ConsumersUnion
POLICY & ACTION FROM CONSUMER REPORTS

August 3, 2012

Marlene Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Notice
WT Docket No. 12-4 (VZW/SpectrumCo/Cox)

Dear Ms. Dortch,

On August 1, 2012, I met with David Goldman, Senior Legal Advisor; Holly Saurer, Acting Legal Advisor for Media Issues; and Paul Murray, Acting Wireless Advisor for Wireless Issues in Commissioner Jessica Rosenworcel's office. Separately, I met with Zachary Katz, Chief of Staff and Charles Mathias, Special Counsel in Chairman Julius Genachowski's office.

I expressed concern with the pending transaction between Verizon Wireless, SpectrumCo, and Cox. I noted that the current wireless and wireline markets are already highly concentrated. I also noted that the few areas where some competition did exist, our magazine, *Consumer Reports*, found that the highest rated providers were competitive providers. I provided the attached documents, which provide the survey results. However, while consumers may like the competitive providers, they are not widely available. I expressed concern that the transaction could make even more difficult for these and other competitive providers to compete.

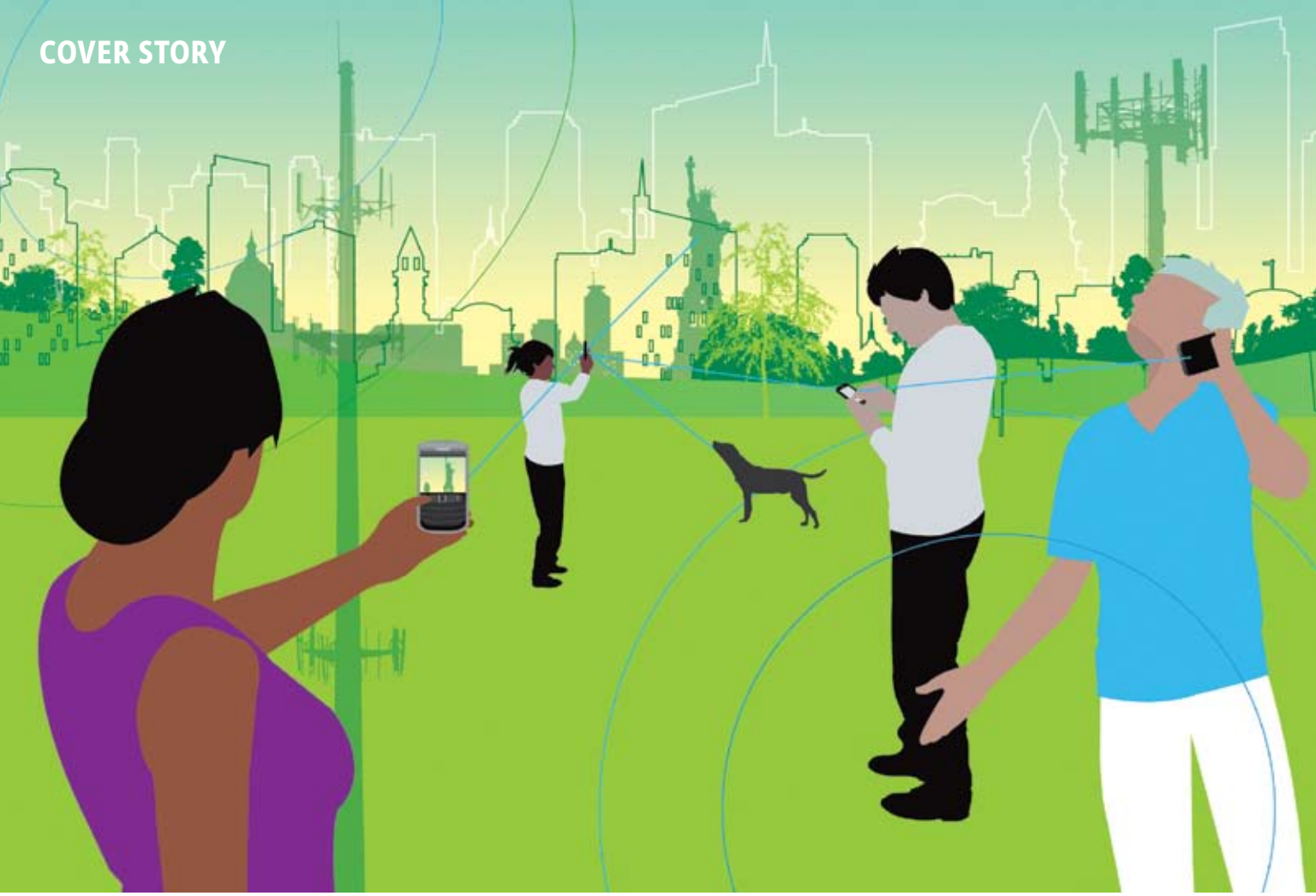
I stated that the transaction was not in the public interest and while conditions could not make the transaction a net positive for the public interest, there are several conditions that would work to lessen the overall public interest harms. I suggested the Commission should limit the duration of the agreements and prohibit them where the ILEC overlaps with the cable footprint. I also stated the Commission should prohibit clearly anti-competitive aspects, such as exclusive arrangements. I suggested a process to raise and expedite consideration of other issues that may arise and a means, such as tolling of a condition, to ensure that any time sensitive conditions are not delayed through lack of cooperation. I suggested that Verizon should divest AWS spectrum in the Eastern markets where Verizon is already capable of launching a 20 x 20 MHz LTE-Advanced network using its existing AWS and upper 700 MHz C-block licenses. Finally, I also suggested the adoption of a shortened buildout requirement of the current 2021 deadline and suggested a "use it or share it" condition if the buildout requirement is not met.

Pursuant to Section 1.1206(b) of the Commission's rules, 47 C.F.R. §1.1206(b), this letter is being filed electronically with your office today.

Respectfully Submitted,

Parul P. Desai
Consumers Union
1101 17th Street, NW,
Suite 500
Washington, D.C. 20036
(202) 462-6262

Cc: David Goldman
Holly Saurer
Paul Murray
Zachary Katz
Charles Mathias



Best phones & service

The top carriers and hottest phones, plus cost-saving strategies

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If the best news about mobile life these days is the arrival of smarter phones and faster networks, the worst is what those improvements can cost.

The advances are significant: large, dazzling displays; full-featured cameras; enhanced video chat; and better voice recognition. And then there's speed. Many new smart phones have faster processors, and one in five—including most of our top-rated models—can connect to speedy 4G (fourth-generation) data networks.

Such advantages no doubt account for the fact that more than 60 percent of Consumer Reports readers responding to our latest survey on cell phones own a smart phone. In most cases, those with 4G phones were more satisfied with their carriers than those with no access to that high-speed service—especially when it came to the data service used to download videos, browse the Web, and more.

But progress comes at a price, and it's little wonder that value was the biggest factor by far in driving satisfaction with cell-phone service among our survey respondents. The cellular cutting edge can be expensive and could get even costlier.

The latest smart phones typically cost $200 and up, even with a two-year contract, and monthly service can easily cost $100. With data usage on smart phones skyrocketing—the average soared by almost 90 percent from 2010 to 2011, according to Nielsen—bills could go even higher.

That's especially true now that all the major carriers except Sprint have dropped unlimited, full-speed data provisions. Most have moved to plans that bill in tiers according to the amount of data you use or that slow download speeds after you hit a specified monthly limit.

ILLUSTRATIONS BY LEON MUSSCHE

But some things about cell-phone plans don't change much—unfortunately. Carriers still don't make it easy to compare plans; each typically offers unequal buckets of minutes, messages, and megabytes. Some phone owners are texting more and talking less, but most contract plans still require buying hundreds of voice minutes a month, whether or not you need them. And unless you buy messages in bundles or in unlimited plans—again, possibly more messages than you might need—you'll pay an à la carte charge that's exorbitant, considering how little data a text message carries.

Read on for a rundown of the latest developments in the market, news from our tests and reader surveys, and advice on how to get more and better for less.

Best and worst carriers

When it comes to standard cell-phone service (meaning billed monthly, often under a contract), the most satisfying carriers in our Ratings were smaller. At the top of the Ratings were Consumer Cellular, a national carrier that uses AT&T's network, and U.S. Cellular, which operates in 26 states. Credo, which offers service in much of the country over Sprint's network and donates part of its earnings to socially responsible causes, was next in satisfaction.

The major national monthly-bill carriers now rate no better than the third tier, occupied by Verizon and Sprint. T-Mobile was below those two but continued to rate significantly better than higher-priced AT&T, whose plan to eliminate its better rival was thwarted by a Department of Justice antitrust lawsuit last summer. A trial is scheduled to begin in February.

On the whole, readers who prepaid for their service (without a contract, for monthly minutes, unlimited or pay-as-you-go) were more satisfied overall than respondents with standard service.

Customers at prepaid carriers were also happier with the value for money of their service. Paying à la carte for the calls or texts you send can be a cost-saver for occasional phone users, and unlimited plans offered by prepaid specialists such as Straight Talk typically cost less than standard service from a major carrier.

One reason prepaid customers may be happier with their service is that they use the phone less than customers with standard service for such demanding tasks as Web surfing and watching videos. With simpler needs, those customers might be easier to please overall. (Not surprisingly, most so-called prepaid carriers offer few if any smart phones.)

And prepaid looks like it's getting cheaper—again. As we went to press, TracFone began promoting a "triple minutes for life" option free with certain phone models, which means if you buy 120 minutes for $30, you get 360 minutes, which cuts the unit price from 25 to 8 cents per minute. T-Mobile offered a data- and text-centric prepaid 4G plan providing 5GB of data, unlimited texting, and 100 voice minutes for only $30, which is great for data hogs who don't talk much.

For standard service, smaller carriers satisfied the most.

Interestingly, usage patterns for subscribers to Consumer Cellular's contract plans more closely resemble those of typical prepaid customers. That, along with its relatively low prices, might help explain the carrier's high standing in the standard-service Ratings.

Phones are better

The top phones in our smart phone Ratings are the best we've ever tested, with the highest overall scores for phones so far. Most of the standouts are 4G phones that share several traits, including stunning screens and cameras with more sophisticated controls and features. Many were from Samsung, which made 20 percent of the phones in this Ratings, up from only 5 percent in our 2009 report. Our tests uncovered other news, too: Apple's newest iPhone, the 4S, scores highly in our Ratings and is recommended.

Speed. Fourth-generation models provide super-smooth video streaming and ultrafast loading of Web-based content, at least under optimal network conditions.

CLOSE-UP

At last, a new iPhone we can recommend

For more than a year, our smart-phone Ratings reflected an anomaly: The iPhone 4 ranked highly on our standard tests, and yet we couldn't recommend it because of a flaw with its reception. Its successor, the iPhone 4S, is also a fine performer, and it doesn't have that problem. We recommend this phone.

Though the new iPhone closely resembles the iPhone 4 in appearance, it isn't prone to dropping calls when you cover a spot on the phone's lower left side under weak signal conditions. Apple says the iPhone 4S has a redesigned antenna system; perhaps that's why it passed our tests where the iPhone 4 didn't. (The iPhone 4 remains available and still doesn't pass, we confirmed in tests of the phone. But when it's used with a case, the problem disappears.)

As we went to press, Apple acknowledged a battery-life problem with some samples of the iPhone 4S and iPhone 4. Some owners complained on user forums of short run times. Apple blamed "a few bugs" in its latest mobile operating system, iOS 5, and promised to deliver a software update to address the problem in November.

Because of the complaints, we ran samples of the iPhone 4S and new and old samples of the iPhone 4 through special tests in our labs. We found no notable battery problems on the phones. We plan to retest them with the software update when it is available, just in case the fix affects battery performance in any way.

The iPhone 4S has other improvements over the iPhone 4, including a better camera and a faster processor. It also adds the intriguing Siri voice-activated feature, which accepts and responds to verbal commands in a conversational tone using a synthetic-sounding female voice.

Apple iPhone 4S

FIRST LOOKS

Hot new phones

Here are our first impressions of several significant new smart phones that arrived too late to be included in our Ratings.

HTC Vivid $200 (AT&T)
Samsung Galaxy S II Skyrocket $250 (AT&T)
These phones, which are the first to run on AT&T's newly upgraded 4G (LTE) network, have 4.5-inch displays (high-resolution, in the case of the Vivid); an 8-megapixel camera capable of recording video at 1080p; and a front-facing camera for video chat. They run on the Android Gingerbread operating system and have dual-core processors.

