

what you should know *about*

Wireless Phone Service



- Coverage..... 2
- Pricing.4
- Handsets.....7
- More Information...8

Coverage...



“Coverage” refers to the geographic area where mobile telephone subscribers can use their cell phones. Cell phones must be able to receive or “pick up” a signal from a mobile telephone carrier’s network. Coverage varies by carrier and is determined by the extent to which carriers have built out their networks.*

■ ANALOG vs. DIGITAL

There are essentially two types of coverage: analog and digital. Calls made on digital networks are clearer, more secure, and more feature-rich than calls made on analog networks. Because analog technology has been in use since the 1980s, virtually every part of the country where people live has analog coverage. Carriers have deployed digital technology more recently and, therefore, digital service plans and coverage tend to be available in the more populated and highly-traveled areas of the country. The FCC estimates approximately 97% of the U.S. population lives in counties that have some digital coverage. Significant portions of the country’s land area do not have access to digital service. Carriers are constantly upgrading their networks to expand the areas where they can offer digital mobile telephone service.

■ A BRIEF HISTORY

During the 1980s, the FCC licensed cellular spectrum in the 800 MHz band to two cellular carriers in virtually every market in the country. These carriers began building out their networks and offering analog cellular service. In 1994 the FCC began auctioning additional mobile telephone spectrum in the 1900 MHz band for Personal Communication Services (PCS). The carriers who purchased this spectrum began building out digital technology and offering digital mobile telephone services. Cellular carriers in the 800 MHz band have upgraded most of their networks from analog to digital technology in order to expand capacity and improve the quality of service. During the late 1990s, carriers operating in spectrum bands allocated for Specialized Mobile Radio (SMR) service began upgrading their networks with digital technology and offering mobile telephone service in competition with cellular and PCS operators. Mobile telephone carriers using these various spectrum bands continue to deploy digital technology in their networks today.

■ WHERE CAN I USE MY CELL PHONE?

This is determined mainly by where your carrier owns spectrum licenses and where it has built out its network within its license areas. Analog networks cover almost every area of the country, whereas digital networks, while extensive, are not everywhere. The extent to which individual carriers have built out their networks in a given market varies.

Even if your carrier has not built out its network in a given area, you may be able to connect to or “roam on” another carrier’s network. If your carrier has an agreement with another carrier, and if you have a type of handset that allows roaming, you may be able to connect. (See “The Handset,” page 3.) Most handsets that allow roaming have an indicator to let subscribers know when they are outside their home calling area and/or out of reach of their carrier’s network. How much you will pay for calls in different areas depends on your pricing plan. (See “Pricing,” page 4.)

**The term “cell phones” generally refers to all mobile phones that operate on any of the three types of mobile telephone spectrum: cellular, PCS, or digital SMR.*

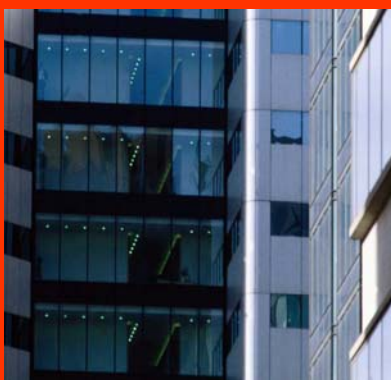


■ DROPPED CALLS, DEAD SPOTS & BUSY SIGNALS

Even where a carrier offers coverage in a specific geographic area, you may not be able to complete a given call due to limitations in network architecture and capacity. When a carrier fails to hand off a call in progress, as you travel from one part of the carrier's network to another, a "dropped call" results. When many customers use a carrier's network at the same time, its capacity becomes constrained. Other customers trying to connect will hear a busy signal instead of being able to complete their calls. Topography can also affect coverage, causing "dead spots." A dead spot is an area where service is not available because the signal between the handset and the cell tower is blocked, usually by hilly terrain, excessive foliage, or tall buildings. Carriers are constantly improving and upgrading their networks in order to minimize these types of problems.

