

Introduction To 5G Wireless Technology

Dilsha M.D.
Fifth Semester, BCA
Carmel College Mala

Neenu Wilson
Fifth Semester, BCA
Carmel College Mala

Abstract: 5G Technology stands for 5th generation mobile technology. 5G denote the next major phase of mobile telecommunication standards beyond the upcoming 4G standards. 5G technology will change the way most high bandwidth users access their phones. With 5G pushed over a VOIP enabled device, people will experience a level of call volume and data transmission never experienced before.

Keywords: 5G Technology, Features of 5G

INTRODUCTION

5G Technology stands for 5th generation mobile technology. 5G denote the next major phase of mobile telecommunication standards beyond the upcoming 4G standards. 5G technology is offering the service in Product Engineering, Documentation, supporting electronic transactions, etc. As the customer become more and more aware of the mobile phone technology, he or she will look for a decent package all together including all the advanced features a cellular phone can have. Hence the search for new technology always the main motive of the leading cell phone giants to out innovate their competitors. The goal of a 5G based telecommunication network would ideally answer the challenges that a 4G model would present once it has entered widespread use.

Wireless systems using orthogonal frequency division multiplexing (OFDM) with wide area coverage, high throughput at millimeter waves (10 mm to 1 mm) covering a frequency range of 30 GHz to 300 GHz, and enabling a 20 Mbps data rate to distances up to 2 km. The millimeter-wave band is the most effective solution to the recent surge in wireless Internet usage. These specifications are capable of providing 'wireless world wide web' (WWWW) applications.

The WWW allows a highly flexible network (flexible channel bandwidth between 5 and 20 MHz, optimally up to 40 MHz), and dynamic ad-hoc wireless network (DAWN). This technique employs intelligent antennae (e.g., switched beam antennae and adaptive array antennae) and the flexible modulation method, which helps in obtaining bidirectional high bandwidth, i.e., transfer of a large volume of broadcasting data in giga bytes, sustaining more than 60,000 connections and providing 25 Mbps connectivity. Users of 5G technology can download an entire film to their tablets or laptops, including 3D movies; they can download games and avail of remote medical services. With the advent of 5G, Piconet and Bluetooth technologies will become outdated. The 5G mobile phones would be akin to tablet PCs, where you

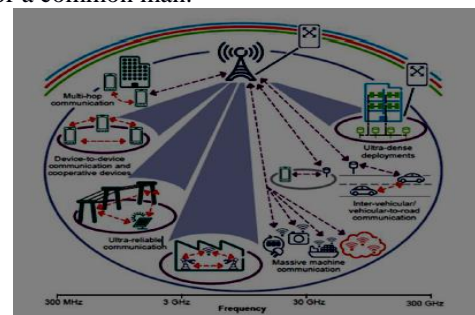
could watch TV channels at HD clarity without any interruption.

FEATURES

Features of 5G Technology:

- 5G technology offer high resolution for crazy cell phone user and bi-directional large bandwidth
- Shaping
- The advanced billing interfaces of 5G technology makes it more attractive and effective.
- 5G technology also providing subscriber supervision tools for fast action.
- The high quality services of 5G technology based on Policy to avoid error.
- 5G technology is providing large broadcasting of data in Gigabit which supporting almost 65,000 Connections.
- 5G technology offer transporter class gateway with unparalleled consistency.
- The traffic statistics by 5G technology makes it more accurate.
- Through remote management offered by 5G technology a user can get better and fast solution.
- The remote diagnostics also a great feature of 5G technology.
- The 5G technology is providing up to 25 Mbps connectivity speed.
- The 5G technology also support virtual private network.
- The new 5G technology will take all delivery service out of business prospect
- The uploading and downloading speed of 5G technology touching the peak.

5th generation technology offers a wide range of features, which are beneficial for all group of people including, students, professionals (doctors, engineers, teachers, governing bodies, administrative bodies, etc.) and even for a common man.



IMPORTANT ADVANTAGES

- High resolution and bi-directional large bandwidth shaping.
- Technology to gather all networks on one platform.
- More effective and efficient.
- Technology to facilitate subscriber supervision tools for the quick action.
- Most likely, will provide a huge broadcasting data (in Gigabit), which will support more than 60,000 connections.
- Easily manageable with the previous generations.
- Technological sound to support heterogeneous services (including private network).
- Possible to provide uniform, uninterrupted, and consistent connectivity across the world.

SOME OTHER ADVANTAGES FOR THE COMMON PEOPLE

- Parallel multiple services, such as you can know weather and location while talking with other person.
- You can control your PCs by handsets.
- Education will become easier – A student sitting in any part of world can attend the class.
- Medical Treatment will become easier & frugal – A doctor can treat the patient located in remote part of the world.
- Monitoring will be easier – A governmental organization and investigating offers can monitor any part of the world. Possible to reduce the crime rate.
- Visualizing universe, galaxies, and planets will be possible.
- Possible to locate and search the missing person.
- Possible, natural disaster including tsunami, earthquake etc. can be detected faster.

DISADVANTAGES OF 5G TECHNOLOGY

Though, 5G technology is researched and conceptualized to solve all radio signal problems and hardship of mobile world, but because of some security reason and lack of technological advancement in most of the geographic regions, it has following shortcomings –

- Technology is still under process and research on its viability is going on.
- The speed, this technology is claiming seems difficult to achieve (in future, it might be) because of the incompetent technological support in most parts of the world.



- Many of the old devices would not be competent to 5G, hence, all of them need to be replaced with new one — expensive deal.
- Developing infrastructure needs high cost.
- Security and privacy issue yet to be solved.

CONCLUSION

5G Technology stands for 5th Generation Mobile technology. 5G mobile technology has changed the means to use cell phones within very high bandwidth. User never experienced ever before such a high value technology.

Nowadays mobile users have much awareness of the cell phone (mobile) technology. The 5G technologies include all type of advanced features which makes 5G mobile technology most powerful and in huge demand in near future.

A user can also hook their 5G technology cell phone with their Laptop to get broadband internet access. 5G technology including camera, MP3 recording, video player, large phone memory, dialing speed, audio player and much more you never imagine. For children rocking fun Bluetooth technology and Piconets has become in market.

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