have a good grasp of the English language develop a negative impression of your organization when they hear *this is her* or some other grammatically incorrect statement.

Avoid Slang

Using slang is neither businesslike nor in good taste. Figure 8-2 provides several slang expressions that are incorrect, followed by more appropriate expressions.

Use the Caller's Name

Individuals like to be recognized and called by name. Use the person's name frequently. For example, say, "Yes, Mr. Jordan. I will be happy to get the information." End the conversation with "It was nice to talk with you, Mr. Jordan."

Transfer Calls Properly

It is often necessary to transfer a caller to another person. Before you transfer a call, explain to the person why it is necessary to do so. Make certain the caller is willing. You may say, "Ms. Dyer is out of the office now, but I believe Mr. Radman can help you. May I transfer you to Mr. Radman?" Additionally, give the caller the extension number in case you are disconnected. Stay on the line until the person

AVOID SLANG EXPRESSIONS WHEN TALKING ON THE PHONE

Avoid	Say
Yeah	Certainly
Okay	Yes
Un-huh	Of course
Bye-bye	Good-bye
Huh?	I beg your pardon. I did not understand.

FIGURE 8-2 Avoid slang expressions when talking on the phone

picks up the phone and announce the transfer. If the person to whom you are transferring the call is not in, ask if the caller would like to leave a voice message. If the caller does not want to do so, take a number from the caller and have someone return the call.

Terminate Calls Courteously

Thank the person if appropriate. Say *good-bye* pleasantly. Let the person who called hang up first. Treat the handset gently; do not slam it down in the caller's ear.

Handle Problem Calls

Although most individuals are pleasant over the telephone, sometimes a caller is angry or unhappy. Remember that the individual is not angry with you. The person is angry at a situation or an event. Just as you are pleasant to a difficult visitor to your workplace, you are pleasant to a difficult telephone caller. If the person is angry over an organizational issue, listen. Successful administrative professionals defuse many angry callers by letting the callers talk and not becoming emotionally involved in the situations.

Once you listen to the person, try to assist in getting the problem solved. This approach may mean that you suggest a solution or suggest someone who can solve the problem. Do not put the person on hold for a long period of time or mishandle the call by transferring it to an individual who cannot help. Such approaches merely make the caller angrier.

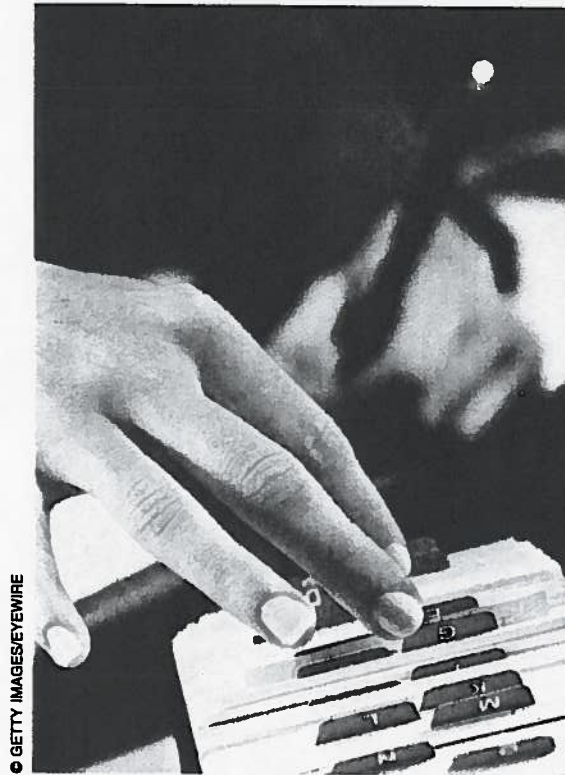
Although you cannot solve every difficult situation and make every telephone caller happy, you should be able to handle most people and situations well if you remain courteous and considerate.

Keep a List of Frequently Called Numbers

A file of frequently called numbers is an excellent time saver. You can keep these numbers in a computer file or in a card file on your desk.

