
Consumer Decision Making Contest

1999-2000 Study Guide

CELLULAR TELEPHONES

Whether they live in rural or urban communities, more people are buying cell phone services. Six times as many people use them in 1998 than in 1993. With more people wanting the service, more models and more pricing choices are being offered.

According to Strategies Group, a Washington, D.C. based wireless-industry consulting firm, the average cellular phone user consumes about 80 minutes per month. Decide when and where you will use cell phone services. Locate and compare charges in each plan for services you will use. Cell phone consumer decisions are guided by when and where you will use the service, and the type of hand set you choose.

Cell phones are being used by consumers for a variety of reasons:

- ◆ emergency calls only,
- ◆ parents keep in touch with children (schedule/needs changes),
- ◆ replace regular phone service to avoid the costs of changing their phone when they move.
- ◆ make business calls while traveling in their vehicle or when they are away from their home or office phone.

Calls made within your **Ahome@**area other than during peak business hours cost less. The **Ahome@**area does not have to be where you live. It can be in the area where you will make most of your calls. If your parents work in a community away from where you live and they use a cell phone to keep in touch with you during the day, they may save money by having the **Ahome@**area be where they work. Otherwise, they may pay the **Aroam@**rates when calling you.

When possible, talk with people who use the products you are considering. Ask if services delivered match promises. Are

there **Adead zones@**where signals fade or cut out? Consumer Reports found that service areas may not match maps of service areas provided by the carrier.

Handset Types

Cell phones are primarily one of two types, or a combination of the two, digital and analog.

Digital or variant personal communications services (PCS) have:

- ◆ reduced call **Anoise@**to give high-quality sound,
- ◆ longer battery life,
- ◆ lower per-minute charges, and
- ◆ extras such as paging and e-mail.

However, infrastructure for these services has not kept up with sales. Calls are cut off abruptly when the signal is lost. Antenna base stations are mainly in urban markets and along major highways connecting them. Consumers in this It may take several years to build a big enough network of antenna

base stations to deliver the 100 percent digital services being sold now.

Analog cellular services cover 90 percent of the populated areas of Texas. They provide true nationwide service, including urban, rural and outlying areas. Handsets may be inexpensive or free, but calling plans can be more costly in some areas. Battery talk time and standby time are usually half that of digital handsets.

Dual-mode units may be most desirable, but are bulkier and 20 percent (average) heavier than analog-only or digital-only.

The main purpose of the handset is to make and receive clear calls. Three performance factors matter most:

- ◆ **Call setup and maintenance:**
A cell phone's most important job is to set up and hold on to the call signal. It needs a receiver with sufficient radio frequency (RF) sensitivity to hear signals sent out by the phone company's transmitters.
- ◆ **Multi-path sensitivity:**
The best phone reception happens when a call signal travels straight to your phone. Some radio waves may reflect off buildings, mountains or large vehicles that pass you while driving. These changes in path create multi-path problems of sound bursts or poor reception. Analog and digital phones are designed to compensate for this problem, with digital phones performing better overall in Consumer Reports tests. An analog phone that issues a static or pft-pft sound does a poor job of compensating for multi-path sensitivity.

- ◆ **Battery life:**
Regardless of the battery sold with the phone, consumers usually have several battery options. The battery size and chemistry affect the amount of talk time and standby time you will have. Lithium-ion batteries offer the longest use time between charges, and are a compact energy source. Most models are sold with nickel-metal-hydride batteries that can be kept plugged in and recharging when not in use.

How to Compare Cost /Service

The consumer's challenge is to sort through price information to determine how to find the services you need from reliable sources at the best price. Cost of air time may range from \$20 to \$70 per month.

To compare annual service costs, *Consumer Reports* provides the worksheet below. Make a copy and complete the information for each available option you are considering. If you aren't sure how you will use the phone, use the average of 80 minutes per month, with 30 peak and 45 off-peak phone minutes in your home area and 5 minutes roaming.

Fill in the blanks below. Start with the estimated number of minutes you will use each service in a month. Subtract the number of free minutes the carrier allows. Multiply the answer by the per minute charge for the type of service to find the total monthly cost for each type of service. Record the basic monthly charge. Add the total costs for each type of service and the basic charge to find the total monthly cell phone cost. Multiply the total monthly cost by 12 and add the cost of the handset to

determine the cost for the first year of service.

Before making a choice, estimate future cost after the first year. Choose features that matter most to you: size, weight, ringing or vibrating call alert, and clarity. The cost of a high quality handset may be off set by lower service charges over time. To estimate how many months of use it would take to cover the difference in total costs for using each handset, find the difference in the handset prices. Find the difference in the total monthly service charges. Divide the service charge difference into the handset cost difference. The answer is the number of months service charges it would take to make up the difference in the cost of each handset.

Other Cost Considerations

Cell phone charges apply not only calls you make, but also for calls received. Estimate the number of minutes per month for phone calls you will receive. Be careful who has access to your cell phone number to keep these charges low.

Flat rate / Single rate plans usually have a high monthly fee. The lowest cost single rate plan *Consumer Reports* found was \$89.99 for 600 *Afree@*minutes (6.6 cents a minute if you use all 600 minutes). If you used only 100 minutes, the cost would be 89.9 cents per minute! Notice also the flat fee for all calls, no matter where or when they are made, such as 25 cents per minute after the 600 minute limit.

Prepaid cellular pricing is another sales offer. These offers target people who do not want to be surprised by a monthly commitment or they do not want a credit

check made by the carrier. The consumer buys the phone and purchases separate calling cards for air time, usually in \$30 or greater increments. The average consumer who uses 80 minutes per month will usually pay more if they use prepaid service. The average *Abest@*prepaid plan was \$170 a year more than the best analog plan and \$240 more than the best digital plan. Consumers who make few calls get hurt more because most plans have expiration times for unused prepaid balances, often 30 to 60 day limits. These lost services are not always clearly described in sales brochures.

Consumer Reports suggests that people buy the least expensive service plan. If it is for a digital system, get a dual-band phone that works both in digital and analog mode. It will be bulkier and heavier to carry, but gives greater assurance you will be able to have service when you need it.

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Worksheet for Comparing Annual Costs for Cell Phone Service Choices

Steps to Figure Cost	When Service Will Be Used			Total Cost
	Peak Time	Off-Peak Time	While Roaming	
<i>Estimate</i> Minutes Used A Month				
<i>Subtract</i> Number of Free Minutes				
<i>Equals</i> Minutes billed after free minutes are used				
<i>Multiply by</i> Per Minute Charge				
<i>Equals</i> Cost per type of use				
<i>Add</i> costs for three types of use to find total cost above basic charge	➡	➡	➡	

Add Basic Monthly Service Charge _____

Total Monthly Service Cost _____

Multiply by 12 = Total Annual Cost of Service _____

Add Price of cell phone (handset) _____

First-year cost of cellular _____

Other Costs to consider:

Battery Life / Cost per year \$_____