■ THE HANDSET

Coverage is also affected by the type of mobile telephone handset a user owns. "Single-mode" phones can connect to either a digital or an analog network but not both. "Dual-mode" handsets can be used on both analog and digital networks. "Tri-mode" handsets can be used on analog and two types of digital networks. The more networks your phone can be used with the better chance you have to pick up service nationwide. The strength of the antenna and quality of the engineering in a mobile handset can also affect your ability to pick up a certain type of signal or any signal at all.



■ IN-BUILDING COVERAGE

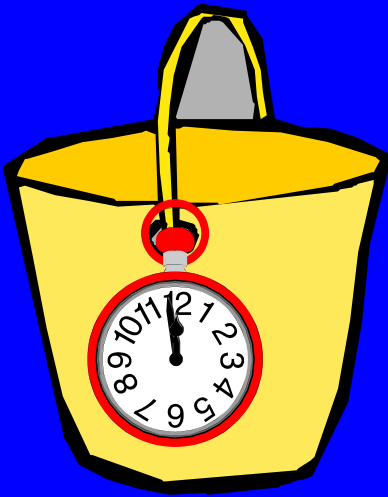
Coverage maps are meant to give users a general idea of where their phones will work when outside or in a car. However, carriers' network signals often fade inside buildings or in underground locations such as basements, parking garages or subways. Carriers are increasingly putting special facilities inside some of these areas to enhance coverage, but they are by no means universal. Therefore, you should not necessarily expect to be able to use your phone in these types of locations.

■ READING THE FINE PRINT

Carriers provide coverage maps on their Web sites and in stores where their products are sold. However, these maps carry the disclaimer that they are provided for informational purposes only and that actual coverage may vary from what is displayed on the map. Reasons for this variance include the dynamics of topographical and network capacity constraints on any given day.



Pricing...



Most wireless pricing plans include a certain number of minutes per month (often called a “basket” or “bucket” of minutes) for a certain price; any minutes over that specified amount are charged on a per-minute basis. Any unused minutes at the end of the month usually expire. Carriers generally offer several variations of these types of plans with increasing baskets of minutes at increasing monthly fees. Carriers also vary their service plans by where subscribers can use their phones without incurring additional roaming and long distance fees.

■ NIGHT & WEEKEND VS. “ANYTIME” MINUTES

Many carriers offer plans that include a basket of minutes that can be used anytime during the month plus a larger basket of minutes that can be used during certain times, generally nights and/or weekends. Which time periods constitute “night” and “weekend” vary by carrier.

■ PEAK & OFF-PEAK MINUTES

Before the advent of “bucket” pricing plans, carriers charged subscribers a per-minute fee for each minute of airtime on every call. Some carriers still offer these types of plans today. With these plans, calls made during certain “peak” times of the day - generally business hours - often cost more, and calls made during other “off-peak” times - generally nights and weekends - often cost less. Again, which times constitute “night” and “weekend” vary by carrier.

■ WHO PAYS FOR INCOMING CALLS?

With the majority of pricing plans, consumers pay for both outgoing and incoming calls. In the case of bucket plans, the minutes from both outgoing and incoming calls are usually deducted from a customer’s monthly bucket of minutes. However, some carriers offer pricing plans where all or some of the minutes of incoming calls are free to customers.

■ MINUTES OR SECONDS?

In general, mobile carriers charge by the minute. When you use a fraction of a minute, many carriers round up to the next minute, charging or deducting subscribers a full minute when only a portion of it is used. However, some carriers offer plans that round to the nearest second instead of minute.

■ ROLLOVER MINUTES

With most “bucket” pricing plans, any unused minutes expire at the end of the month. However, some carriers offer consumers the option to roll their unused minutes over to the next month.

■ “NATIONWIDE” PRICING PLANS

All of the major mobile carriers offer pricing plans that allow customers to purchase a bucket of monthly minutes to use on a nationwide basis without incurring roaming or long distance charges. Consumers should be aware that how carriers define “nationwide” varies. For some carriers, this means being able to use your phone anywhere in the country where any type of signal is available at no additional charge. For other carriers, it means being able to send and receive calls only on the carrier’s network without incurring roaming and long distance fees. These carriers’ networks generally extend through the country’s more populated and highly-traveled locations but do not cover the entire United States.