Remember Time Differences

You need to remember time zone differences when placing long-distance calls. There are



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Keep frequently called numbers in a file so you can find them quickly.

four standard time zones in the United States—Eastern, Central, Mountain, and Pacific. There is a one-hour difference between neighboring zones. For example, if it is 10 a.m. in New York City (Eastern Standard Time), it is 9 a.m. in Dallas (Central Standard Time). If you call from New York to Los Angeles, you do not want to call at 9 a.m. Eastern Standard Time; it would be only 6 a.m. in Los Angeles (Pacific Standard Time). You might note on your telephone list time differences for frequent callers. Figure 8-3 is a time zone map of the United States.

There are also international time zones. For example, the person who places a call from New York to London must remember that when it is 11 a.m. in New York, it is 4 p.m. in London. If you are placing many international calls, you need to become familiar with the international time zones.

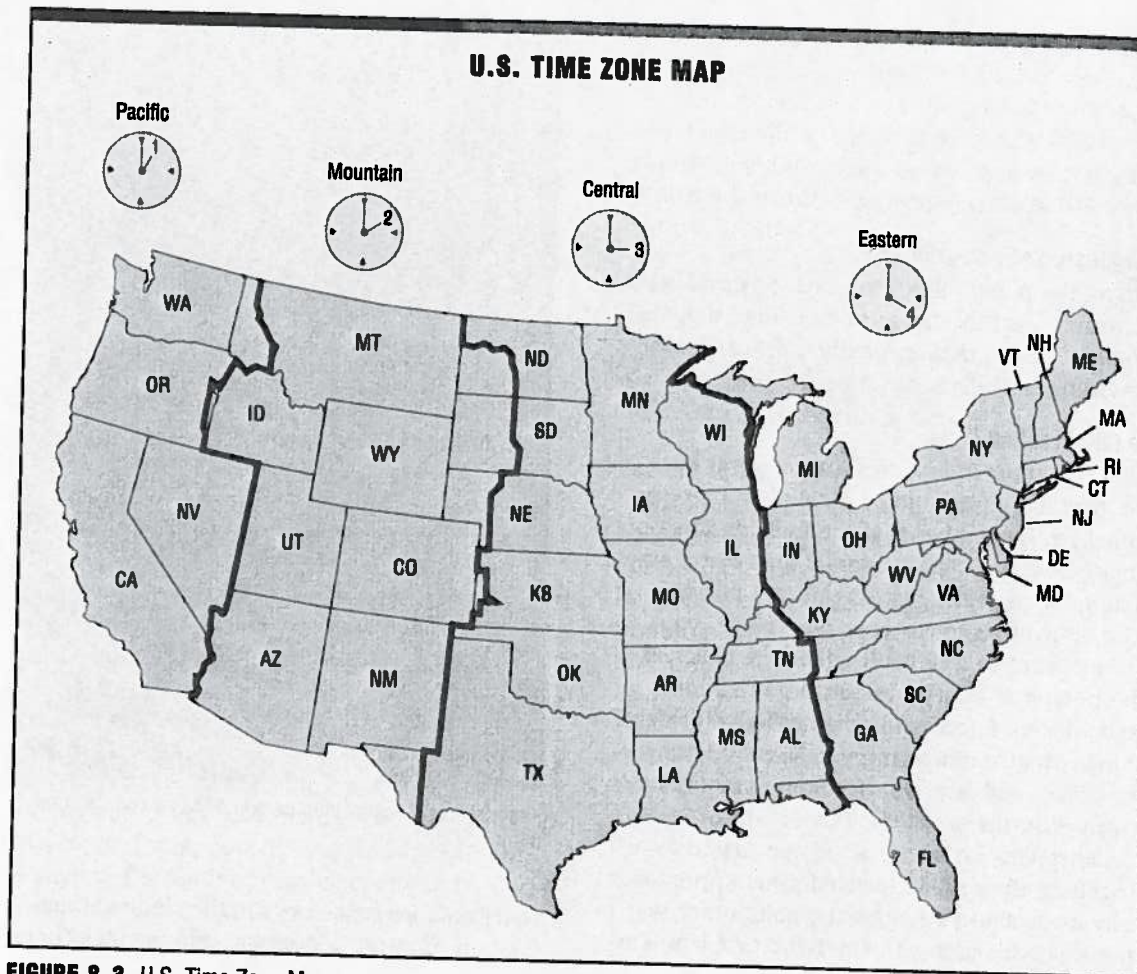


FIGURE 8-3 U.S. Time Zone Map

Your Telecommunications Role

As an administrative professional who understands the importance of keeping abreast of telecommunications technology, your role is twofold. First, you need to keep current on advances in telecommunications. Second, you need to be willing to learn the intricacies of the telecommunications equipment you operate.

If you accept the need to remain current on telecommunications advances, does this mean you must understand the intricacies of each new telecommunications device? Absolutely not! You are not an engineer or a telecommunications expert. However, your job does demand that you pay attention to new developments in telecommunications. You do so by reading publications such as *PCWorld*[™] and *Smart Computing*[™]. You do so by using the Web to learn about new technologies and equipment that are available. In other words, you make it part of your job to have

a general knowledge of what is happening in the telecommunications world.

Additionally, you willingly learn the intricacies of new telecommunications devices at your workplace. You eagerly accept training on new equipment. You become proficient in

operating the equipment. You become a leader with other administrative professionals in your workplace in using new technology to increase your own productivity and thus the productivity of the organization. ■

SUMMARY

To reinforce what you have learned in this chapter, study this summary.

- Advances in telecommunications affect an individual's workplace and personal life. Telecommunication advances will continue at ever-increasing speeds. Technology will continue to affect how individuals work and live.
