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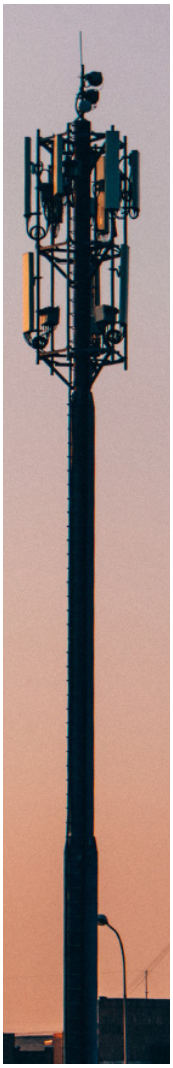
Will Super Fast 5G Live Up To The Hype?

Approximately three quarters of the US population has access to some variant of 5G coverage. All services that are billed as 5G aren't the same, though, and Russia continues to spread disinformation about 5G.

Most major cellular providers have something they call 5G in some areas. *Lifewire* has a comprehensive report on where 5G is available.

I've been pondering the new technology, it's promises, and its shortcomings. There are plenty of advantages and a few disadvantages.

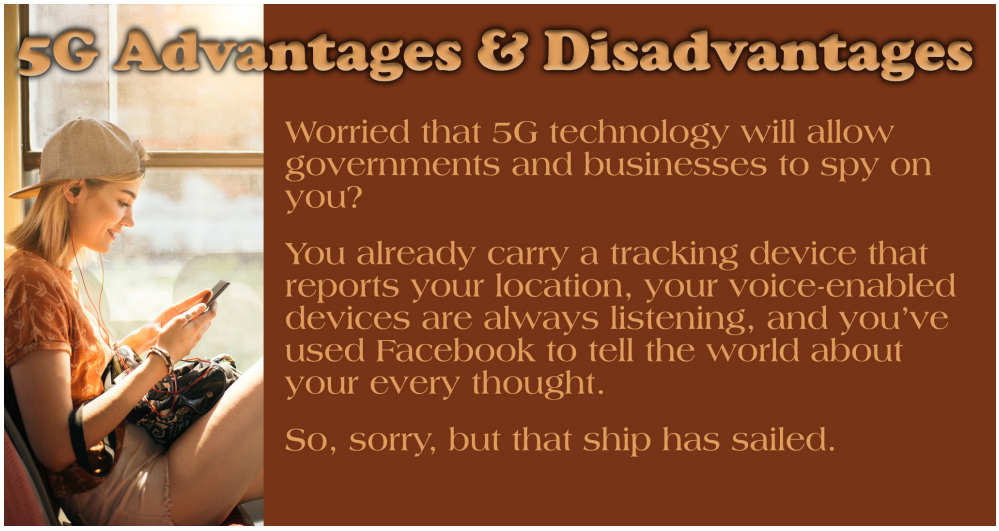


In most cases, 5G systems operate on frequencies that are higher than those used by 2G, 3G, and 4G systems. Some service providers have pseudo-5G systems that operate on 4G frequencies and with slower data rates than true 5G.

Because the frequencies are higher, the signals won't travel as far. That means there will be more cell towers, but 5G towers are usually shorter and less obvious. The towers look a lot like light poles and are being combined with street lighting in some areas.

< Compared to traditional cellular towers such as this, 5G towers are smaller and shorter, but there are more of them.

Because there are more cell towers, the individual cells are smaller. 5G cells can handle as many as 10 times the number of devices that a 4G cell can handle.



Combined with smaller cell size, there's the possibility of massively better throughput. But because cells are smaller and systems need more cell towers, the development cost is considerably higher. This alone has slowed development.

As 5G systems become more available, more computing power will probably be added to cars and trucks so that they can send and receive information about their position, and possibly communicate with smart traffic control devices that can be adjusted in real time for better traffic flow. That's a *possibly*, but don't expect to see it anytime soon. The infrastructure needs to be present first, and it isn't. Then enough 5G-enabled vehicles need to be on the road for the system to have a noticeable impact. Think decades, not years.