Samsung Galaxy Nexus (Verizon)
This 4G (LTE) phone, for which a price wasn't yet available at press time, promises to be a groundbreaker in several ways. Its specs list the largest screen (4.65 inches) and the highest screen resolution (1280 x 720) we've ever seen in a phone.

It's also the first phone to run on Ice Cream Sandwich, the latest version of the Android operating system. The update promises a newly designed user interface, a fast browser, and a new implementation of Gmail that lets you search through messages even when you're offline. A new app called People will supposedly let you browse high-res photos and updates from Google+. A Face Unlock feature will use facial recognition to unlock the phone.

Other Galaxy Nexus features include a dual-core processor and 5-megapixel camera that can record video in 1080p, a front-facing camera for video chats, a compass, a gyro, and a barometer.

Motorola Droid Razr $300 (Verizon)
The Razr is a 4G (LTE) phone that features a 4.3-inch high-resolution display, an 8-megapixel camera that records video to 1080p, a front-facing camera for video chat, and a dual-core processor. Less than a third-of-an-inch thick, the Razr is one of the thinnest 4G phones on the market. It also promises toughness, with a "splash-resistant" case made from Kevlar fiber.

This Droid is also billed as one of the first phones that can download HD video from Netflix and that comes ready to work with MotoCast, Motorola's own personal "cloud" service. That promises to enable you to share phone content as well as sync documents and calendars with your PCs. And like the Motorola Droid Bionic and Atrix, the Droid Razr has an optional laptop attachment ($300).

Voice—the forgotten function?

They may be smart but they're still phones. Why, then, do smart phones continue to earn mediocre scores, at best, for their most basic function?

Their middling voice quality means you may start to miss syllables or words as background noise increases—say, when you're on the street or at a party—though you should be able to hold a reasonably clear conversation under relatively quiet conditions. We expect better than that.

Another basic function, placing a call, has also become more of a challenge thanks to today's touch-screen interfaces. On most smart phones, phone controls and keypads don't appear until you tap a phone-app icon. And the icon itself is rarely larger or more distinguishable than the other app icons that surround it.

Sometimes while you're on a call, an alert from another application might launch another screen, hiding your phone controls in the process.

BlackBerry smart phones are the exception. They almost always have a designated Send key for activating the phone and a corresponding key for hanging up. And you can program their physical keypads to function as speed-dial buttons, which is a nice plus.

That's not entirely due to the faster download speeds of 4G networks. 4G phones are also likely to have state-of-the-art processors that can provide fast performance even on 3G networks.

Another plus to 4G: It allows you to talk and surf the Web at the same time on all four major carriers; only AT&T and T-Mobile allow such multitasking on 3G networks.

Contrary to popular belief, not all 4G phones have notably short run times on a charge. Though 4G phones from Verizon and Sprint had lower scores for battery life than the carriers' 3G-only models, plenty of 4G phones from AT&T and T-Mobile scored very well in our battery tests.

Many more 4G models will be out later this year, possibly at lower prices, and more areas will have 4G coverage. And 4G service could be faster than it is now for AT&T and Sprint, which plan to shift from their current network technologies to LTE, the high-speed technology used by Verizon. (T-Mobile is on the HSPA network.) But if you use your phone mainly to talk and text, you won't get the benefits from 4G that a heavy data user will, so decide whether you need it.

Note, however, that the biggest data hogs who have grandfathered unlimited plans with AT&T and Verizon may see their data speeds clipped in months when their usage is high, in a controversial practice known as data-throttling.

Screens. Displays of 4 inches or larger are becoming more common, as are high-resolution screens that look better than ever, with bright, vivid colors.

Cameras. More phones than ever have 8-megapixel cameras and such big-camera features as ISO settings, tap to focus, and face detection. Two rated phones, the HTC Evo 3D and LG Thrill 4G, can capture subjects in 3D. One feature still missing, though, is optical zoom.

In addition to offering more features, the best phone cameras have very good photo quality, with little or no graininess, decent detail and color rendition, and a short shutter lag. And even run-of-the-mill phone cameras offer photos that are typically good enough for casual use.

A growing number of phones can shoot HD video at 1080p (so-called full high-definition) resolution, the best of them with video quality approaching that of the best pocket camcorders we've tested. (But even smart phones with better cameras and pocket camcorders can't match full-sized HD camcorders for image quality.)

How to cut your phone bill

1 Don't automatically buy from the company store. Two-thirds of cell phones are bought at carrier stores, but our reporting suggests prices there can be higher than at warehouse stores, mass merchandisers such as Walmart, and electronics stores such as RadioShack. In fact, a carrier's walk-in stores can be even pricier than the company's own website. When we shopped for two dozen smart phones we recommended at 12 retailers in the San Francisco Bay area last October, the carrier stores for AT&T, Sprint, T-Mobile, and Verizon had the highest prices for more than three-quarters of the phones.

We've found phones to be especially inexpensive at Costco. But you may not find the exact model you want there—or at any retailer for that matter. All retailers don't sell phones for all carriers, and all models might not be available everywhere.

2 Consider a low-priced carrier. It's not easy to compare carriers' plans across or even within carriers, because their buckets of minutes, messages, and megabytes differ. But you can find competing plans that are similar enough to give you an idea of their relative value.

When we compared 100 plans to similar alternatives in 21 matchups covering the full spectrum of plans, both prepaid and standard, Consumer Cellular came out on top. It had the best deal most often—in more than one out of three cases. The next-best deals, in order, were from T-Mobile, Sprint, Metro PCS, Net10, Straight Talk, T-Mobile prepaid, and U.S. Cellular.

With savings that usually ranged from $10 to $40 a month over pricier rivals such as Verizon and AT&T, some of those carriers not surprisingly received higher reader marks for value in our service Ratings. But not every high-scoring carrier had the best prices, and you may not find many, if any, of the hottest smart phones in the model lineup of smaller and prepaid carriers.

3 Use alternative services. Bypassing the carrier and using third-party services for texting and voice calls can be a money-saver. But there are trade-offs.

Text messages, including a maximum 160 bytes of data, are outrageously priced à la carte by the carrier at 10 cents each. (Translated into data terms, that's about $625,000 per gigabyte vs. the going rate of $8 to $40 per GB for wireless data plans.) International texts and texting while abroad can cost more—about 20 to 50 cents per message.

New apps such as Heywire and TigerText let you send text messages free over your data connection. Typically you use a special receiving phone number assigned to you by the service to avoid charges on your cell number. With most carriers, that means you won't have to pay your carrier 10 cents a pop or $5 to $30 a month for limited-to-unlimited messaging plans. (Data charges do apply if you text using the cellular data network rather than Wi-Fi, but that should have little impact on your bill because texts contain so little data.)

We tried both services on Android phones. Heywire worked fast and intuitively, and it's free—provided you accept fairly unobtrusive ads along the bottom of the message-thread page. But TigerText, whose selling points include private messages that self-destruct after a certain time, didn't work for us.

Skype Mobile lets you make free voice calls to other Skype subscribers in the U.S. and worldwide using your smart phone. That's especially helpful for international calls, which tend to be even pricier on cell phones than on landlines. Skyping uses your carrier's data service, so such calls don't count against your cell plan voice minutes, but these VoIP calls eat data at the rate of about 3 megabytes per minute. If you use Skype over a Wi-Fi network rather than on the carrier's network, you don't cut into your monthly metered data allocations.

4 Max out on Wi-Fi. Avoid using your plan's allotment of data by tapping into the rising number of Wi-Fi networks that are available. Your home and work networks are obvious choices. But your cable company or Internet service provider might offer access to its own free, local Wi-Fi hotspots with your subscription, as does Time Warner Cable around the New York/New Jersey metro area and Comcast in the Philadelphia/New Jersey area.

You'll also find free public Wi-Fi hotspots at airports, libraries, universities, sports stadiums, and cafés. AT&T wireless customers can use 29,000 mostly free, unlimited Wi-Fi locations around the U.S., many of which are in more than 6,800 company-operated Starbucks and 11,500 McDonald's locations, free for all customers.

There's another way to limit data use on 4G phones, where faster network speeds can eat up your allotted monthly data more quickly. If you find that 3G speeds are just as good as 4G for activities such as texting or streaming music, set your 4G phone (via its Settings) to connect only to 3G.

5 Investigate employee discounts. AT&T, Sprint, T-Mobile, U.S. Cellular, and Verizon offer discounts to the employees of companies that use their service. To see whether you qualify, Google the carrier's name and "employee discount," and navigate to the Web page that asks for your work e-mail address. Discounts can be as high as 20 percent, though some deals exclude the iPhone or certain service plans.

About your bills

Consumers have grown tired of a common gotcha that affects one in five cell service subscriber—"bill shock" from unexpectedly high charges. The surprises often occur because consumers are unaware that they've exceeded their plan's voice, message, or data limits and have begun to incur hefty overage charges.

In October, CTIA-The Wireless Association agreed that carriers should send customers alerts before high penalties and fees begin piling up as a result of voice, messaging, or data overages and international roaming. At the same time, the Federal Communications Commission and Consumers Union, the advocacy arm of Consumer Reports, agreed to work with the FCC on a website that will monitor compliance with the new industry guidelines.

4G phones are very fast, but you don't need that speed to talk or text.

Some carriers, including top-rated Consumer Cellular and U.S. Cellular, say they already provide data-overage alerts. Some smart phones, including iPhones, have a built-in feature that monitors your data usage, and apps from companies such as Pageonce offer the same capability on other phones.

Companies that market software to protect computers from viruses and other malware are stepping up their efforts to sell similar programs for cell phones, especially smart phones. While the risk of phones being infected may be rising as their Web access increases, we don't believe that it justifies installing yet another program at this time.

For most people, the possibility of losing a phone poses the greatest security risk. We urge the use of a password-protected screen or other measure to ensure that a lost phone cannot easily be accessed. The easiest way to protect data against loss is with a personal identification number (PIN) or password.

When you pay your phone bill, you pay a fee to the Universal Service Fund, which subsidizes phone service, and now also broadband access, in rural, underserved areas. The FCC, in late 2012, will direct more funding into broadband development in remote locations. The agency says that the Universal Service fee will not be increased due to the change.

Despite the rollout of 4G networks, rising demand for wireless broadband is expected to outstrip network capacity, and the search is on for ways to expand network access and speeds. The FCC is supporting legislation that would allow the agency to pay broadcasters for relinquishing TV spectrum that could then be auctioned for wireless broadband use.

Android vs. iPhone

Which is best at what's new

The most important determinant of what a smart phone can do, and how well it can do it, is its operating system. While Windows Phone and, even more so, BlackBerry have a significant presence, two rivals dominate the OS market: Apple, with its three models of iPhone (the new 4S along with the 4 and 3G S), and Google's Android, with dozens of phones from a host of manufacturers. Here's how those two titans compare on key attributes:

Advantage: Android

Large displays. Back in 2007, iPhone's 3.5-inch display was one of the largest, brightest, and sharpest you could get, and its recent color and resolution upgrades have been impressive. But the larger (4.3 inches and up) and equally dazzling screens on Android phones from HTC, Motorola, Samsung, and other makers seem better suited to the Web pages, games, and videos that users are increasingly accessing from their phones.

Navigation. Android phones offer free, spoken, turn-by-turn directions and traffic updates out of the box via Google Maps Navigation software. To get comparable performance and convenience, iPhone users have to shell out $40 to $50 for a navigation app from TomTom, Navigon, and others. But those aftermarket iPhone apps have an advantage: Their maps are stored on the phone, so you can navigate even when you lack good cellular reception. (Next month's issue will include Ratings of the newest versions of those apps.)

Web browsing. Apple has its pluses here, including a "reader" mode built into the Safari browser of the new iOS 5 operating system. You can tap it to read articles without the clutter of ads and other graphics and to save articles to read later.

Customization of the interface. Apple's interface is fairly fixed, albeit in a highly intuitive manner, but the Android platform can be customized. Phone makers can tweak the interface, carriers can install apps, and users can customize a phone's look and feel using widgets and other tools. For example, some blend updates from friends on Facebook, Twitter, and other social networks, and others manage all of your phone's wireless connections.

4G compatibility. More than a dozen Android smart phones support this technology, far more than any other platform. Technically, only the AT&T version of the iPhone 4S supports 4G; it runs on the carrier's HSPA+ network.

Shopping by phone. Android and Apple have apps that allow you to check the prices of products and other details by scanning bar codes or QR codes (those square blotches you might have seen in ads) using the phone's camera and a connection to the Web.

