

# Introducing 5G a new technology for upcoming Era

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**Abstract:** 5G (5th generation mobile network or 5th generation wireless network) is the name used in many research papers and projects, which means 4G standard after the future of mobile telecommunication standards (what will be completed from 2011 to 2013). 5G is not the official name used for any specifications or authorized files that are still being disclosed by telecommunications companies or authorities such as 3GPP

## I. Introduction

In this presentation we can discuss the 5G technology known as the fifth generation. The wireless industry has begun to revolutionize and evolve since the early 1970s. Wireless technology 5G can change the world using high frequency wireless equipment. The 5G feature must be an intelligent technology that connects the global

network with no restrictions. 5G presents a new concept of data from the world's true roads. 5G has many advantages compared to the current 5G technology station. 4G is currently working on radio and audio programming, as well as new bugs,

Which can be downloaded from the Internet. Development is targeted at the customer terminal as a 5G mobile network. The terminal will include access to many wireless devices Technology at the same time in time and station should be able to join a stream of different nonprofit technology. Vertical transfers should be avoided when they do not exist

## II. 1G Technology:

- 1G applies to the early generation of mobile wireless communications and communications technology that was introduced in 1980 and ended in the early 1990s.
- Speed up to 2.5 kg.
- It allows voice calls in the country
- 1G networks use analogue signals. AMPS was first sold in the United States in 1G mobile network.



Technology:

2.5G is a technology between the second (2G) And third 3G generation of mobile phone. 2.5G is at times described as 2g cellular technology combined with general packet radio service .it is speed 64-144kbs ,camera phone ,browsing 6-9 min to download a 3 mins.mp3 songs.

### III. 2G Technology:

- Developed in late 1980s & completed in late 1990s
- 2G technology is to the 2<sup>nd</sup> generation which is based on GSM
- It is was launch in Finland in the year 1991.
- 2G Networks use digital signals, Speed up to 64 kbps
- It provides better quality and capacity.

### IV. 3G Technology:

3G Technology to 3<sup>rd</sup> generation which was in year 2000s. Data Transmission speed improved from 144kbs -2mbps classically called Smartphone data transport rates to accommodate web based application and audio and video files.

High speed web /more Security video conferencing 3D games TV, Mobile TV , and download speed 11sec -1.5 min time to mp3 songs. and email messages send, receive



COMPARISON B/W 3G Vs 4G:

Technology	3G	4G
Data transfer rate	3.1MB/sec	100MB/sec
Internet Services	Broadband	Ultra Broadband
Mobile-TV Resolution	Low	High
Bandwidth	5-20MHz	100MHz
Frequency	1.6-2 GHz	2-8GHz
Download and upload	5.8Mbps	14Mbps

V. 4G Technology:

High speed data access and high quality stream video capable of as long as 100mbps - 1Gbps speed .Wi-Fi and Wi-max multimedia anytime's global mobility hold up wireless solutions personal services.

VI. 5G Technology:

- Next major time of mobile telecommunication & wireless system
- 10 times more capability than others
- projected speed up to 1 Gbps
- More faster & reliable than 4G
- Lower cost than previous generations



Features

- 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 customer supervision tools for fast action.
- High quality 5G technology service
- 5G technology delivers comprehensive data sharing in Gigabit that supports nearly 65,000 connections. 5G technology offers great features of 5G technology.

- 5G technology also supports the deployment of virtual private network help..

Advantages:

- It posse very high speed, high ability and low cost per bit.
- It supports multimedia, voice, and internet.
- It also offers global access and service portability.
- It has very high uploading and downloading speed.
- It offers high resolution and bi-directional large bandwidth for mad mobile users.

Disadvantages:

- It is under processing technology.
- It is difficult to get a high speed in some parts of the world.
- Many old machines will not support 5 Generation.
- Security and privacy are yet to be solved

Comparison of 1G to 5G Technology:

Technology Features	1G	2G	3G	4G	5G
Deployment	1970-1980	1990-2004	2004-2017	now	Soon (probably 2020)
Data Bandwidth	2kbps	64kbps	2Mbps	1Gbps	Higher than 1 Gbps
Technology	Analog cellular Technology	Digital cellular Technology	CDMA 2000 (1Xrtt,EVDO) UMTS,EDGE	4G Max LTE Wi-Fi	www(Coming soon)
Service	Mobile Telephony (voice)	Digital Voice , sms , higher capacity packetized data	Integrated high quality audio, video and data	Dynamic Information access, wearable device	Dynamic Information access, wearable device with AI capabilities
Multiplexing	FDMA	TDMA, CDMA	CDMA	CDMA	CDMA
Switching	Circuit	Circuit, All Packet	Packet	All Packet	All Packet
Core Network	PSTN	PSTN	Packet N/W	Internet	Internet

## I. CONCLUSIONS

This technology help to promote stronger links among public works in different field creating prospect concepts of mobile communication internet services, cloud computer, all tart network, and technology.

The new coming 5G technology will be accessible in the market at with your resources charge, high max out outlook & much reliability than past

technologies 3G- Operator Centric, 4G- Service Centric whereas

5G- User Centric We have proposed 5G wireless concept plane as an open display place on different layers

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