Internet of Things (IoT) devices will also make use of 5G. Security has been lagging with IoT devices, although it has improved in the past few years. Having devices with unreliable security protocols on the network is a danger that must be addressed.

Data rates are dependent on the frequency as well as the number of users on a given cell. 4G systems were supposed to be able to deliver 100Mbps speeds, but data rates like that in real life are all but impossible. 5G promises a theoretical maximum of 10Gbps, and it's unlikely that those speeds will be seen in practice. But maybe half the theoretical speed — 5Gbps — or even a quarter of the theoretical speed — 2.5Gbps. Even one tenth would be 1000Mbps, which is ten times the theoretical maximum of 4G systems.

So faster speeds are clearly coming.

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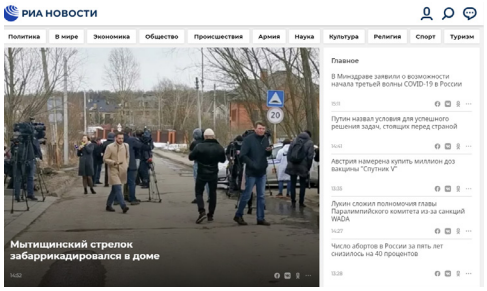

< RT Television is operated by RIA Novosti, Russia's Federal State Unitary Enterprise International News Agency. In addition to Russian, the service operates in several other languages and continues to use propaganda techniques developed by the KGB in association with the Soviet "News Agency" TASS during the Cold War.

Beware websites that combine fact with fiction to paint a scary picture of 5G technology. Radiation is not a danger with 5G because the radio signals are non-ionizing. >

Some opposition to 5G technology is based on the possibly that the new devices will contribute to climate change or that they will be used by governments and businesses to spy on citizens. There's no question that 5G will increase the number of devices in use, but it won't matter when (hopefully "when" and not "if") the planetary use of renewable energy resources largely eliminates the use of coal, oil, and gas.

The surveillance concern isn't exaggerated, but it also seems irrelevant. Nearly every person on the planet already carries a tracking device around all day, every day. We use devices at home that listen to us. We use applications that report information about us to organizations such as Facebook, Microsoft, and Google. All of that calls into question our real concerns about privacy. Do we really care?

The Point Of Disinformation

5G technology is a game changer for connectivity, and the technology can give a one nation a competitive advantage over another.

As a result, it shouldn't be too surprising to find that Russia is pushing hard to develop 5G technology at home while using disinformation campaigns to create and empower resistance movements in the United States.

Unfortunately, some of these campaigns have been effective. RT Television has run several so-called *special reports* on the dangers of 5G. The "R" in RT Television stands for Russia. *Russia Today* is operated by the state-owned news agency RIA Novosti (Federal State Unitary Enterprise International News Agency) as part of a public relations effort intended to improve the image of Russia abroad. It has a long history of meddling and fanning the flames of conspiracy theories.

German news magazine *Der Spiegel* says RT "uses a chaotic mixture of conspiracy theories and crude propaganda." In the United Kingdom, the *Observer*'s Nick Cohen wrote that RT spreads conspiracy theories and is a "prostitution of journalism", and Oliver Kamm at the *Times* called it a "den of deceivers."

In the US, journalists at the *Daily Beast* and the *Washington Post* have written that RT continues to promote long-discredited bits of disinformation such as control of the world by "the Illuminati" and the forged "Protocols of the Elders of Zion" that was created before the Russian Revolution in Tsarist Russia.

The respected non-profit think tank RAND characterizes RT as "a firehose of falsehood", and anyone who has studied actions by TASS, the old Soviet news agency (as I have), will immediately recognize the techniques used to spread lies.

Much of the disinformation is based on the assumption that non-scientists will not understand the difference between ionizing and non-ionizing radiation. We are surrounded by radio waves. AM and FM radio, television, cell phones, smart devices, and more all use radio waves. These signals are non-ionizing. The disinformation campaigns make a big deal out of "radiation" from 5G devices without mentioning all of the other radio signals and without differentiation between non-ionizing and ionizing.

