

## 5G Internet

5G is considered to be the most upcoming revolutionary technology that will impact the Internet in so many ways. For about a year now, there have been discussions about the high speed internet network changing our lives and now finally it is near. Verizon recently assured the consumers that they will implement 5G internet for home users by the end of spring 2019. Verizon has targeted a few cities like Chicago and Minneapolis where they have implemented 5G Networks and are providing the customers 5G Internet. AT&T on the other hand has targeted about 19 cities, Sprint and T-Mobile are planning to team up to provide their customers 5G Internet. 5G internet is going to be available to more and more consumers sooner than we think and I believe it is going to change our lives in many ways. The pros and cons of 5G Internet are as discussed below –

### Pros –

1. Faster Internet opens up endless possibilities, there will be a boom in the IOT, and all devices can connect and talk to other devices with better speed and agility.
2. 5G has almost Zero Latency this means that there will be no lag no matter what, this will be extremely beneficial in medical fields, according to an article in CNN Business by C.P. Gurnani [1] “Wearable devices and connected health care, for instance, will help people monitor and manage their illnesses and allow medical professionals to efficiently screen and diagnose patients remotely.” This means that even if a doctor is not physically present in the hospital to do a surgery, with the help of robotics and 5G connectivity surgery can still take place with precession.
3. Autonomous Vehicles will have better accuracy with almost zero latency, any vehicle can avoid crash by accessing a set of algorithms in real-time scenario, and possibly even remote human intervention could be implemented through 5G speed.
4. Virtual Reality would be now easily be availed, with no lag better graphics and representations of actual site / scenario could be projected in virtual reality, this would be very beneficial for all of the fields, be it in housing to view a home without actually visiting or for gaming purposes or even to visualize something for research purposes.

### Cons –

1. 5G basically has shorter wavelength as compared to 4G this gives it advantage to carry more information with better speed but this also limits the distance to which it can be transferred,[2] 4G range is about 10 miles while 5G range will be 1000 feet as per an article in Tech Insider by Michelle Yan and Antonio Villas-Boas.
2. Because of the shorter connectivity range, 5G will need more and more antennas, practically everywhere for a 5G connection this will make it difficult for the Telecomm Companies to implement 5G as a whole new infrastructure will be required to put in place, this will include setting up new antennas / towers & cables.
3. A lot of local communities are worried about the health side effects this will bring as almost everywhere there would be towers and antennas which would emit radiations, though FCC has mentioned in their report that as of now there aren't any harmful radiations from the 5G Infrastructure but they have also mentioned that they need to do further research as per Tech Insider article [2].

## References

- [1] Gurnani, C. (2019). 5G will have an enormous impact on the world. *CNN Business*.  
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- [3] <https://interestingengineering.com/5g-internet-will-change-the-world-through-connectivity>
- [4] <https://www.weforum.org/agenda/2018/01/the-world-is-about-to-become-even-more-interconnected-here-s-how/>
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- [7] <https://www.cnet.com/news/5g-not-just-speed-fifth-generation-wireless-tech-lets-you-do-vr-self-driving-cars-drones-remote/>