



What Does 5G Mean for Enterprises?

Designed to be the network for applications, 5G holds much promise for enterprises that need flexible and dynamic communications services.

What do you think of when you hear "5G?"

As a consumer, you may think of 5G as being about faster speeds on your mobile device, but within the enterprise, does it mean anything other than another round of bring-your-own-device headaches? Does 5G bring any new value to enterprise communications?

5G is not a simple upgrade to existing mobile (2G/3G/4G/LTE) standards, but rather it enables entirely new types of communications services. The promises of 5G include high throughput (with a theoretical maximum of 10 gigabits per second) and very low latency, creating the potential to run existing and new core enterprise applications on what was previously considered a network for mobile apps only.

Many carriers have announced plans to begin 5G rollouts over the next several years. However, deployment is going to take a while; let's not forget that carriers started installing LTE back in 2010 -- and in some places, they still aren't done. The 5G rollout is going to be challenging, with support for many of its new features requiring an upgrade to the existing infrastructure. To provide the ultra-low latency promised by 5G, for example, carriers must place cell towers in much closer proximity to end devices. How close? A fair estimate is under a mile.

Enterprise Promises

One specific type of 5G implementation that looks promising for enterprises is known as fixed wireless access. In this case, carriers would use 5G connectivity to replace a physical connection (such as fiber). Several carriers are looking at using 5G to solve the costly management, maintenance, and upgrade challenges associated with the portion of the telecommunications service that physically reaches the enterprise's premises -- commonly called the "last mile."

We all know of enterprises that have had to wait weeks or even months to get their connections installed or upgraded. 5G will offer the potential for a carrier to install a smaller cell that services a location. While this is technically available today (with 4G or LTE), these technologies are not fast enough to support enterprise communication needs. 5G fixed wireless access may mean no more waiting for that fiber cable to be trenched into a location. This new connectivity, coupled with the move to network function virtualization, will enable carriers to provision new services more quickly and with greater agility than they are able to do so today.

Another 5G feature that holds promise for enterprises is "network slicing," which will enable developers to build end-to-end virtual services suitable for their specific requirements while ensuring

that applications have consistent network characteristics and performance. Till now -- meaning, with 4G/LTE -- network slicing has primarily been about enabling the carrier side of delivery. 5G extends the ability end to end (including the handsets), and will allow enterprises the consistency and performance required by application type.

For example, an enterprise might build out network slices for design and engineering services for which high bandwidth (moving large files) is frequently needed but where latency is not a primary concern. Or, it might build out low-latency network slices suitable for high-quality voice and video interactions (telepresence or virtual/augmented reality).

Network for Applications

5G is far more than just a mobile upgrade to faster speeds. It is a fundamental change in how carriers deliver communications. If previous mobile systems were all about creating a network for devices, 5G is designed to be the network for applications. Many of the benefits will take time to roll out, but for enterprises that need flexible and dynamic communications services, 5G has a lot of promise.

Original article can be found here:

<http://www.nojitter.com/post/240172772/what-does-5g-mean-for-enterprises>