Radiation generated by nuclear power stations and held inside containment structures is ionizing. That's why the containment structures are needed. This kind of radiation can cause burns, cancer, and radiation sickness. Standard radio waves do not.

So those who oppose 5G technology based on what they've seen or heard on RT Television or on websites that base their "research" on propaganda promulgated by RT Television should seriously question their sources. Ω

5G Radiation Dangers – Get The Facts!

Written by David in Cell Phone Towers

So what is all the panic over the new 5G technology roll out? Is it really that dangerous? I mean we have survived with all of the previous generations of cellular technologies.

5G is much more dangerous than previous cellular technologies because it uses millimeter waves of much higher frequencies. Within the radio frequency portion of the electromagnetic spectrum, the higher the frequency the more dangerous it is. (Here is a link to letters from 250 scientists from 35 countries talking about the dangers of 5G.)

Also because of the limits of the frequencies used, in order for users to have good reception it is estimated they will need to put a mini cell station every 2 to 8 houses. This will multiply significantly the amount of RF Radiation we will be exposed to.

(Related Article "**Why 5G Cell Towers Are More Dangerous – Get The Facts!**)

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What Is 5G?

So often we throw around these technical terms and no one really stops to figure out what they really mean. 5G basically means 5th generation of wireless technology. According to PC Magazine, each generation of wireless technology has been defined by its capabilities, such as speed, responsiveness, and how many devices can be connected to the network at any one given time. 5G is expected to be the "Rolls Royce" of wireless connections, if you will.

Basically, 5G will make everything you do online a whole lot faster. We're talking nanoseconds to open a file, cruise the internet and watch movies and shows on Netflix. 5G operates in shorter signals, and because of that some tech experts estimate there will need to be base station for every 2 to 8 homes in an urban area. We're talking thousands, if not millions of additional base stations across the country just to make 5G available for everyone. Implementing the 5G infrastructure will be an incredible feat.

For an updated list of 5G scientific studies and how they affect our health, please see the "**Scientific Studies**" page of this website. There are hundreds of scientists and medical doctors from around the world that are calling for a halt to the role out of 5G. I list some of these on the Scientific Studies page of this website. And as I find more and more studies and information I am always adding to that page.

More And More Cell Towers

This 5th Generation of cell phone technology is being rolled out as I am writing this article. Most people are familiar with the earlier cellular generations called 1G, 2G, 3G and most recently 4G. And if you think back over the years you will realize that as time has moved on, and as we have moved through the first four cellular generations, we have gotten more and more cell towers installed. Why is this?

If you ask the average guy on the street "why do they always seem to be putting in more and more cell towers?" Most people would say "they are just trying to improve our cell phone reception". While this is technically true, what most people do not realize is that as we advanced from cellular generation to generation, the radio frequencies being used have increased.

The higher the radio frequency, the shorter the wavelength is, and the shorter distance they can travel. So we have needed more and more cell towers because our cell signals travel shorter and shorter distances. Yes, especially early on, we needed more and more cell towers for the different carriers to be able to provide coverage around the country. But as the generations advanced, and our signal distance capabilities shortened, we needed even more cell towers than we would have needed with earlier generations.

Frequency Increases Data Capacity

The reason that each generation needed to use higher and higher frequencies, is because the amount of data that needed to be carried by each generation increased significantly. 1G was mostly using the lower analog frequencies. These radio waves traveled very long distances and could go through buildings and trees. Since all we used was voice transmission this was sufficient.

But higher frequencies can carry more data. So with 2G and 3G where we got the ability to text and access the internet we needed higher frequencies to carry the huge increase in data. The same is true with 4G as we got full access to internet video streaming capabilities. Again we needed higher frequencies to be able to carry the huge increase in data.

Why 5G Needs A Lot More Cell Towers

5G is taking the need for more cell towers to a whole new level. With the roll out of 5G technology companies are trying to create the "internet of things", connecting everything with computer functionality to the internet. From self driving cars to your baby monitor, and everything in between, will all be