■ ROAMING

Carriers have traditionally charged per-minute roaming fees on calls made from the network of the carrier that has a roaming arrangement with your carrier from a location outside of a customer’s home calling area. However, several carriers have eliminated these fees in their “nationwide” pricing plans.

■ LONG DISTANCE

Cell phone users have traditionally had to pay additional fees for “long distance” calls. Long distance calls are generally calls made to locations outside of a customer’s home coverage area. However, some carriers may define long distance calls differently for purposes of their pricing plans. Several carriers offer pricing plans that eliminate per-minute long distance fees. Some plans charge no long distance fees for calls made from a customer’s home calling area, some for calls made from anywhere on a carrier’s network, and some for calls made from anywhere in the United States. Whenever a long distance call is made, the mobile telephone carrier determines which long distance carrier will complete the call, unlike with landline service where the customer chooses the long distance carrier.

■ PREPAID SERVICES

With prepaid service, consumers purchase a handset and pay for a fixed amount of minutes prior to making any calls. There is usually a set time period in which unused minutes will expire. Prepaid minutes are often subject to peak and off-peak airtime rates. When prepaid customers have used up their minutes, they can refill them. Carriers do not obtain credit history reports on prepaid subscribers as they generally do with other subscribers.

■ ACTIVATION FEES

Many carriers charge a one-time fee to customers when they initiate service, called an “activation fee.” Carriers will sometimes waive this fee as part of a promotional pricing plan.

■ SPECIAL OPTIONS

Special options (also known as vertical services) include such things as call waiting, Caller ID, voicemail, call forwarding, and three-way calling. Carriers offer these to customers as add-on features beyond simply dialing and talking. Some of these options are included in the monthly price of most digital calling plans, while others are generally offered at an additional monthly or per-use charge. Many of these features may not be available on analog networks.

■ SHORT MESSAGING SERVICES (SMS)

SMS provides the ability to send and receive short text messages to and from mobile handsets. Some carriers charge a few cents per message to use SMS, and many offer SMS packages which include a set number of messages for a flat monthly fee.

■ MOBILE DATA SERVICES

In addition to SMS, many carriers now offer mobile data services that allow customers to exchange e-mail messages, download games and ringtones, send digital photos, or access the Internet via a handset, PDA, or laptop. There are generally a variety of pricing options for these mobile data services, including per-minute, per megabyte, or unlimited usage for a flat monthly fee. Consumers are encouraged to review all of the information on the specific capabilities of these services and their pricing options before purchasing.

■ SERVICE AGREEMENTS

Most carriers require new subscribers to sign one-year contracts or service agreements when they sign up for a new service plan. Most charge an “early termination fee” to users who cancel their service plans prior to the end of that year. Some carriers offer additional incentives to subscribers who sign up for two-year service agreements. Consumers should carefully read any potential service contract prior to signing up for service.

■ TRIAL PERIODS

Many carriers, including all six nationwide carriers, permit customers to cancel service without paying the termination fee if service is cancelled within a certain period of time after the service contract is signed. These “trial periods” generally range from 14 to 30 days, depending on the carrier. Consumers are encouraged to find out the length of a carrier’s trial period before signing a service contract, and may wish to consider the length of trial periods as a factor in selecting a wireless carrier. In addition, consumers should use this time period to determine whether their carrier provides adequate coverage in the areas where they use their phones most frequently, such as at home or on their commute to and from work.

■ MONTHLY BILLS

The format of monthly bills varies by wireless carrier. Some carriers automatically provide detailed content, such as a list of every call made that month its duration, and whether it was roaming or long distance. Other carriers offer detailed billing as an option for an additional monthly fee. Consumers should get information from carriers on billing before signing up for service, and may wish to consider billing and bill format options as a factor in selecting a wireless carrier.

WHAT TO CONSIDER WHEN BUYING A HANDSET

MODE

Is the phone single or multi-mode? Can it operate on analog or digital networks, or both? Does it indicate when it's roaming?

STORAGE

How many phone numbers and other data can the handset store?