- Telecommunication pipelines include analog dial-up, cable, DSL, satellite, and wireless.
- The rapid growth of telecommunication capabilities suggests that the capabilities and speed of information transmission by 2020 will increase exponentially.
- IM benefits include almost instantaneous contact with "buddies" who can assist with information. IM also has the potential to improve sales for ecommerce companies. Research suggests that IM users will continue to grow, with IM having the capacity to reduce the usage of email and telephones.
- Since you cannot observe a person's facial expressions and tone of voice with IM, you must observe appropriate IM etiquette. For example, do not add a buddy to your list without communicating with that person first; be concise with your IM message; let your buddies know when you are not available for IM; and put into action the effective correspondence techniques of completeness, clarity, accurateness, promptness, conciseness, courteousness, and positivism.
- Internet telephony provides hardware and software that enables people to use the Internet as the transmission medium for telephone calls.
- Cell phones are standard equipment for many people. In addition, combination cell phones and PDAs are available that allow phone, fax, and email messages to be delivered into a single mailbox; Web browsing; IM email; and other services.
- With the number of cell phones in use today, appropriate cell phone etiquette becomes important. When in public places, keep your calls to a minimum, your voice as low as possible, and your calls short.
- Since organizations use voice messaging extensively, voice messaging etiquette is essential. Voice messaging systems should route calls quickly and efficiently. The voice on the message must create a favorable impression through the words and the tone of voice.
- Telephone etiquette includes these techniques:
 - Answering promptly
 - Speaking distinctly
 - Identifying yourself and/or the organization
 - Recording messages carefully
 - Placing calls on hold effectively
 - Avoiding discriminatory language and gender bias

- Being helpful and discreet
 - Asking questions tactfully
 - Screening calls
 - Being attentive
 - Using correct English
 - Avoiding slang
 - Using the caller's name
 - Transferring calls properly
 - Terminating calls courteously
 - Handling problem calls
 - Keeping a list of frequently called numbers
 - Remembering time differences
- As an administrative professional who understands the importance of keeping abreast of telecommunications technology, your role is to remain current on advances in telecommunications and to be willing and eager to learn the intricacies of telecommunications equipment in the workplace.