The latest news on cell-phone radiation

The controversy continues. The Food and Drug Administration maintains that the weight of scientific evidence has not shown that low-level radiation from cell phones endangers anyone, including children and teenagers. And the Federal Communications Commission says all wireless phones sold in the U.S. meet government requirements that limit their radiation to safe levels. An FDA representative says the agency continues to monitor available research. But some studies have linked cell-phone radiation to health problems such as increased risk of brain cancer. Here's a roundup of recent developments:

New studies but no consensus. The World Health Organization's International Agency for Research on Cancer (IARC) in May 2011 classified cell-phone radiation as "possibly carcinogenic to humans" based on limited evidence. The classification drew on an investigation published in the International Journal of Epidemiology involving 5,117 people in 13 countries (excluding the U.S.). The authors found no overall greater risk of brain tumors for long-term cell-phone users but "suggestions" of an increased risk at the highest exposures of 1,640 hours or more over 10-plus years, which might be due to biases and error, they said.

Elsewhere, a case-control study of 3,689 Swedes found the highest risk for malignant brain tumors among those who began using cell phones before age 20 and used them for more than 10 years. The finding, from the International Journal of Oncology, suggests that young people may be more susceptible to cell-phone radiation than older users.

However, researchers studying European children and adolescents found no statistically significant differences in brain tumor risk between cell-phone users and non-users, as

However, only Android has the Google Wallet app, which allows you to make a purchase using your smart phone as though it were a digital credit card. Use of that app is limited to a handful of phones with near-field communications (NFC) capability. Phones in our Ratings with that feature include the Sprint version of the Samsung Nexus S 4G, the HTC Amaze 4G, and the T-Mobile Samsung Galaxy S II. The carrier must offer the service (now only Sprint does), and merchants must be in the MasterCard PayPass network, which operates in 150,000 U.S. locations.

Advantage: iPhone

Selection of apps and entertainment. No contest. Not only does Apple have the most apps, games, songs, movies, and other forms of entertainment for download but its platform also makes it very easy to pay for them—via your iTunes account. On Android phones, payment arrangements are often between you and the individual app seller, which means you're giving your credit-card number to multiple sources instead of to just one.

Cloud computing. Android is the true pioneer when it comes to syncing contacts, calendars, apps, and other phone-based elements via the Web and intelligently linking them with Web-based data such as maps, social networks such as Facebook and Twitter, photos, search-engine results, and more. Apple's iCloud feature takes the game to a whole new level, giving users 5 gigabytes of free storage on its servers, to which they can upload photos, music, documents created with apps from Apple or third parties that support iCloud, and more that can be accessed by up to 10 devices on one iTunes account. Ditto for most apps and content, including videos and books bought from Apple, which don't count against your limit. To get more storage for non-Apple files, you'll have to pay up to $100 a year for 50GB. Both Google and Apple have new services that use the cloud to stream music, but it's premature to compare them, because Google's app is still in beta.

Consistent and intuitive interface and "ecosystem." Apple sustains a familiar, highly intuitive interface across its various devices and programs. That aids in the sharing and integration of tasks across your digital life, especially if you own various Apple devices.

Voice assistance. While Android efficiently allows users to perform universal searches, launch apps, and even dictate and send messages through voice commands, Apple now offers all that and more with its built-in Siri voice-activated assistant. Currently available only on the iPhone 4S, Siri not only understands and executes requests but speaks back to you, in a female voice. Tell Siri to remind you about an appointment, and she'll set it up in the calendar after confirming with you that she got it right.

Siri sometimes demurs from speaking when you ask her questions involving calculations, such as, "Convert 42 pounds into ounces." But she's smart enough to show you the correct answer—in this case, 672 ounces—on her display.

reported in the Journal of the National Cancer Institute. They did observe an increase in brain tumors but lacked enough cases to confirm that it was a statistically significant effect.

Low-level radiation from cell phones can affect brain function during short-term use, according to a February 2011 report in the Journal of the American Medical Association. The study, by researchers at the National Institutes of Health and the Brookhaven National Laboratory, suggests a new biological effect linking cell-phone radiation and increased brain glucose metabolism. It's unknown whether that could be harmful. The FCC states that cell-phone radiation has been associated with heating of human tissue, which may be linked to adverse health effects.

An October 2011 report in the British Medical Journal found no link between long-term cell-phone use and cancer among Danish mobile-phone users. But our experts said the study had shortcomings, including that a potentially high-use cell-phone population was categorized as non-users.

Doubts about radiation stats. Cell-phone packaging can have information about specific absorption rate (SAR) values. The higher the SAR value, the more radiation the body theoretically absorbs. But SAR values indicate the maximum possible exposure from a given phone, not the varying levels of exposure in normal use, the FCC says. So you won't necessarily absorb less radiation from a phone with a lower reported SAR value than one with a higher value, and SAR values can't be used to reliably compare cell-phone models.

Further, a team of investigators reported that SAR figures do not "adequately protect" most people who use cell phones, especially children, who absorb more cell-phone radiation than adults, according to an October 2011 article in the journal Electromagnetic Biology and Medicine. Commenting on that report, an FCC official told us the agency will "evaluate the merits of reports" such as this.

Continuing calls for more research. CTIA-The Wireless Association supports calls for more research to clearly identify any potential health risks from the use of cell phones. The IARC announcement of a possible carcinogenic effect of phone use concluded "we need to keep a close watch for a link between cell phones and cancer risk."

Bottom line. If you're concerned, here's how to minimize exposure to phone radiation:

- Reduce cell-phone use, especially by kids.
- Hold the phone away from your head and body, especially when a call is connecting.
- Text or use a speakerphone or headset to reduce absorption in your head.

Which phone & plan for you?

Combinations to suit a range of needs

You require only the basics

Like 34 percent of readers in our survey, you never or rarely access websites or e-mail from your phone, which you use almost exclusively for voice calls and, probably, texting.

Leading option: A plan with less than 450 minutes per month at a reasonable price from a carrier with decent reader scores. If you send and receive more than a couple of dozen text messages per month and want to avoid overpaying à la carte, you should also consider a messaging bundle or a free texting app (see "How to cut your phone bill," on page 31).

Alternatively, you can opt for no plan at all. If you're like the 24 percent of readers who made only one or no calls on a typical day, consider prepaying for minutes and texts on an as-needed basis. Though the cost per minute or text may be relatively high, prepaying will probably still be less expensive than almost all traditional plans because your usage will be lower than the minimum for those plans.

Whether you go traditional or prepaid, choose the provider and service first and the phone second—a simple flip- or slider-styled phone. Pay no more than about $50 for the phone, and avoid smart phones and so-called feature phones, fancier conventional phones sold by some carriers. With smart phones, you must pay $15 or more per month for a data plan, which you won't need for voice calls and texting.

Service: If you're toward the higher end of "basic"—say, with 150 minutes or texts, or both, per month—consider Consumer Cellular, a national carrier that received our highest rating for value. It operates on the AT&T network and aims at older users with fairly basic cellular needs.

Consumer Cellular offers short-term contract options and bills you monthly like a traditional cell carrier does, which is less complicated than a prepaid arrangement. For example, you can buy a plan with 300 minutes per month for $20, inexpensively add a second line for your spouse ($10 per month), and get 100 text messages (and a small data package, for checking the Web two to four times a week—up to 4 megabytes of data) for only $2.50 more per month. (Prices and plan specifics for all plans was as of press time.)

If you're a true cell minimalist, consider TracFone, among the better prepaid carriers in our Ratings. Its options include buying 60 minutes of airtime for $20 that you can take up to three months to use, essentially giving you basic cell service for less than $7 per month.

Phones: With Consumer Cellular, choose the Doro PhoneEasy 410, which has large buttons and other features the carrier says make it easier for seniors to use, or the Motorola WX345, which has outstanding battery life. With TracFone, the LG 420G also offers exceptional talk time (more than 7 hours) on a battery charge.

You want to 'smarten up'

You're like the 18 percent of our readers who said they don't yet own a smart phone but want one. You're not stuck on getting a big-name model with the latest features, you're not yet sure how much you'll use a phone for e-mail and other data services, and you'd happily sacrifice some pizzazz for a lower monthly bill—no more than $80 per month, including voice, texting, and data service.

Leading option: A less sophisticated,

CHECK OUT OUR VIDEO

On your smart phone, download the ShopSavvy or the RedLaser app, then scan the code at right. Or go to *www.ConsumerReports.org/smartphonebuy.*

ILLUSTRATION BY LEON MUSSCHE

modestly priced, competent smart phone from a low-priced carrier with decent, though not necessarily top, scores for data service. A plan that doesn't force you to overpay for a high level of data downloads you might not need.

Service: U.S. Cellular, a regional carrier that operates mostly in the Midwest, scored above average for value. If the carrier is available to you, consider its Single Line Primary Plus plan ($80 for 450 minutes, unlimited messaging, and 5 gigabytes of data) or for even less, its prepaid plans (450 minutes, unlimited messaging, and 2GB of data for $60 or 200MB for $40 per month).

Among national carriers, Sprint's Everything Data plans are relatively inexpensive and include one line for $80 per month (450 minutes and unlimited data and messaging).

Phones: The BlackBerry Bold 9650, available from U.S. Cellular, is inexpensive and capable. With Sprint and Credo, value choices include the Samsung Replenish, free from each carrier with a two-year plan; see the smart-phone Ratings for details.

You want it all

You're similar to the 41 percent of Consumer Reports readers in our survey who accessed the Web or e-mail at least five times a day, or the half or so that used apps in the past month, including Facebook and other social-networking tools. Although you don't want to overpay for service, you're willing to spend $100 or more per month for fast, widespread coverage for your phone.

Leading option: A new top-of-the-line Android phone or iPhone, to enjoy the widest selection of apps. A carrier with satisfying data service, including an ample (even unlimited) data plan, perhaps on a fast 4G network.

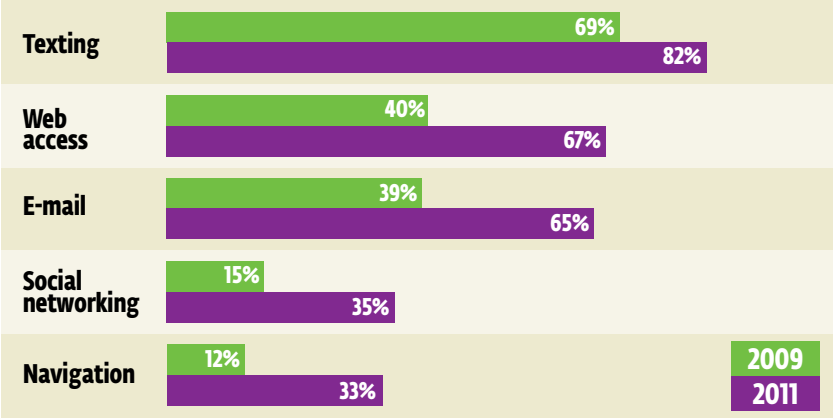
Service: Standard service (billed monthly, often under a contract) from a major national carrier is most likely to allow you to get the kind of phone you want.

Among the four major carriers, Verizon and Sprint offered more satisfying data service, according to readers. Sprint does so more economically with its Simply Everything plan, which includes unlimited data, voice, and texts and costs $110 for smart phones. By comparison, Verizon charges new customers $120 for unlimited voice and texting with a 2GB data limit. A data hog might need several more gigabytes per month, which cost $10 per gigabyte.

CLOSE-UP

What a difference a few years make

More than 60 percent of readers we surveyed now own a smart phone; most bought theirs in the past two years. Those facts help explain the dramatic changes in the percentage of readers who did the tasks below, many of which require a smart phone. Readers aren't necessarily talking less on their phones; they're using them in a lot more new ways.



Source: 2009 and 2011 Annual Cell Phone Service Surveys, Consumer Reports National Research Center.

Phone: Any of the high-rated recommended Verizon and Sprint models from our smart-phone Ratings should suit you. They include the Apple iPhone 4S (available on both carriers) and the top-rated 4G models—the Samsung Galaxy S II Epic 4G Touch (Sprint), Motorola Photon 4G (Sprint), and Motorola Droid Bionic (Verizon).

You're buying for a crowd

You're a family, or a couple, that makes lots of voice calls and texts, often to one another. Different family members have varying priorities—say, texting for the teens, streaming sports video for Dad, and mobile banking for Mom.

Leading option: A family plan, which more than two-thirds of cell-phone users have, mainly because it probably saves money compared with multiple single-line accounts. If you need four cell lines, for example, a family plan can save through shared minutes, add-a-line prices, and free in-network calling between spouses and the kids.