SCREEN SIZE

This can be an important factor for viewing phone numbers and other stored data, as well as wireless Web content.

SPECIAL OPTIONS

What types of "vertical features," such as Caller ID, call waiting, and voicemail, are included with the handset and service plan?

VOICE FEATURES

Does the phone have voice-activated dialing?
Does it have a speaker phone?

BATTERY LIFE

What are the handset's talk time and standby time? Standby time is the number of hours or days the phone can stay on before the battery will run out. Talk time is the number of hours a user can talk on the phone before the battery will run out. These times can vary with analog and digital service. Also, a handset's battery will affect its size and weight.



SAR RATING

The Specific Absorption Rate (SAR) is a measure of the level of human exposure to radiofrequency (RF) emissions from a handset. You can obtain information on SAR ratings of specific handsets on the FCC Web site at: www.fcc.gov/oet/rfsafety/#sar.

MOBILE DATA CAPABILITIES

Does the handset have the ability to access the carrier's wireless web services and/or send and receive text messages?

HEARING AID COMPATIBILITY

Hearing aids generally work with cellphones that use analog signals but not currently with those that use digital signals. More information about hearing aid compatibility is on the FCC's Consumer & Governmental Affairs Bureau webpage at: <http://www.fcc.gov/cgb/dro/hearing.html>

Where To Get More Information...

■ FEDERAL COMMUNICATIONS COMMISSION

www.fcc.gov
e-mail: fccinfo@fcc.gov

1-888-225-5322 (CALL-FCC) - VOICE
1-888-835-5322 (TELL-FCC) - TTY

■ CARRIERS

The Web sites and toll-free numbers of the 10 largest mobile carriers in the United States, listed below, provide information on where these carriers offer service, the extent of their network coverage, pricing plans and other services they offer, and the corresponding handsets and accessories they sell.

ALLTEL	www.alltel.com	(800) 255-8351
AT&T Wireless	www.attws.com	(800) 888-7600
Cellular One/Western Wireless	www.cellularonewest.com	(800) 635-0304
Cingular Wireless	www.cingular.com	(866) 246-4852
Leap Wireless/Cricket Communications	www.cricketcommunications.com	(866) 274-2538
Nextel	www.nextel.com	(800) 639-8359
Qwest	www.qwestwireless.com	(800) 899-7780
Sprint PCS	www.sprintpcs.com	(800) 480-4727
T-Mobile	www.tmobile.com	(800) 937-8997
US Cellular	www.uscellular.com	(888) 944-9400
Verizon Wireless	www.verizonwireless.com	(866) 256-4646

■ CONSUMER INFORMATION WEB SITES

The following Web sites provide consumer information on mobile telephone service, such as side-by-side comparisons of the service plans available in a given area, general advice on purchasing a mobile phone, educational information on wireless technology, user ratings of phones and pricing plans, listings of dead spots by location and carrier and answers to commonly-asked questions.

www.cellmania.com
www.dealtime.com
www.getconnected.com
www.point.com

www.deadzones.com
www.ldwiz.com/cellular
www.cnet.com
www.wirelessadvisor.com

■ OTHER CONSUMER INFORMATION

Consumer Reports (www.consumerreports.org) provides free consumer information on its Web site, including details on the various mobile service plans available in major U.S. markets and their accompanying handsets. With an online or print subscription, consumers can obtain a full ratings report and comparison of mobile service plans and handsets.

J.D. Power (www.jdpower.com) provides ratings on its Web site of all of the wireless carriers in major U.S. cities. The carriers are rated on various criteria, including call quality, cost and customer service.

CTIA (www.wow-com.com) is a trade association representing the wireless industry. Its Web site contains tips for consumers on purchasing mobile service as well as an overview of all mobile handsets that have hands-free accessories.

AARP, the American Association of Retired Persons (www.aarp.org), provides on its Web site a published survey entitled *Understanding Consumer Use of Wireless Telephone Service* that discusses various issues related to wireless service and older consumers.

NOTE: The sources listed on this page represent a sample of the consumer information available to the public on wireless issues and is not meant to be a complete list. In addition, the FCC does not vouch for the accuracy of the information contained in these Web sites and publications.