FIND THE PROBLEM

In your work for People Pharmaceuticals International, you frequently use IM with individuals who report to Sandra Portales, informing them of meetings or asking them for information that Ms. Portales needs immediately. Recently you requested information from three people regarding a new drug under development. You received a reply from two of the individuals; you did not receive a reply from the third person. After one day passed, you sent the following IM to the individual who did not respond.

I sent an IM to you yesterday; I have received no response. I must have the response immediately.

When the individual returned, you received this IM from him:

Sandra knew I was out of town; she gave me an assignment that demanded a trip to Cleveland. Next time check before you send me two IMs and call my assistant.

What is the problem? How should you handle it?

PROFESSIONAL POINTERS

When communicating through email, through IM, or by cell phone, adhere to these rules of etiquette:

- Ask for information rather than demand that you receive it. Use *please* often.
- Use your IM system to let your buddies know when you are not available.
- Before you make a call or write an email or IM covering complicated issues, plan carefully. Be certain you include necessary details.
- When writing email or IMs to internal employees, use proper language, just as you would when writing to a client or customer. Be polite.

- Do not attempt to be clever or cute when writing emails or iMs. Be professional.
- When talking on a cell phone in a public place, remember to follow rules of courtesy: Do not talk too loudly or too long. If you must talk, seek out a place (if possible) where there are a limited number of people.
- Do not handle confidential information via a cell phone in a public place. You never know who might hear and use what you say to the detriment of your organization.

REINFORCEMENT ITEMS

1. Describe three ways that telecommunications affects people's lives.
2. List and describe the major telecommunication pipelines.
3. Describe three messaging services.
4. List three standards of etiquette for cell phone usage.
5. List five standards of etiquette for standard telephone usage.

CRITICAL-THINKING ACTIVITY

Celia Mesa works as an administrative professional for a small law firm, McKay, Carlson & Duffy. Celia started with the firm five years ago when there was only one attorney. Although the firm is still relatively small, there are three attorneys and the number of clients has increased by 300 percent from five years ago. One of Celia's responsibilities is to answer all incoming calls. There is one other administrative assistant in the office (added in the third year of operation), but the person has no phone responsibilities. In addition to answering the telephone, Celia must take care of a myriad of other duties, including keying legal documents and filing correspondence. Mr. McKay was the founder of the firm, and he believes that providing a personal touch is important. He wants his employees to care about the clients. He rejected a voice messaging system in the past because he considered it too impersonal.

Celia is overloaded. She is going to have to ask for additional help—either a third person or a voice messaging system. She knows the voice messaging system would be less costly. What advice would you give to Celia? What should she suggest to Mr. McKay?

VOCABULARY REVIEW

Complete the Vocabulary Review for Chapter 8 given on page 73 of the *Applications Workbook*.

ENGLISH AND WORD USAGE DRILL

Complete the English and Word Usage Drill for Chapter 8 given on page 74 of the *Applications Workbook*.

WORKPLACE APPLICATIONS



A8-1 (Goal 1)

With two classmates, interview three administrative professionals about the impact telecommunications has on the workplace. Write your instructor a short report of your findings using the memorandum form on the Student CD, SCDA8-1. Present an oral report of your findings to the class.



A8-2 (Goals 2 and 3)

Using the Web, conduct a search for the most recent wireless technology; check at least four sources. Write a report to your instructor describing your findings (including costs of services if available) and listing your sources. Use the memorandum form on the Student CD, SCDA8-2 to report your findings to your instructor.

A8-3 (Goal 4)

Refer to the five situations that appear in your *Applications Workbook*, page 75. Respond to each situation. Submit your responses to your instructor.



A8-4 (Goal 4)

Choose a class member to work with. Call each other, recreating the five situations in A8-3. One of you should be the caller; the other, the administrative assistant. Then switch roles and replay each situation. Rate each other on voice quality and the handling of the situations by using the Telephone Rating Form in your *Applications Workbook*, page 76. Individually prepare an action plan on how you can improve your voice quality and/or techniques. Submit your action plan to your instructor.

ASSESSMENT OF CHAPTER GOALS

Did you successfully complete the chapter goals? Evaluate yourself by filling out the form on page 77 of the *Applications Workbook*.