Service: A major carrier that bills monthly will give you the widest choice of services with family savings. If it's available in your area, U.S. Cellular provides better than average value, our readers said. Its Family Basic plans let you start with a sufficient level of minutes for most families and add text or data—or not—as needed per line.

Our readers rated Sprint only average on value but better than Verizon, T-Mobile, and AT&T. Sprint offers multiline economy in its family plans and the option of unlimited and potentially lower-priced data. Verizon got the best text rating of the major carriers. Sprint and Verizon tied with better data ratings among the big four carriers.

Some higher-rated possibilities may disappoint. Consumer Cellular wouldn't be a good option for family members with big data needs; its plans have low data limits and its smart-phone selection is very limited. Credo, which uses the Sprint network, is generally more expensive than Sprint—$25 more per month, for example, for 1,400 to 1,500 minutes and unlimited messaging and data. So why pay more?

No-contract carrier Walmart Family Mobile is a great deal if all you need is unlimited voice and text; it delivers a $70 per month savings over the majors for a family who needs two lines. But its data plan (WebPak) is overpriced at $40 per gigabyte, even if all family members can share it and it doesn't expire until it's used up.

Phones: Because family needs can be diverse, no single model of phone may be suitable for everyone who will share the plan; consult the Ratings. That said, if the needs of several family members are close enough, two-for-one sales can deliver substantial savings on phones.

Overview Cell-phone service

Standard cell-phone service, involving a bill at the end of the month, is best if you want a sophisticated smart phone and are prepared to accept a contract. Prepaid service, either pay-as-you-go or plans with a monthly-minute allocation, are usually contract-free and offer basic phones and simpler smart phones.

Best major carriers:

A2 U.S. Cellular
A4 Verizon Wireless
A5 Sprint

These are the highest-scoring of the big six carriers for full-featured, standard service. **A2** has a coverage map that's nationwide, but its service area is limited to 26 mostly Midwest states; it's a standout in almost every respect. **A4** has an edge over **A5** in texting and in knowledgeable staff, but **A5** rated better in value.

Fine choice if a socially responsible carrier is a priority:

A3 Credo

This carrier, formerly known as Working Assets, donates a portion of its income to social causes. While we lacked sufficient data to formally score certain attributes, it seems to offer satisfying service. Relatively high prices don't seem to hurt its value score.

Best choices if your phone and service needs are fairly basic:

A1 Consumer Cellular
B1 TracFone

These specialize in no-frills cell phones and service. **A1** is a short-term contract, standard carrier aimed at seniors that offers standout customer service and adequate voice service. **B1** is a prepaid carrier that offers very inexpensive plans for minimal phone users. **A1** uses AT&T's network and **B1** uses it with some of its phones. The carriers' relatively basic phones aren't likely to place heavy demands on its data component, which AT&T customers found to be a weak point.

Best prepaid values:

B1 TracFone
B2 Straight Talk
B3 T-Mobile
B4 Virgin Mobile

These carriers, whose overall scores are not meaningfully different, operate on major carrier networks (see the cell-phone Ratings, on page 40), often for less. The per-minute cost of **B1** is ostensibly high, but double- or triple-minutes-for-life cards cut that accordingly, and value-plan minutes are reasonably priced. **B2** offers unlimited voice, text messages, and Web access for $45 per month. **B3** lets you buy primarily what you want with plans emphasizing mostly data, text, or talk. **B4** sells Beyond Talk unlimited Web, talk, and text for markedly less than parent company Sprint's Simply Everything.

Ratings Cell-phone service overall

Summary Ratings, reflecting all cities surveyed, in order of overall score. Differences in score of less than five points are not meaningful.

Better ◆ ◒ ○ ◒ ● Worse

Order	Provider	Reader score (0–100)	Value	Service satisfaction: Voice	Texting	Data	Customer support: Phone	Staff knowledge	Issue resolved
A	**STANDARD SERVICE** Billed at month's end, often under a contract.								
1	Consumer Cellular	87	◆	○	–	–	◆	◆	◆
2	U.S. Cellular	84	◒	◆	◆	◆	◆	◆	◆
3	Credo	78	○	○	–	–	–	–	–
4	Verizon Wireless	73	◒	○	◒	◒	○	◒	○
5	Sprint	72	○	○	○	◒	○	○	○
6	T-Mobile	67	◒	◒	○	○	◒	○	○
7	AT&T	59	●	●	○	◒	●	○	○
B	**PREPAID SERVICE** Billed in advance, without a contract.								
1	TracFone	82	◒	○	◒	○	●	◒	○
2	Straight Talk	78	◒	○	○	–	–	–	–
3	T-Mobile	78	◒	○	○	○	◒	○	○
4	Virgin Mobile	78	◒	○	○	○	●	◒	○
5	Net10	75	○	○	–	–	–	–	–
6	Verizon Wireless	75	○	○	○	◒	●	○	○
7	Metro PCS	71	○	◒	●	–	–	–	–
8	AT&T GoPhone	67	◒	◒	◒	◒	●	○	○

T-Mobile allows you to buy phones in two ways

Consumers with cell-phone contracts have long paid for "free" or deeply discounted phones through hidden monthly fees built into their one- to two-year service contracts. Those fees invariably continue even after the phone has been paid off.

T-Mobile has added transparency when it comes to those fees, and it has done so in a way that saves money. If you buy a new phone with one of the carrier's Value plans, which are low-priced versions of its Classic plans, you make a down payment plus a monthly installment of $3 to $15 to pay back the full retail price of the phone. The fee is in addition to the monthly service fee and is imposed for 20 months.

Though that might sound unappealing, it's positive in two ways: The Value plans are priced so low that your total monthly bill is usually less than with the matching Classic plan, even with the added phone fee. And the bill becomes lower once the 20-month payback period ends and the fee is removed.

That can spell significant savings. When we ran the math on the HTC myTouch 4G Slide, comparing individual two-year plans with unlimited talk and text and 2 gigabytes of data, the Value plan was $200 less than the Classic plan over two years and almost $500 less over three years. Those totals include the up-front cost of the phone ($200 with the Value plan, $250 with the Classic) and the Value-plan phone time payments.

Bottom line. Comparing the Value and Classic plans and phone prices can be complicated. But we think it might be worth the effort, especially for people who keep a phone past the contract's expiration date.

T-Mobile's transparency is a welcome step toward a more straightforward and honest approach to cell-phone pricing.

Ratings Cell service by city

In order of reader score, within 22 metropolitan areas. Differences in reader score of less than six points are not meaningful.

Better ⟷ Worse

Provider	Reader score (0–100)	Voice	Texting	Data
ATLANTA				
Verizon	74	◓	◓	○
Sprint	74	○	○	○
T-Mobile	70	◒	◒	◒
AT&T	56	●	◒	●
AUSTIN, TEXAS				
T-Mobile	74	○	○	–
Sprint	72	◓	○	○
Verizon	72	◓	◓	○
AT&T	61	◒	○	●
BOSTON				
T-Mobile	70	○	◒	◒
Verizon	69	○	○	○
Sprint	68	○	○	○
AT&T	60	●	◒	●
CHICAGO				
U.S. Cellular	84	⊙	–	–
Verizon	73	◓	○	○
T-Mobile	69	○	○	◒
Sprint	68	○	○	◒
AT&T	55	●	◒	●
DALLAS-FORT WORTH				
Verizon	76	⊙	◓	◓
Sprint	73	◓	○	○
T-Mobile	69	○	–	–
AT&T	65	○	○	◒
DENVER				
Sprint	72	○	○	○
Verizon	72	◓	○	○
T-Mobile	66	◒	○	●
AT&T	56	●	◒	●
DETROIT				
Verizon	73	◓	◓	○
Sprint	67	○	○	◒
AT&T	63	◒	◒	●
HOUSTON				
Verizon	77	⊙	◓	○
Sprint	71	○	○	○
T-Mobile	69	○	○	◒
AT&T	59	●	○	●
KANSAS CITY				
Sprint	79	⊙	○	◓
Verizon	74	◓	○	○
T-Mobile	68	◒	○	–
AT&T	66	○	○	◒
LOS ANGELES				
Verizon	73	◓	○	○
Sprint	69	○	○	○
T-Mobile	67	◒	◒	◒
AT&T	56	●	◒	●
MIAMI				
Verizon	74	◓	◓	○
Sprint	74	◓	○	○
T-Mobile	70	○	–	○
AT&T	61	○	○	◒
MILWAUKEE				
U.S. Cellular	85	⊙	⊙	⊙
Verizon	74	◓	○	○
AT&T	60	◒	○	●
MINNEAPOLIS-ST. PAUL				
T-Mobile	73	○	○	○
Sprint	71	◓	○	○
Verizon	71	◓	○	○
AT&T	60	○	○	●
NEW YORK				
Verizon	71	◓	○	○
Sprint	69	◒	○	◒
T-Mobile	66	◒	◒	●
AT&T	57	●	◒	●
PHILADELPHIA				
Verizon	71	◓	○	○
Sprint	71	○	○	○
T-Mobile	66	◒	●	–
AT&T	63	◒	○	◒
PHOENIX				
Verizon	76	⊙	◓	○
Sprint	71	○	○	○
T-Mobile	68	○	○	◒
AT&T	62	○	○	◒
SAN DIEGO				
Verizon	74	◓	○	○
Sprint	73	○	○	○
T-Mobile	72	○	○	–
AT&T	60	●	◒	●
SAN FRANCISCO				
Verizon	73	◓	◓	○
Sprint	71	○	○	○
T-Mobile	69	○	○	○
AT&T	53	●	◒	●
SEATTLE				
Verizon	72	◓	○	○
Sprint	72	○	○	○
T-Mobile	71	○	○	○
AT&T	59	◒	◒	●
ST. LOUIS				
Sprint	74	◓	○	○
Verizon	73	◓	◓	○
AT&T	64	○	○	●
TAMPA, FLA.				
Sprint	74	◓	○	○
Verizon	73	◓	◓	○
T-Mobile	71	○	○	–
AT&T	67	○	○	◒
WASHINGTON, D.C.				
Sprint	73	○	○	○
Verizon	71	◓	○	○
T-Mobile	70	○	–	–
AT&T	60	●	◒	●

Guide to the Ratings

Ratings are based on responses from 66,315 ConsumerReports.org subscribers with cell-phone service surveyed in September 2011. In the **overall Ratings, standard** customers said they receive a bill after each month of service; **prepaid** customers said they prepay for service as needed. While some providers may offer one or both types of service, only providers for which we had sufficient data of the specified type are included in the table. The **Ratings by city** show all providers with sufficient data in each locale, including standard and prepaid customers. In some cases, carriers whose service is available in certain cities may not be rated for them. In both charts, "—" indicates insufficient data. **Reader score** refers to how respondents rated their overall satisfaction with their cell-phone service and is not limited to the factors rated. A score of 100 would mean all respondents were completely satisfied; 80 very satisfied, on average; 60, fairly well satisfied. **Voice** scores are based on the average frequency of problems (no service, dropped calls, call failed, static); **texting** reflects the percent who did not experience any problems (difficulty sending messages, message did not arrive, message arrived much-delayed). Scores for voice and texting refer to problems in the past week, are adjusted for frequency of use and phone type (smart vs. feature), and are relative (reflecting differences from the average of all providers in all areas). The following reflect mean scores on a scale of "Very poor" to "Excellent": **value** for money, satisfaction with **data** service, ease and speed of reaching support staff through the **phone** system, and support **staff knowledge. Issue resolved** reflects the percentage who said their issue was satisfactorily resolved in a timely manner, and those Ratings are relative as well. Findings might not reflect the general U.S. population.

Overview Smart phones

Many of the tested phones are fine choices that we recommend. Those below stand out for the reasons noted.

Best choices for Verizon:

A1 **Motorola** Droid Bionic $300
A2 **HTC** ThunderBolt $150
A3 **LG** Revolution $200
A4 **Samsung** Droid Charge $200

Compatible with Verizon's 4G network (LTE), these phones have front-facing cameras and take HD video. **A2's** video rivals that of the better HD pocket camcorders. **A1** has one of the sharpest displays we've seen. The displays on **A3** and **A4** have excellent readability, even in bright light.

