

New way of making cell calls promises better service

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Your cellphone may soon be making calls in a whole new way, one that promises faster connections, clearer audio and better service - at least eventually.

The new way of making calls is called VoLTE, or Voice over LTE. It involves sending calls over the carriers' new high-speed data networks, rather than through a dedicated voice "channel."

For carriers, the [new technology](#) offers a way to more efficiently divvy up their limited spectrum. For consumers, it offers the potential of better sounding calls, faster Web surfing and [new features](#).

"It's the next generation for the wireless industry," said Jeff Kagan, an independent telecommunications analyst. "It's better quality and better cost."

Verizon, AT&T and T-Mobile began rolling out their VoLTE [service](#) this spring, following Metro PCS, which launched its offering in 2012. But the new service jumped into the limelight when Apple announced that its new iPhone 6 models will make VoLTE calls.

Perhaps the biggest advantage of VoLTE is that it solves a basic problem with Verizon and Sprint's networks. Both companies' older networks are based on CDMA technology, which didn't support the ability to simultaneously handle voice and data transmissions over one wireless radio.

That shortcoming is why the Verizon and Sprint versions of the iPhone don't allow you to surf the Web while making a phone call when you are away from a Wi-Fi hotspot. Other smartphone manufacturers were able to solve the problem by placing another radio in their phones - at the expense of extra battery usage.

Because VoLTE treats voice like data, it can transmit both at the same time without the need for an extra radio.

Sprint plans to roll out VoLTE services, but hasn't said when it will do so.

But cellular subscribers will likely notice other benefits of VoLTE calls. For one, their calls should sound better. That's because each of the big three carriers who are now offering VoLTE are using it to roll out HD Voice, a standard for higher-quality audio calls.

Another advantage they'll likely notice is that they won't have to wait as long to place calls. Because the data network is inherently faster than the old voice one, VoLTE calls should connect much quicker than older ones.

Verizon is using the launch of its VoLTE service - which it dubs Advanced Calling 1.0 - to introduce new video calling features.

Thanks to the move to VoLTE, consumers could see fewer problems accessing the Web or using Internet-connected apps on their phones. That's because the technology allows the carriers to repurpose the spectrum they used to dedicate just for voice calls to data traffic, giving them more capacity for streaming video, song downloads and other services.

"In terms of voice calls, it's a better way to manage traffic," said Sathya

Atreyam, a wireless network infrastructure analyst with research firm IDC. "It gives (the carriers) more freedom to move resources to give a better experience for users."

Although VoLTE will route calls over the data network, consumers don't have to worry about using up their limited data allotment. For now, AT&T, Verizon and T-Mobile are all treating VoLTE calls like traditional ones. The unlimited calling feature of most newer subscription plans applies to VoLTE calls.

Even though their [voice calls](#) will be mingling with other data traffic, users shouldn't have to worry when the Internet gets busy about having the same poor call quality they can get on services such as Skype. That's because the carriers are prioritizing VoLTE calls over other data traffic to ensure that consumers get consistent quality of service.

To be sure, it will be a while before many consumers are able to use the new calling service. Of the big four carriers, only T-Mobile and Verizon are offering it nationwide and then only through towers they've already upgraded to LTE service. Meanwhile AT&T is only offering VoLTE in a handful of markets.

Even if your carrier supports VoLTE in your area, you'll only be able to access the service if you have one of a handful of new phones. While the new iPhone 6 models support the new calling method, last year's iPhone 5s does not.

On Verizon, your other choices for VoLTE phones are the Samsung Galaxy S5 and the LG G2. On T-Mobile, your other choices are LG's G Flex and Samsung's Galaxy S5, Galaxy Light and Galaxy Note 3.

Even if you've got the right phone and the right service, you may run into some hiccups. On Verizon, for example, if you roam from a tower

that supports VoLTE to one that doesn't, your call will drop. In order to make an HD call on Verizon and AT&T, both parties to the call need to have VoLTE-capable phones that are connected to VoLTE-capable towers on the same network. Right now, you can't make HD calls from one carrier to another.

But as the new service rolls out more widely, these issues will eventually disappear, and VoLTE has the potential to revamp what consumers should expect out of a traditional cellphone call.

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VOICE OVER LTE

The major carriers are rolling out a new calling service called VoLTE.

What is it? A way of transmitting calls over the carriers' data networks rather than through a dedicated voice "channel."

Why are they switching? The switch frees up space for more data transmissions. It also will allow Verizon and Sprint's networks to support simultaneous calls and data usage through one radio.

What are the advantages for subscribers? Faster connections, better sounding calls, more room for video streams and other data usage.

Who's offering it? Verizon and T-Mobile nationwide, AT&T in certain markets.

What does it cost? Nothing extra. Carriers are treating VoLTE calls just like traditional ones.

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