

What is the 5G network?

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5G is the term used to describe the upcoming fifth generation of mobile network technology.

Currently, there is no specific definition of this technology. While 4G becomes equivalent to LTE, the standard of 5G network has not been officially announced. However, there are a few similar technologies emerging.

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The main criteria for comparing 5G and 4G are about speed. 5G is much faster than 4G and the difference in speed between 5G and 4G is huge.



How fast is 5G?

There are many estimates of 5G speed that have been set in recent years.

Recently, Samsung confirmed the speed of 7.5Gbps while Nokia said it could reach 10Gbps. In the same period last year, the University of Surrey achieved nearly 1Tbps of capacity similar to optical fiber - wireless network.

However, all tests are only used in the laboratory. What we need of estimating it is a real test of the final speed of 5G.

In October 2015, China's Huawei network and Japan's NTT Docomo reported the results of the tests conducted. They have achieved maximum data rates of 3.6Gbps using a sub-6GHz band.

Compared to EE's LTE-A network offering 300Mbits / sec, you will see a 12-fold increase in speed compared to 4G.

In fact, the final number of 5G speeds can be 10Gbps.

Low latency and large capacity

Besides the real speed, the other benefits of 5G will be low latency and large capacity.

Low latency means, not only fast download and upload speeds, but also short data transmission response times. Between "play" on Netflix will be less stopped and for 4K sharp content on the phone.

Another advantage related to the biggest problem about recent mobile network standards is the serious shortage of bandwidth. The band of 3G and 4G is currently overloaded.

Over the next five years, more and more people and devices will be set up using the network connection, 5G will be the starting network for unmanned cars. This will be extremely important. No matter what type of 5G technology is used, what we still expect from it brings a whole new experience or smarter way of using what we have.



7 things hard to believe about 5G

Surgery

When it comes to speed, the biggest benefit of 5G is the low latency between the network ping device and the response. The 5G network almost caused 4G LTE to lag behind in latency, which brought great significance to us that in the future surgeons do not need to be in the same room as patients.

Ericsson works with NeuroDigital Technologies and doctors in the Royal College of London, and uses effigies to demonstrate the surgery using a VR stethoscope and special gloves to control robotic arms and practice.

surgery elsewhere.

The glove is fitted with a haptic feedback engine and will vibrate when you touch the mannequin's internal organs, giving us a real sense of reality.

Many companies are calling with the idea of "Internet of skills". This idea allows you to perform your specialization at a distance in real time using robots and haptic feedback.

Without a practical 5G connection, everything is still hypothetical.

Internet touch and feel

The surgery's response is a good example of how to touch the 5G network. With haptic feedback, you can experience the feeling of touch, enhance the eyes and sound of the video.

Another Ericsson simulation, they will put you in the driver's seat of a 50km car show from Fira. Thanks to the seat-mounted feedback system, you'll feel a speed bump warning and feel like your head hits the roof.

"To touch and feel things hundreds of miles away, you need slow latency," said the chief technology officer of the technology firm. This will create applications in the industrial sector such as people supervising robots.

For the first time, network technology will handle faster than the brain, Ericsson Technology Director Ulf Ewaldson said.

Self-driving cars

While companies like Google and Uber are investing in self-driving cars, many others in the industry do not believe that automated vehicles will be feasible without the need for a 5G network.

Cars will have to contact other cars and sensors are installed around the city, from traffic lights to the station because the network responds instantly and everywhere.

"It's not just about cars, it's about urban technology and design," said Adam Koeppe, Verizon's vice president of network planning.

Unmanned aircraft

Similarly, 5G will open the possibility for unmanned aircraft. Speaking of this, Lynn Comp, Intel's market development manager, cited the example of unmanned drones flying over oil platforms with video cameras and showing that the network allows precise control of unmanned aircraft. Drive and give high definition video.

Virtual reality (Virtual reality)

VR is a big trend in Mobile World Congress (MWC) last year, but this year, the technology is lagging behind with some new hardware other than the updated version of Samsung.

But conversely, VR is being preferred by filmmakers, and it appears that this year's Sundance Film Festival is more than MWC.

If any VR appears at MWC, most of them will come because the battle to enhance the 5G experience allows you to chat in real time with the live-streaming virtual world.

Gunther Ottendorfer CEO said he hoped to see the return of entertainment using VR.

Security

Do you always want to have a reliable connection? Rest assured with 5G. Phone companies provide "service level agreements" that ensure connectivity for businesses and critical applications.

With 5G, networks will quickly provide security for individuals. And of course it will cost not cheap.

Home bandwidth

The most obvious application of 5G is the replacement for traditional home internet service. And it will appear soon because Verizon and AT&T are investing in US trials.

Of course, phones will also be used 5G. Roger Gurnani, Verizon's leading technology and information architect, stirred up Barcelona with a 5G phone.

It is a great ambition, but Gurnani and industry players know that there is a lot of work ahead and the great hope of users needs to be completed. Therefore it is their top priority.

John Stankey, head of AT & T's entertainment business, said, "This is not just G, 5G or 5 gigs, it makes it even better."

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