Best choices for Sprint:

B1 **Samsung** Galaxy S II Epic 4G Touch $200
B2 **Motorola** Photon 4G $200
B3 **Samsung** Epic 4G $100
B4 **HTC** Evo 3D $200

These models run on Sprint's 4G network (WiMAX). All have front-facing cameras and can record HD video. **B1's** huge 4.5-inch display provides excellent readability in bright light; the displays on **B2** and **B4** are among the sharpest in our Ratings. **B3** has a clearly labeled, well-spaced physical keyboard with five rows of keys. **B4** can capture photos and videos in 3D.

Best choices for T-Mobile:

C1 **Samsung** Galaxy S II $230
C2 **Samsung** Galaxy S 4G $100
C3 **HTC** Amaze 4G $260
C4 **T-Mobile** G2x $0

These 4G models have front-facing cameras and can record HD video. **C1** has a huge 4.5-inch display. It has excellent readability, even in bright light; so does **C2's** display. **C4's** camera is among the best, producing very good photos and video.

Best choices for AT&T:

D1 **Samsung** Galaxy S II $200
D2 **Samsung** Infuse 4G $100
D3 **LG** Thrill 4G 4 $100

All of these 4G-capable phones can record HD video and have front-facing cameras. **D2's** 4.5-inch display has excellent readability, even in bright light; so does **D1's. D3** takes 3D photos and videos.

If you want an iPhone:

A5, B5, D4 Apple iPhone 4S $200

This is a great choice for Verizon, Sprint, and AT&T, as are the Android models below. Besides a super-sharp screen, the iPhone 4S has a front-facing camera and a voice-activated assistant, Siri, that responds to commands and questions. Its camera is among the best, with video quality rivaling that of the better HD pocket camcorders and very good photos. What the 4S doesn't have is the reception problem of the iPhone 4. Only the AT&T version, **D4,** has 4G.

A1 Motorola Droid Bionic

A5 Apple iPhone 4S

B1 Samsung Galaxy S II Epic 4G Touch

Ratings Smart phones

In performance order, by carrier. (Carriers listed in order of user satisfaction.)

Rec.	Rank	Brand & model (Similar models are listed in small type with their price.)	Price	Available as prepaid	Overall score (0–100; P | F | G | VG | E)	Display	Ease of use	Voice quality	Phoning	Messaging	Web browsing	Camera	Battery life	Display size (in.)	Camera (megapixels)	Broadband 4G data
	A	**VERIZON** This carrier was among the more satisfying in almost all cities in our survey.														
✔	1	**Motorola** Droid Bionic	$300		77	●	●	◒	◓	●	●	◓	○	4.3	8.0f	•
✔	2	**HTC** ThunderBolt	150		74	●	●	○	◓	●	●	◓	○	4.3	8.0f	•
✔	3	**LG** Revolution	200		73	●	●	◒	◓	●	●	○	○	4.3	5.0f	•
✔	4	**Samsung** Droid Charge	200		73	●	●	◒	◓	●	●	○	◒	4.3	8.0f	•
✔	5	**Apple** iPhone 4S (16GB) (32GB), $300; (64GB), $400	200		73	●	●	○	◓	◓	◓	◓	◓	3.5	8.0f	
✔	6	**Motorola** Droid 3	200	•	73	●	●	◒	◓	◓	◓	◓	◓	4.0	8.0	
✔	7	**Motorola** Droid X2	100	•	73	●	●	○	◓	◓	◓	◓	◓	4.3	8.0f	
	8	**Apple** iPhone 4 (8GB)	100		71	●	●	○	◓	◓	◓	◓	◓	3.5	5.0f	
✔	9	**HTC** Droid Incredible 2	150	•	70	◓	●	◒	◓	◓	◓	○	○	4.0	8.0f	
✔	10	**Casio** G'zOne Commando	50		69	◓	●	○	◓	◓	◓	○	●	3.6	5.0f	
✔	11	**Sony** Ericsson Xperia Play	50	•	67	◓	●	◒	○	◓	◓	○	◓	4.0	5.0f	
✔	12	**BlackBerry** Bold 9930	250	•	65	○	●	◒	◓	◓	◓	○	○	2.8	4.9f	
	13	**HTC** Trophy	30		62	◓	◓	◒	◓	◓	◓	○	○	3.8	5.0f	
	B	**SPRINT** This carrier was among the more satisfying in almost all cities in which it was rated in our survey.														
✔	1	**Samsung** Galaxy S II Epic 4G Touch	200		76	●	●	○	◓	●	●	◓	○	4.5	8.0f	•
✔	2	**Motorola** Photon 4G	200		76	●	●	○	◓	●	●	○	○	4.3	8.0f	•
✔	3	**Samsung** Epic 4G	100		73	●	●	○	◓	●	●	◒	○	4.0	4.9f	•
✔	4	**HTC** Evo 3D	200		73	●	●	◒	◓	●	●	○	○	4.3	4.9f	•
✔	5	**Apple** iPhone 4S (16GB) 32GB, $300; 64GB, $400	200		73	●	●	○	◓	◓	◓	◓	◓	3.5	8.0f	
✔	6	**HTC** Evo 4G	100		71	●	●	○	◓	◓	●	◒	○	4.3	8.0f	•
	7	**Apple** iPhone 4 (8 GB)	100		71	●	●	○	◓	◓	◓	◓	◓	3.5	5.0f	
✔	8	**Samsung** Nexus S 4G	100		70	●	●	○	◓	◓	●	○	○	4.0	4.9f	•
✔	9	**BlackBerry** Torch 9850	150		67	◓	●	○	◓	◓	◓	○	○	3.7	4.9f	
✔	10	**Samsung** Conquer 4G*	100		66	◓	●	○	◓	◓	●	○	○	3.5	3.1f	•
	11	**Motorola** XPRT	100		64	○	◓	○	◓	◓	◓	○	◓	3.1	5.0f	
	12	**HTC** Arrive	200		61	◓	◓	○	◓	◓	◓	○	◒	3.6	5.0f	
	13	**Samsung** Replenish*	0		59	○	◓	○	◓	◓	◓	○	○	2.8	1.9	
	C	**T-MOBILE** This carrier was among the more satisfying in about half of the cities in which it was rated in our survey.														
✔	1	**Samsung** Galaxy S II	230	•	79	●	●	○	◓	●	●	◓	◓	4.5	8.0f	•
✔	2	**Samsung** Galaxy S 4G	100	•	78	●	●	○	◓	●	●	◓	●	4.0	4.9	•
✔	3	**HTC** Amaze 4G	260	•	77	●	●	○	◓	●	●	◓	○	4.3	8.0f	•

Guide to the Ratings

Overall score is based mainly on display, ease of use, voice quality, phoning, messaging, Web browsing, camera, and battery life. **Display** score considers size, resolution, and readability in various lighting. **Ease of use** mainly considers how easy it is to access features and modes, such as phoning, messaging, Web browsing, and camera. We also evaluate programmable shortcuts and touch screens. **Voice quality** considers listening and talking in noisy and quiet environments. **Phoning** considers step-saving functions for making and receiving calls, including hands-free capabilities. We judged keypad readability in various lighting. **Messaging** mainly assesses keyboard ergonomics, e-mail readability, attachment and corporate capabilities, text-messaging features, and accessing

C3 HTC Amaze 4G

D2 Samsung Infuse 4G

D3 LG Thrill 4G

✔ Recommended

● Excellent ◓ Very good ○ Good ◒ Fair ● Poor

Rec.	Rank	Brand & model (Similar models are listed in small type with their price.)	Price	Available as prepaid	Overall score (0–100; P | F | G | VG | E)	Display	Ease of use	Voice quality	Phoning	Messaging	Web browsing	Camera	Battery life	Display size (in.)	Camera (megapixels)	Broadband 4G data
	C	**T-MOBILE** continued														
✔	4	**T-Mobile** G2x	$ 0	•	76	◓	●	○	◓	●	●	◓	◓	4.0	8.0f	•
✔	5	**HTC** Sensation 4G	200	•	75	●	●	○	◓	●	●	◓	◓	4.3	8.0f	•
✔	6	**T-Mobile** Sidekick 4G	80	•	75	◓	●	○	◓	●	●	○	●	3.5	3.1	•
✔	7	**T-Mobile** myTouch 4G	100	•	74	◓	●	○	◓	◓	●	○	●	3.8	5.1f	•
✔	8	**HTC** myTouch 4G Slide	200	•	73	◓	●	○	◓	●	●	◓	○	3.7	8.0f	•
✔	9	**Motorola** Cliq 2	100	•	73	◓	●	○	◓	◓	●	◓	◓	3.7	5.0f	
✔	10	**Samsung** Nexus S	0		72	●	●	○	◓	◓	●	○	◓	4.0	4.9f	
✔	11	**BlackBerry** Bold 9900 4G	300	•	69	○	●	○	◓	◓	●	○	○	2.8	4.9f	•
✔	12	**HTC** myTouch 3G Slide	50	•	65	○	●	○	◓	◓	◓	○	○	3.4	5.1f	
✔	13	**HTC** HD7	100	•	65	●	◓	○	◓	◓	◓	○	◒	4.3	5.0f	
	14	**HTC** Wildfire S	0	•	64	○	●	○	◓	◓	◓	○	○	3.2	5.1f	
	15	**BlackBerry** Bold 9780	110	•	63	○	◓	◒	◓	●	◓	○	◓	2.4	5.0f	
	D	**AT&T** This carrier scored the lowest in satisfaction in almost all cities in our survey.														
✔	1	**Samsung** Galaxy S II	200		80	●	●	○	◓	●	●	◓	●	4.3	8.0f	•
✔	2	**Samsung** Infuse 4G	100		80	●	●	○	◓	●	●	◓	●	4.5	8.0f	•
✔	3	**LG** Thrill 4G	100		77	●	●	○	◓	◓	●	○	●	4.3	5.0f	•
✔	4	**Apple** iPhone 4S (16GB) (32GB), $300; (64GB), $400	200		75	●	●	○	◓	◓	●	◓	◓	3.5	8.0f	•
✔	5	**Motorola** Atrix 4G	100		75	●	●	○	◓	◓	●	○	●	4.0	5.0f	•
✔	6	**HTC** Inspire 4G	100		74	●	●	○	◓	●	●	○	○	4.3	4.9	•
	7	**Apple** iPhone 4 (8GB)	100		73	●	●	○	◓	◓	◓	◓	◓	3.5	4.9f	
✔	8	**Samsung** Captivate	0	•	73	●	●	○	◓	●	◓	○	◓	4.0	3.1	
✔	9	**BlackBerry** Torch 9810	50		71	◓	●	○	◓	●	●	○	○	3.2	5.0f	•
✔	10	**Apple** iPhone 3G S	0		69	◓	●	○	◓	◓	◓	○	○	3.5	5.0f	
✔	11	**BlackBerry** Torch 9800	30		66	◓	●	◒	◓	●	◓	○	○	3.2	3.1	
✔	12	**HTC** HD7S	100	•	65	●	◓	○	◓	◓	◓	○	◒	4.3	4.9f	
	13	**LG** Phoenix	0	•	64	○	◓	○	◓	◓	◓	○	◓	3.2	3.1f	
	14	**Samsung** Focus	50	•	63	◓	◓	○	◓	◓	◓	○	○	4.0	3.1	
	15	**LG** Quantum	50	•	62	◓	◓	○	◓	◓	◓	○	○	3.5	5.1f	
	16	**Pantech** Crossover	0	•	62	○	◓	◒	○	◓	◓	◓	○	3.0	5.1	
	17	**HTC** Status	0	•	61	○	◓	○	◓	◓	◓	○	○	2.6	1.9f	
	18	**HP** Veer 4G	0		60	○	◓	○	◓	◓	●	○	○	2.5	5.1	•
	19	**Palm** Pixi Plus	0	•	56	○	◓	○	○	◓	◓	○	○	2.6	1.9f	

* Available from Credo Mobile, which uses the Sprint network.

applications while on a call. **Web browsing** mainly assesses browser capabilities, including multitouch, Flash video, link selecting, and the phone's ability to handle more than one browser and multiple Web pages. It also considers data connections, such as 3G, 4G, and Wi-Fi. **Camera** considers still-picture quality and shutter lag, features, and messaging capabilities; in **camera (megapixels)** column, an "f" indicates flash. **Battery life** was tested under strong and weak cell-network signals and while performing various tasks. **Broadband "4G" data** indicates models considered 4G based on carriers' definitions. **Price** is based on a two-year contract in October 2011 from the indicated carriers, including rebates. Scores may differ from past Ratings due to updates to our testing and changes in phone firmware.

Overview continued

The models below, without letter-number codes, are for smaller carriers not in the Ratings.

