

How Much 5G Could Cost Users

DREW FITZGERALD FEBRUARY 26, 2019

Wireless carriers say the next generation of faster, 5G wireless service will transform entertainment, communication and the workplace. What they haven't said: how much it will cost.

Telecom giants like [Verizon Communications](#) Inc. and [AT&T](#) Inc. are touting the ultrafast speeds that their in-home 5G services will offer, and the first smartphones compatible with the new networks are scheduled to hit the U.S. market this year. But the carriers are still grappling with how they will charge consumers and businesses for the service.

"I think it's going to be much more about evolution than revolution," says Val Elbert, a partner focused on technology, media and telecommunications at Boston Consulting Group.

Business are likely to begin paying for 5G networks as part of their capital expenditures, probably opting to build faster, private networks to power factories and stores, he says. The prices consumers pay for mobile-phone plans are less likely to change dramatically, he says, though some carriers may only offer 5G to clients in the higher tiers of their unlimited data plans.

"I pay \$160; I don't think tomorrow you can double that to \$320" for a monthly mobile family plan, even if speeds are significantly faster, says Anthony Goonetilleke, who helps telecom companies with their network

buildout and pricing models as chief technology officer of [Amdocs](#) , a provider of software and services to communications and media companies.

Pricey upgrades

The cost of mobile wireless service has plummeted in recent years, with consumers growing accustomed to lower bills and unlimited data usage. U.S. mobile data cost roughly \$3.33 a gigabyte at the end of 2017, according to consulting firm Recon Analytics, down from \$11.12 a gigabyte three years earlier.

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But upgrading networks to 5G standards requires billions of dollars of fresh cash. Carriers must buy new radio equipment and the infrastructure to support it, including fiber-optic lines and hundreds of thousands of new small-cell installations—investments they aim to recoup.

It is hard to separate 5G investments from the 4G upgrades that companies would have made anyway. Many carriers will spend billions of dollars on more-powerful 4G equipment that could become 5G-capable once new software is available.

Market analyst New Street Research predicts that Verizon alone will spend an extra \$20 billion over the next seven years to support wireless broadband to the home, a 5G upgrade. But the carrier and its competitors will need to spend billions more to make 5G wireless coverage available nationwide.

New Street Research says Chinese network operators will devote more than \$60 billion to pure 5G upgrades in China over the next five years.

Carriers will need to generate added revenue to justify all of that expense, but they haven't settled on how they will set prices.

"Given the expected ecosystem around 5G, which includes things like self-driving cars, augmented reality, telemedicine and traditional handsets, there may well be plans and pricing outside the traditional industry model," an AT&T spokesman says.

Mr. Goonetilleke says he expects 5G will usher in more bundled services that combine hardware and on-the-go wireless connectivity for products like virtual reality or gaming entertainment systems.

"I think there's going to come a time when connectivity is going to become ubiquitous. You're not going to think 'Am I outside?' or 'Am I in my car?'" he says.

Carriers are trying to position themselves to cash in on what families pay for 5G phones, cable, entertainment and gaming, having missed out on revenue generated by the apps and e-commerce opportunities developed on the back of 4G networks.

Verizon currently sells a version of in-home 5G residential broadband service for \$70 a month. But that service is only available in a handful of neighborhoods in areas such as Los Angeles, Indianapolis and Houston, and it isn't based on the international 5G standard set by a global industry trade group, meaning the equipment eventually will need to be updated.

Diego Scotti, chief marketing officer at Verizon, says that in the future, carriers may offer consumers different buckets of service. That could mean 5G plans for mobile devices such as smartphones, tablets and watches, for internet access in the home or for both of those things—mobile and in-home broadband—together.

[T-Mobile US](#) Inc. said earlier this month that the additional revenue from 5G was likely to come from new services, more connected devices and business applications, rather than from people upgrading their smartphone plans.

The FCC recently announced a plan to encourage a blazing fast wireless service called 5G. But what is 5G? And how far is the U.S. from rolling it out? Photo: Reuters

“We don’t have plans for the smartphone plans that you see today to charge differently for 5G enablement versus 4G LTE,” says Mike Sievert, the carrier’s chief operating officer.

[Sprint](#) Corp.’s chief executive, Michel Combes, said on an earnings call in January that its 5G service would be embedded in some of the carrier’s plans, adding that it should allow the carrier to shift more customers to its high-end plans. He declined to provide further details.

Shifting economics

Every new generation of networks comes with shifting economics, but 5G is unique because it will be rolled out in a more fragmented way than 4G. U.S. carriers are offering the new service piecemeal to certain pockets of the

country, typically dense urban areas. The new networks require carriers to install more clusters of equipment closer to consumers. Some of the airwaves they are using only travel short distances, boosting carriers' capital costs.

To reap the full benefits of 5G, consumers must also buy new mobile devices and change in-home equipment, such as routers. That could lead to a longer adoption cycle than the change to 4G from 3G, some analysts say.

The rollout of 4G networks also coincided with the early years of the smartphone, which allowed carriers to charge a premium. Today, consumers are holding on to their devices longer, which could delay their [willingness to spend](#) money on 5G-compatible devices.

Some 42% of consumers were willing to pay between \$10 and \$20 more a month for 5G mobile broadband service, according to a survey last year for [Intel](#) Corp. of 4,676 people in the U.S. and U.K. by market-research firm Ovum.

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