Fine choice for Consumer Cellular:

Motorola Bravo $165
This relatively lightweight phone has a high-resolution 3.7-inch display and a decent 3.1-megapixel camera. But it lacks the handy search key found on most Android phones.

Fine choices for Credo Mobile:

Samsung Conquer 4G $80
This fine Android phone has a 3.5-inch display and a decent 3.1-megapixel camera.

Samsung Replenish $30
This Android phone has a smallish 2.8-inch display, a tiny physical keypad, and a decent 1.9-megapixel camera.

Fine choices for U.S. Cellular:

Motorola Electrify $200
A 3G sibling of the high-rated Motorola Photon 4G in the Ratings.

HTC Merge $150
This Android model has a 3.8-inch display and a slide-out keyboard.

Fine choices for BlackBerry users:

BlackBerry Torch 9850 $200 (U.S. Cellular)
Like newer BlackBerrys, this has a touch-screen display, the largest we've seen at 3.7 inches, but lacks the usual physical keyboard.

BlackBerry Style 9670 $100 (Credo Mobile)
A pocket-friendly phone with a very good 5.0-megapixel camera and 2.7-inch display.

BlackBerry Bold 9650 $130 (U.S. Cellular)
This model has a smallish 2.4-inch display.

BlackBerry Curve 3G 9330 $0 (Credo Mobile)
This phone has a smallish 2.4-inch display and a decent 1.9-megapixel camera.

BlackBerry Curve 8530 (MetroPCS, $150; Virgin Mobile, $180)
This model has a smallish 2.4-inch display.

Fine choices for Virgin Mobile:

Motorola Triumph $300
This has a large 4.1-inch display but doesn't let you view Word and Excel files out of the box, as you can with most Android phones.

Samsung Intercept $100
This Android phone has a slide-out keyboard and a 3.2-inch display.

Fine choice for Walmart Family Mobile:

Motorola Cliq XT $200
This Android phone has a 3.1-inch display and a customizable Motoblur interface that links related applications on the home screen.

Overview Cell phones

This Ratings comprises models available mainly without a contract, an arrangement we think is suitable for many people who use a cell phone. Most models are available with prepaid service and are listed with the prepaid price. However, Consumer Cellular's phones are offered with standard (billed) service with a short-term contract. Many phones listed for AT&T and Verizon are available with a contract for less than the prepaid price shown. We've identified phones below that have special suitability for some users.

For long battery life:

C2 Motorola WX345 (Consumer Cellular) $0
D1 LG 420G (Straight Talk) $30
E1 Samsung Gravity TXT (T-Mobile) $140
F1 LG 420G (TracFone) $20
F2 Samsung T301G (TracFone) $20
H1 LG Rumor Touch (Virgin Mobile) $100

All of these phones have very good or excellent battery life and should offer talk times upward of 5 hours on a charge.

If simplicity is paramount:

C1 Doro PhoneEasy 410 (Consumer Cellular) $25

This phone has big buttons and other features for easy operation, such as an emergency-call feature that alerts family members.

Tops for texting:

B2 Sanyo Innuendo (Boost) $130
G2 LG Octane (Verizon) $250
H1 LG Rumor Touch (Virgin Mobile) $100

Exceptional keyboards make this trio tops for texting. Also consider four with very good keyboards: the A2 Pantech Impact, B1 Samsung Seek, E1 Samsung Gravity TXT, and G1 LG Cosmos Touch.

For toughness:

A4 Samsung Rugby II (AT&T GoPhone) $230

This ruggedly built phone is designed to withstand harsh conditions.

A4 Samsung Rugby II

B2 Sanyo Innuendo

C1 Doro PhoneEasy 410

E1 Samsung Gravity TXT

F1 LG 420G

Ratings Cell phones

In alphabetical order, within carriers.

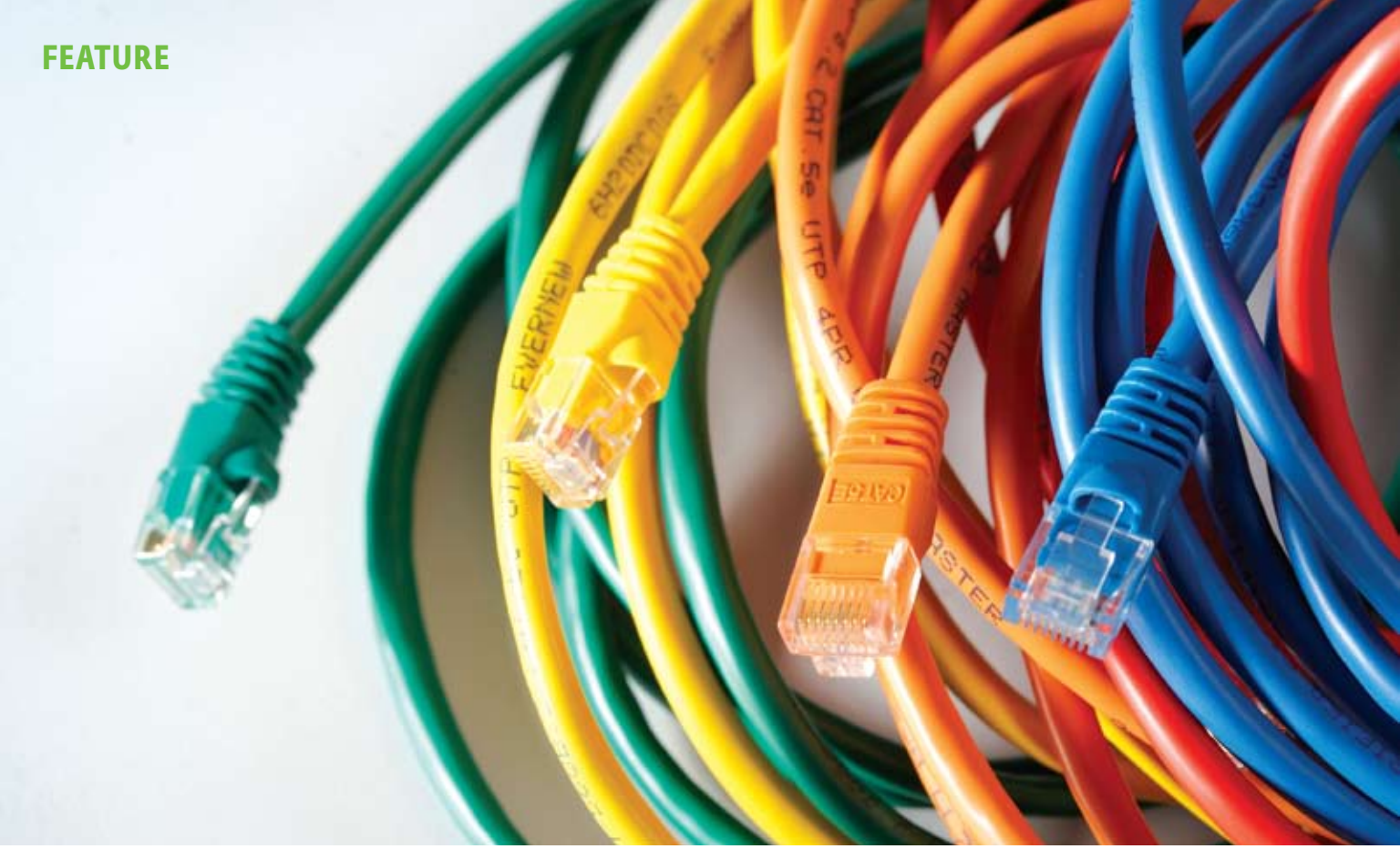
● Excellent ◓ Very good ○ Good ◒ Fair ● Poor

	Brand & model	Price	Test results: Voice quality	Test results: Battery life	Features: Display (in.)	Features: Camera (megapixels)	Features: Touch screen	Features: Keyboard: Virtual	Features: Keyboard: Physical	Features: Voice command	Features: Preset messages
A	**AT&T GOPHONE** These use AT&T's network.										
1	**HTC** FreeStyle	$270	○	○	3.2	3.1	•	•			•
2	**Pantech** Impact	200	○	○	2.6	1.9			•		•
3	**Pantech** Link	60	○	○	2.4	1.3			•		•
4	**Samsung** Rugby II	230	○	◓	2.2	1.9				•	•
5	**Samsung** Solstice II	180	○	○	3.0	1.9	•	•		•	•
6	**Samsung** Strive	120	◒	◒	2.6	1.9			•	•	
B	**BOOST** These use Sprint's network.										
1	**Samsung** Seek [1]	80	○	○	2.6	1.2	•		•	•	
2	**Sanyo** Innuendo	130	○	◒	2.8	3.1	•		•	•	•
C	**CONSUMER CELLULAR** These use AT&T's network.										
1	**Doro** PhoneEasy 410	25	○	○	2.0	NA					
2	**Motorola** WX345	0	○	●	1.7	1.9					•
D	**STRAIGHT TALK** This uses AT&T's network.										
1	**LG** 420G	30	○	●	1.8	0.3					•
E	**T-MOBILE** These use T-Mobile's network.										
1	**Samsung** Gravity TXT	140	○	◓	2.4	1.9			•	•	•
2	**Samsung** Smiley t359	50	○	○	2.6	1.2			•		•
F	**TRACFONE** These use AT&T's network.										
1	**LG** 420G	20	○	●	1.8	0.3					•
2	**Samsung** T301G [2]	20	◓	◓	2.0	0.3					•
G	**VERIZON** These use Verizon's network.										
1	**LG** Cosmos Touch	210	◒	○	2.8	1.2	•		•	•	•
2	**LG** Octane	250	◒	○	2.6	3.1			•	•	•
H	**VIRGIN MOBILE** This uses Sprint's network.										
1	**LG** Rumor Touch	100	○	◓	3.0	1.9	•		•	•	•

[1] Also available with standard (billed) service from Credo Mobile, which uses the Sprint network.
[2] Tested on AT&T network; can be used on T-Mobile network with a different SIM card.

Guide to the Ratings

These phones were assessed on only two key attributes, so there is no overall score; models are listed alphabetically within carriers. **Voice quality** considers listening and talking in noisy and quiet environments. **Battery life** represents tests under strong and weak cell-network signals, including battery consumption performing various tasks. **Display size** is diagonal, in inches. **Touch screens** are of the single-touch type, except for A1, which is multitouch and so lets you pinch to zoom in or out of Web pages or photos. **Voice command** allows dialing from the phone contacts by speaking a name or by saying digits, without training the phone. Preset messages are texts that can be customized or selected from a list. **Price** is prepaid without a contract; some phones may also be available with postpaid plans (and often contracts) from AT&T, Consumer Cellular, T-Mobile, and Verizon.



Cut your telecom bill

And 69,000 readers reveal the best TV, Internet, and phone providers

Many of us love to hate our home telecom provider. In our latest survey, our readers once again ranked telecom services as less satisfying than most other services we rate. Yet there were a few companies that managed to please subscribers for TV, Internet, and home phone. Trouble is, it's unlikely they serve your area.

Case in point: One of the best providers in our Ratings is a regional cable company you may not have heard of—WOW, which serves four Midwestern states. It was among the top-rated providers for TV, Net, and phone and for bundles of all three services.

Then there's Verizon FiOS, another of the top services, available in portions of 12 mostly Eastern states; Washington, D.C.; southern California; and Texas. Verizon is the only major provider that runs its high-speed fiber-optic network all the way to your house rather than switching to bandwidth- and speed-limiting copper wiring at a neighborhood "node" as many cable companies do and AT&T U-verse typically does. FiOS's "bigger pipe" may help explain its top ratings for TV picture quality and Internet speed.

Unfortunately, even in regions where Verizon already operates, it has stopped or slowed down wiring new neighborhoods for FiOS. So if it hasn't yet made it to your doorstep, chances are it won't this year.

Further, consumer advocates fear Verizon may have less incentive to compete with cable companies now that it has entered into partnerships with Comcast and Time Warner Cable, among others. The cable companies would give Verizon unused wireless spectrum for its cell-phone network, and Verizon and the cable companies would market each other's services through bill mailings, stores, and more. Consumers Union, the advocacy arm of Consumer Reports, opposes the deals, which are now under regulatory review.

Though you might not be able to get FiOS, one of the highly rated small cable companies, or local alternatives such as the innovative utility service in Chattanooga, Tenn. (see sidebar), you can still level the playing field with providers and deal from a position of power. Our report outlines five strategies you can use to help you get the best service and biggest savings in telecom.

For maximum flexibility, try to avoid signing a contract with early-termination penalties, which will limit your ability to

BY THE NUMBERS

24%

Percentage of readers surveyed who don't have home phone service. The leading reason cited by those who dropped it in the past two years was that they didn't use their home phone at all or enough to justify the cost.

PHOTO: GAZIMAL/PHOTODISC/GETTY IMAGES

negotiate rates or switch providers. Some providers require a contract, so you're stuck. But others give you the option of a contract-free plan, usually at a slightly higher rate. It's worth paying a little more to maintain your bargaining power.

Get ready to bargain

Seven out of 10 readers with a triple play didn't even try to bargain on their telecom bills. Yet of those who did, more than 90 percent got some accommodation. They were more likely to get a break on bundles from cable companies and phone companies' fiber services than on hybrid bundles (of DSL, phone, and satellite TV).

Price reductions led the list of concessions, with around 40 percent of bargainers reporting savings of up to $50 a month. About 30 percent had fees for installation or activation waived, and 30 percent or so said they got free premium channels. Be sure to cancel the freebie channels after the trial period ends or they'll continue with a monthly fee.

Hagglers' experiences suggest that it can pay to let your provider know you're ready to drop some or all of its services. Survey respondent Elvis Wright of Lubbock, Texas, got his cable company, SuddenLink, to take back $8 of a $10 general price increase in his monthly bill by threatening to cut out some services. You can also tell your provider you'll consider switching to a rival service, even if you'd really prefer to stick with the status quo.

Push back when rates rise

Readers gave some companies, including Verizon FiOS and Cox, high marks for limiting price increases after a promotional rate expired. But others (notably Cablevision and Comcast) hiked rates considerably, survey respondents reported. If your provider's rates soar after a deal ends, push back. Use competition among providers to your advantage. Though you might not have another cable choice, satellite TV serves all but a few parts of the country, and Verizon FiOS or AT&T U-verse is an option in about one-third of the U.S.

Be prepared for resistance from your TV provider, though. Companies are increasingly keeping track of the promotions they give you and offering smaller discounts when you ask them for another break. "We have a very well-choreographed program for moving people from the most heavily discounted promos into the rational next-step pricing packages," says Rob Marcus, president of Time Warner Cable. "Over time, that discount will decrease, but you'd probably still save 20 to 30 percent off the rack rate," or regular price.

Sometimes brinksmanship is your best strategy. A Consumer Reports staffer who'd gotten discounts from her cable company for a few years in a row was denied yet another discount when her last promotion expired and the triple-play rate jumped to $170 a month. She decided to switch to Verizon FiOS to save $50 a month in the first year and $30 the second. Before sealing the deal with Verizon, she called the cable company to ask how to disconnect. She was transferred to a "customer retention" specialist, who upgraded her to the next TV tier, which included Encore, Showtime, Starz, and a few other channels and cut her bill to $140 a month.

"The magic word is 'cancel,'" says Phillip Dampier, of the website StopTheCap.com. He suggests you schedule your disconnection date for a week or two in the future. "When you're on their disconnect list, they are going to start calling you offering very aggressive deals," he says.

Among readers who had changed TV providers in the previous six months, about one in three were offered new savings—in some cases $20 or more a month—by their old provider if they didn't switch to a new company or decided to come back after switching.

But don't despair if there's only one provider in your area. Alan Curtis of Manchester, N.H., whose condominium is served only by Comcast, says his rates go up each year but he pushes back. "If you say, 'We'll have to buy less,' occasionally they'll come up with a cost-cutter that will

Verizon's all-fiber network might help explain its top-notch scores.

Breaking news: TV viewers held hostage

When cable, satellite, and telephone company TV carriers have a business dispute with content providers, why should consumers suffer?

Already this year, contract fights between Time Warner Cable and the MSG sports network, DirecTV and Sunbeam Television, and Verizon FiOS and Newport Television blacked out—or threatened to—local news, sports, and network programming for subscribers from Boston and New York City to Harrisburg, Pa., and Miami. Last year there were channel blackouts in more than 30 markets, says Philip Napoli, director of Fordham University's Donald McGannon Communication Research Center.

The outages stem from a rising number of fights over fees TV providers should pay to carry networks. Consumers are caught in the crossfire. In a recent MSG-Time Warner dispute in New York City, viewers not only lost access to broadcasts of New York Rangers games for a month but also were subjected to dueling newspaper ads urging them to express displeasure to the other company. During the dispute Time Warner offered free access to a premium sports package, which (you guessed it) didn't include Rangers games.

When consumers lose paid-for channels, Napoli points out, "they don't get refunds from the TV service provider, and customers are starting to ask why not."

So are we. Providers should be required to refund the portion of fees they save by not carrying blacked-out networks and be prohibited from exhorting subscribers to protest. Indeed, Consumers Union, the advocacy arm of Consumer Reports, is urging the Federal Communications Commission to create a new process for resolving disputes and require that the programming not be cut while the parties negotiate in good faith.

apply to you," he says. Similarly, a staffer who lives in a New York City apartment served only by Time Warner Cable more than offset a $5 increase in his overall bill by negotiating an $8-a-month cut in his DVR rental fee for 12 months.

Beware of such small, often stealthy increases. Carriers are "creative at adding a few bucks here and there" after promos expire, notes Arthur Gruen, president of Wilkofsky Gruen Associates, a telecom industry consulting firm. Watch for letters notifying you of rate changes, and check statements periodically. Compare them with previous bills so that you'll detect even minor increases that might escape notice.

Don't overbuy on Internet

The data speed of your Internet service affects how quickly you can send and receive files, how smoothly content (especially video) streams and at what resolution, and the ability to play interactive games on the Web. Yet eight out of 10 consumers don't even know what speed they're getting from their Internet service provider, according to the Federal Communications Commission.

Speeds (measured in megabits per second, or Mbps) have generally been rising for standard service, sometimes without a rise in rates. Many cable providers have upped their standard speed in recent years, as have the AT&T U-verse and Verizon FiOS high-speed phone-company services. But cable companies and high-speed phone services increasingly offer a number of step-up speeds as premium features. Here's our advice on what you need:

Carriers may push higher speeds than you need.

Light usage. You typically have only one or two users at a time e-mailing, Web surfing, downloading short, standard-definition videos, and playing simple online games such as Farmville. File uploads, such as low-resolution photos, are small.

Recommended: speeds of up to 3 Mbps. That's available from DSL, satellite, and wireless broadband service.

Moderate usage. One or two simultaneous users is the norm, with three online at times. Video streaming is common, including some in HD, from such Net services as Vudu and iTunes, and you can accept occasional quality compromises due to limited bandwidth. You might play two-way HD games, use an online backup service, or occasionally upload high-resolution photos to the cloud.

Recommended: 6 to 12 Mbps. That's standard for most cable companies and with some AT&T U-Verse packages.

Heavy usage. The number of users, data demands, or both, is high. Up to four people may be online at once, with some using a tablet or smart phone. Some may stream HD video or play HD games and demand good quality. A serious photographer or videographer who accesses the cloud might be among the users.

Recommended: at least 15-Mbps service. That's standard for a few providers, such as Verizon FiOS and Cablevision, and available as a step-up from others, including AT&T's Max Turbo service.

Keep in mind that speeds aren't always as claimed. An FCC study released last year, involving speed measurements by 6,800 customers of the 13 largest Internet providers, suggests that carriers deliver the promised speed most of the time. But some underperformed, especially during the peak hours of 7 p.m. to 11 p.m., when speeds could be 5 to 10 percent lower than the 24-hour daily average. You can gauge your own speed at *broadband.gov/qualitytest.*

DSL providers as a whole sustained download speeds during peak hours that met only 82 percent of claims—a concern, given that their speeds are on the low side. Frontier DSL, which had relatively low reader scores, delivered only 67 percent.

Cable companies overall met promised speeds more than 90 percent of the time. Cablevision delivered only 50 percent of advertised speed for its standard 15-Mbps service and 69 percent for its 30-Mbps service. But readers gave it high marks for speed, perhaps because its standard speed is more than users generally need.

Verizon FiOS aced the FCC tests, exceeding the claimed speed for every level of service measured, including its 35-Mbps offering, with barely any fluctuation at various times during the day. Unsurprisingly, its speed score with readers was a standout.

Satellite-based Internet service from HughesNet and WildBlue received two of the lowest scores for speed in our survey. ViaSat, which no longer sells WildBlue service to new subscribers, said it has

Grassroots groups bring fiber to more homes

Chattanooga, Tenn., is probably not the first place you'd expect to find one of the nation's fastest telecom providers. Yet the 1-gigabit-per-second service from the quaint-sounding Electric Power Board (EPB) is one of a host of groundbreaking efforts to provide fiber-optic networks with faster speeds and higher capacity than even those of Verizon FiOS, the biggest "Fiber to the Home" provider. Google is building an "ultra-high-speed fiber network" in Kansas City, and some 700 smaller providers all over the U.S. have already deployed FTTH networks.

AT&T declined the Chattanooga mayor's request to build an FTTH network. Comcast, which also serves the city, and the state cable association even sued (unsuccessfully) to block the EPB. The Tennesseeans eventually delivered their own FTTH service, including TV and phone, by piggybacking onto an existing fiber-optic smart grid the power board had built to manage its electrical service.

Most of the 35,000 Chattanooga homes with EPB Internet service don't buy the 1-Gbps speed, opting instead for

the standard 30 Mbps, which we believe is more than most households need. The $58-a-month cost is steep but less expensive than similar services elsewhere.

The network futureproofs Chattanooga against the day when there will be new, more-bandwidth-intensive services—ultra-high-definition video signals and uses that haven't even been invented yet. So see what local options you may have or push your electric utility to get in the game.

PHOTO: JOHN RENSTEN/THE IMAGE BANK/GETTY IMAGES

boosted data download speeds to as much as 12 Mbps since we surveyed our readers.

AT&T, Clear, and Verizon wireless broadband services (all used by some readers as their main home Internet service) rated about as well as DSL on speed—only middling. AT&T and Verizon charge at least $50 a month for 5GB of data; streaming just one HD movie can eat up 4GB. Each 1GB overage costs $10. Clear promises unlimited data but says it may throttle speeds on heavy users at some times.

Monthly data limits are quietly popping up on more home Internet plans. The lowest we found was 30GB per month on the Cox Starter plan. Comcast sets its cap at 250GB and says 99 percent of its residential customers use only 8 to 10GB a month. Still, be mindful of data limits, especially if you stream a lot of video online.

Look to phone for savings

More than half of Consumer Reports subscribers use Internet-based phone service (including VoIP, cable, and fiber-based phone services) instead of a traditional landline. Ooma, a VoIP service, was one of the top-rated phone services of any type in our survey, and it's available nationwide. Ooma equipment is pricey, at $200 and up, but unlimited domestic calling is free (though you pay $3.50 a month in taxes) and international rates are rock-bottom.

Vonage, another highly rated national VoIP service, requires a small adapter hooked up to a phone and an Internet connection. A $12-a-month plan with 300 local and long-distance minutes and free incoming calls should suffice for many households as their home phone service.

MagicJack, which plugs into a computer's USB port and serves as a phone jack, was tops for value but had low scores for quality and reliability. It costs $40, including a year of unlimited domestic calls; an additional year costs $30. (MagicJack Plus doesn't require a computer.)

But bundling prices are complicated, and dropping phone service from a triple-play package might not save you much. Check to see whether it's worth it.

With all Internet-based phone options, including digital phone service from a cable company, you run the risk of losing service—including emergency 911 calls—if power or broadband service fails. Cable-company and fiber-based VoIP services offer battery backup, but for only 8 hours. Some services provide a free battery; others charge up to $40. Ooma, MagicJack, and Vonage don't have such backup. That might make a cell phone your only option in an emergency, provided it works at home (cell-phone 911 service is reliable, another of our surveys found).

AT&T and Verizon also offer a $5-a-month discount if you use their cellular services to replace the home phone part of a triple-play package, and $10 a month off if you bundle a cell plan and a home triple-play into a quad-play package. How long those discounts apply varies. Forty-seven percent of those with a quad-play bundle judged it to be a very good or excellent value, higher than for any other bundle we asked about.

Downsize your TV service

Only about 9 percent of our readers didn't receive TV programming from a cable, satellite, or phone-company provider. If you want such service but prefer to pay less:

Go basic. The recession and the threat of online TV sources have pushed cable and satellite TV providers to offer, albeit quietly, economy TV services costing $25 to $35 for local channels and about 20 basic TV channels including CNN, E!, and Discovery but not ESPN. That might be enough for you, especially if you combine TV service with other options for getting video onto your TV set, including streaming services such as Netflix, Hulu, Vudu, and Amazon Instant Video (which we plan to cover in an upcoming survey report on alternatives to regular TV service).

Drop the DVR. Programs you often record might be available at no cost via your provider's video-on-demand (VOD) or "start over" and "view later" features, allowing you to save $6 to $20 a month.

Go back to free TV from an antenna. Over-the-air signals from ABC, CBS, NBC, and PBS are all digital and mostly HD.

Apps let you watch TV on your iPad

Many TV providers now offer apps that let subscribers view programming on the Apple iPad, sometimes on the iPhone or iPod Touch, and occasionally on Android devices. Some limit you to video-on-demand viewing, though others such as Cablevision and Time Warner let you stream live TV. (Others promise live TV viewing soon.) Most also limit iPad viewing to home.

Many listed providers—and others who lack their own apps, such as Verizon FiOS—support iPad apps from partner cable networks such as HBO, Showtime, CNN, and ESPN. Whether you have paid TV service or not, you can download free mobile apps for broadcast networks such as PBS and ABC that allow iPad viewing.

A few caveats: The satellite providers require that you have an HD DVR (DirecTV) or a $99 Sling adapter (Dish) to stream video. And the data that mobile apps use, which is considerable, count against the monthly data caps from Cox and Comcast. With any provider, using your iPad or iPhone on a cellular network counts toward your wireless data cap.

Provider & app	Live channels	Video on Demand	Away from home	iPhone/iPod Touch
	Number (approx.)			
AT&T U-verse App	0	✔	✔	✔
Cablevision Optimum	All channels in your TV package	✔		✔
Comcast Xfinity TV	0*	✔	✔	✔
Cox TV Connect	30			
DirecTV iPad App	49			
Dish Network Remote Access	All channels in your TV package plus DVR recordings	✔	✔	✔
Time Warner Cable TWC TV	Up to 200			✔

*At press time a trial of live TV via the app was under way in Denver and Nashville.

IS IT GOOD OR BAD FINANCIAL ADVICE?

1. ***"The best place to stash cash now is a money market."***

GOOD ADVICE. To keep ahead of inflation without much risk, consider a high-yield money market.

2. ***"You can afford to retire on 75% of your pre-retirement income."***

BAD ADVICE. Instead, invest part of your portfolio in stocks even after retirement for additional income.

Consumer Reports Money Adviser puts a wealth of unbiased information at your fingertips.

See the attached post-paid card for Free Offer details

SD264A

Overview

Here are our recommendations. Note that for all options except regular phone service, you need a battery backup to avoid losing your phone during a power outage. Some companies provide one at no charge.

BEST CHOICES OVERALL

WOW
Verizon FiOS

Superior scores make FiOS or the regional carrier WOW worth serious consideration for all services if they're available in your area. Verizon scored higher than the major cable companies for TV picture, sound, and channel selection and received our highest mark for Internet speed. But you must rent a receiver for every TV, which all cable companies may not require. And FiOS had more complaints than most about bills for triple play.

THE NEXT-BEST CHOICES FOR MANY HOUSEHOLDS

A highly rated cable company
AT&T U-verse

If AT&T U-verse, Bright House Networks, Cox, or Cablevision/Optimum serves your area, any is the next-best alternative to Verizon FiOS for triple-play service. Cable doesn't always require as much of an investment in special equipment, though Cablevision is among the few major companies that charge extra for battery backup so that you don't lose service in a power outage.

IF TV IS PARAMOUNT AND THERE'S NO BETTER OPTION FOR IT

DirecTV or Dish Network

The satellite-TV providers received high scores for TV picture, sound, and channel selection. But hybrid bundles combining DirecTV with DSL Internet and landline service from telephone providers were otherwise undistinguished. They had more problems than average with billing and coordinating support for the different services. With analog copper-based service, you don't need battery backup to preserve phone service during power outages. But readers were generally less satisfied with the speed of DSL Internet service than with cable. Satellite requires a dish and other equipment, usually free or discounted in exchange for a contractual commitment.

WOW! Verizon FiOS bright house NETWORKS

Ratings Bundled telecom services

In order of average reader score for Internet, phone, and TV services.

Order	Service provider	Type	Average reader score: Internet, phone, and TV (0–100)	Survey results: Would bundle again	Value	Billing	Support	Added fees	Price after promotion
1	WOW	cable	81	●	◓	◓	◓	◓	-
2	Verizon FiOS	fiber	77	●	○	◒	○	○	●
3	Bright House Networks	cable	74	◓	○	◓	○	◓	●
4	SuddenLink	cable	73	○	○	○	○	○	-
5	AT&T U-verse	[1]	72	○	◒	○	○	○	○
6	Cox	cable	71	○	◒	○	○	○	●
7	Cablevision/Optimum	cable	69	○	●	◓	○	◓	●
8	CenturyLink [2]	hybrid	69	○	◒	◒	●	○	-
9	Verizon [2]	hybrid	69	○	●	◒	●	◒	-
10	AT&T [2]	hybrid	68	◒	●	◒	●	○	●
11	Time Warner	cable	67	○	●	○	○	○	○
12	Comcast	cable	65	○	●	○	○	○	●
13	Charter	cable	63	◒	●	○	○	○	○
14	Mediacom	cable	59	◒	●	○	○	○	-

[1] Phone-company service that combines fiber-optic and copper cabling, like some cable providers. [2] A hybrid plan: its own landline phone and DSL Internet, with satellite TV from a different provider. TV score used to calculate average reader score is from DirecTV.

Ratings Internet, phone, and TV service

In order of reader score, within services.

Better ⟷ Worse

Internet service

Order	Provider	Type	Reader score* (0–100)	Survey results: Value	Reliability	Speed	Support: Phone/online	Support: In-home
1	WOW	cable	80	○	◉	◓	◉	-
2	Verizon FiOS	fiber	77	○	◉	◉	○	○
3	Bright House Networks [2]	cable	73	◒	◓	◓	◓	◓
4	EarthLink [3]	cable	73	◒	◓	◓	-	-
5	TDS	DSL	72	◒	◓	○	-	-
6	Frontier	[1]	72	○	◉	◓	-	-
7	AT&T U-verse	[1]	71	◒	◓	◓	○	○
8	EarthLink	DSL	71	◒	◓	○	-	-
9	Knology	cable	71	◒	◓	◓	-	-
10	Cincinnati Bell	DSL	71	○	◓	○	-	-
11	SuddenLink	cable	71	◒	○	◓	○	-
12	Cox	cable	70	●	◓	◓	○	◓
13	Cable One	cable	70	●	○	◓	-	-
14	Clear	mobile	69	○	◒	◒	-	-
15	Insight	cable	68	●	◓	◓	○	-
16	Cablevision/Optimum	cable	68	●	◓	◓	◓	○
17	Verizon	mobile	68	●	○	◒	○	-
18	CenturyLink	DSL	67	●	○	◒	○	-
19	Time Warner [2]	cable	67	●	○	○	○	○
20	Windstream	DSL	66	●	○	◒	○	-
21	Verizon	DSL	66	●	○	◒	●	○
22	AT&T	mobile	65	●	○	◒	-	-
23	AT&T	DSL	64	●	○	◒	●	○
24	Frontier	DSL	64	●	○	◒	○	-
25	RCN	cable	64	●	○	○	-	-
26	Comcast	cable	63	●	○	○	◒	○
27	Charter	cable	61	●	○	○	●	◒
28	FairPoint	DSL	60	●	◒	●	-	-
29	Mediacom	cable	57	●	●	○	●	-
30	WildBlue	satellite	50	●	●	●	-	-
31	HughesNet	satellite	47	●	●	●	●	-

*Differences in reader score of less than 6 points are not meaningful. [1] Phone-company service that combines fiber-optic and copper cabling, like some cable providers. [2] Using Road Runner service. [3] On the Time Warner system.

Phone service

Order	Provider	Type	Reader score* (0–100)	Survey results: Value	Reliability	Call quality	Support
1	Ooma	VoIP	87	◉	◓	◓	-
2	WOW	VoIP	86	◉	◉	◉	-
3	SuddenLink	VoIP	80	◓	◓	◓	-
4	Verizon FiOS	fiber	79	○	◉	◉	◒
5	Vonage	VoIP	79	◓	◓	○	○
6	Bright House Networks	VoIP	78	◓	◓	◓	◓
7	Cox	VoIP	76	○	◓	◓	○
8	TDS	land	76	○	◓	◓	-
9	Cablevision/Optimum	VoIP	75	○	○	◓	○
10	AT&T U-verse	[1]	75	○	◓	◓	◒
11	Cincinnati Bell	land	75	○	◉	◓	-
12	RCN	VoIP	73	○	◓	◓	-
13	Frontier	[1]	73	◒	◉	◉	-
14	Insight	VoIP	73	○	◓	◓	-
15	Windstream	land	72	◒	◓	◓	◒
16	Time Warner	VoIP	72	◒	○	◓	○
17	Comcast	VoIP	70	◒	○	◓	◒
18	MagicJack	VoIP	70	◉	●	●	-
19	CenturyLink	land	70	◒	◓	◓	○
20	Verizon	land	70	◒	◓	◓	●
21	Charter	VoIP	69	◒	○	○	●
22	AT&T	land	69	●	◓	◓	●
23	FairPoint	land	69	◒	◓	○	-
24	Frontier	land	69	◒	◓	◓	◒
25	Mediacom	VoIP	65	◒	●	○	-

*Differences in reader score of less than 5 points are not meaningful. [1] Phone-company service that combines fiber-optic and copper cabling, like some cable providers.

TV service

Order	Provider	Type	Reader score* (0–100)	Survey results: Value	Reliability	Channel selection	Picture	Sound	Support: Phone/online	Support: In-home
1	WOW	cable	78	○	◉	◓	◓	◓	◉	-
2	Verizon FiOS	fiber	76	○	◉	◓	◉	◓	○	○
3	AT&T U-verse [1]		71	◒	○	◓	◓	◓	○	○
4	Bright House Networks	cable	71	◒	○	◓	◓	◓	◓	○
5	DirecTV	satellite	71	◒	○	◓	◓	◓	○	○
6	Dish Network	satellite	70	◒	○	◓	◓	◓	○	○
7	Cox	cable	68	●	○	◓	◓	○	○	○
8	SuddenLink	cable	67	●	○	○	○	○	○	-
9	Insight	cable	65	●	○	○	○	○	○	-
10	Cablevision/Optimum	cable	64	●	○	○	○	○	○	◒
11	Time Warner	cable	62	●	○	○	○	○	○	◒
12	RCN	cable	62	●	○	○	○	○	-	-
13	Comcast	cable	61	●	○	○	○	○	◒	◒
14	Charter	cable	58	●	◒	◒	○	◒	●	●
15	Mediacom	cable	56	●	●	◒	◒	◒	●	-

*Differences in reader score of less than 4 points are not meaningful. [1] Phone-company service that combines fiber-optic and copper cabling, like some cable providers.

Guide to the Ratings

Ratings are based on 51,151 respondents with a home Internet account, 54,043 with TV service, and 43,884 with phone service, all of whom completed the Consumer Reports Annual Telecom Survey online in spring 2011. Respondents were Consumer Reports subscribers and might not represent the general population. Providers are those for which we had sufficient data to score the service. **Type** is delivery technology including, for phone service, Voice over Internet Protocol (VoIP) and traditional landline service. **Reader score** reflects overall satisfaction and is not limited to the factors listed under survey results. A score of 100 would mean all respondents were completely satisfied; 80, very satisfied, on average; 60, fairly well satisfied; 40, somewhat dissatisfied. **Survey results** reflect average scores on a scale from very poor to excellent: **value** for money, service **reliability,** and the other specific performance attributes for the various services. A "–" indicates that there was insufficient data to provide a score. The data in the **bundled telecom services** Ratings is based on 15,714 respondents who bundled all three services. **Average reader score** is for Internet, TV, and phone service, as detailed in the charts on this page. Except for value, **survey results** are relative compared with the average of all providers. Those who **would bundle again** reflects the proportion who indicated that willingness. High scores for **price after promotion** indicates that rates did not increase significantly after an initial promotional period. Low scores indicate the following problems: **Billing,** bills that were difficult to understand or had errors; **support,** the need to contact different help lines or getting inconsistent help for different services in the bundle; and **added fees,** any charges that raised bills unexpectedly.