Fifth Generation Technology
(5G Technology)

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Abstract—Abstract— In The today generation there are having various Technologies like the 2G, 3G…..5G. That are been used by the around the people in the world. But the amongst of all the technology of 5G is the latest trending technology. The 5G technology is pushed over VOIP – enabled to device. And this 5G technology is offering product engineering services document ions etc…
The technology in the mobile phone that function and possess 24/7 job that can be easily used by people around the world. The main purpose of this device is to key all people connected around the world and serve the purpose of entertainment gadget. Many customers offers the handset to be priceless so that it can handle the best technology for its bright future.
The main aim of this 5G wireless technology has an incredible speed of transmission has no limitation. The recent technology is 5G mobile technology can hit other technology from other localities that can be accessed through various parts in the world to find a new technology.
The utilization of this electronic gadget will shrink to the handset with the mobile or cellphone which will resemble like PDA (personal digital assistant) in the 21st century.

Keywords-2G,3G,4G,5G ,VOIP ,PDA ,gadget.

I. INTRODUCTION
In the terminology of networking the word wireless that is referred in dictionary as “having no wires”. The network nothing but rather it is connected by the radio waves and microwaves to maintain communications. The technology is widely used worldwide cellular phones. In the realm communication there are a lot of changes. In today’s world we no more use the landlines. It is envisaged there is complete network for the mobile internet which is wireless at that is the capability to accommodate in the application of the potential requirements [2][1].

The 5G design goal is to work with the wireless world which are freeform obstacles which was been face by the earlier generation. This technology might change the manner in the plans of cellular which was been offered worldwide. The cell phone that can be used globally around any corner.[4,3] The extraordinary capability that supports software and consultancy. This technology in the upcoming days might roll the market all over the world and achieves the greater response in the world market. [1,3]

The technology of network which provides high connectivity and distribute the internet permission to access within the building that can be deployed the union of wired or wireless connections and it has glowing future. The technology implementation would be like an umbrella around the year 2020.[5,8]
II EVOLUTION

2.1 1st Generation Technology (1G):
The one the first technology was introduced in the 1G. The 1Generation it was the one of the wireless telephone technology. The 1G was introduced past 1980s and it was finished in early 1990.[3,5]

The 1Generation speed was mainly up to 2.4Kbps, and this also allows to the voice calls 1 country. The 1G main difference between the existing system and 1G was invited through the cellular technology. The 1G also called as analog cellular telephone. This technology mainly used to transmitting voice signals through analog transmission techniques.[6,4]

- The 1st Generation Technology we have :-
  1. NMT (Nordic mobile telephony).
  2. TACS (total access communication system).
  3. ETACS (European total access communication system).[7,8]

- The basic features of 1Generations:-
  1. The up to speed was 2.4 kbps.
  2. This allows voice calls in 1 country.
  3. It’s having poor voice quality.
  4. In this method using the analog signals.
  5. The 1G phone was the large size.
  6. Its having limited capacity.
  7. In this it’s offered very low level of spectrum efficiency.[5,8]

Fig: 1st Generation Network Diagram.
2.1 The 2\textsuperscript{nd} Generation Technology we has.

The 2\textsuperscript{nd} Generation was introduced after the 1\textsuperscript{st} Generation. It was refers to the based on the GSM and emerged in in the late 1980s. In the 2\textsuperscript{nd} Generation was used digital signals for voice transmission. The 2\textsuperscript{nd} generation we would focus of that technology was on digital signals and it was provides service to delivers text and images, pictures messages at low speed (in Kbps).[5,8]

The 2\textsuperscript{nd} generation was used that bandwidth of 30 to 200 KHz. The after the 2\textsuperscript{nd} Generations used another new technology it’s called the 2,5Generation system packet switched and circuit switched domain it provide data rate up to 1444Kbps. The 2\textsuperscript{nd} Generation data speed was up to 64Kbps. And the it was used digital signals.[4,7]

The 2\textsuperscript{nd} Generations was provides to the better quality and capacity to use. The one of the disadvantages 2\textsuperscript{nd} generation Unable to handle complex data such that videos. The 2\textsuperscript{nd} Generation was required strong digital signals to help mobile phone work.[3,5]

The 2\textsuperscript{nd} generation is faster than the 1\textsuperscript{st} generation, it’s compared to 1\textsuperscript{st} G more usability. The 2\textsuperscript{nd} generation is semi global facility.[5,7]

![GSM Network Diagram](image)

\textit{Fig: 2\textsuperscript{nd} Generation Network Diagram.}

2.2 3\textsuperscript{rd} Generation  Technology we have.

The 3\textsuperscript{rd} Generation was based on GSM and launched in 2000. The one of the 3\textsuperscript{rd} generation aim of technology was to offer high speed data. The 3\textsuperscript{rd} Generation original technology was improved to allow data up to 14 Mbps and it more used packet switching. In the 3\textsuperscript{rd} generation it can be used wide band wireless network with which clarity is increased.[2,4]
The 3rd generation was offers data services, access to television/video, because of new service like Global Roaming.[3,5]
The 3rd generation was operates capacity at a range of 2100MHz. And the 3rd generation bandwidth was 15-20MHz used for High Speed internet service, video chatting.[6,5]

- **The basic features of 3rd Generations:-**
  1. The 3rd Generation speed was 2Mbps.
  2. The 3rd Generation is typically called smart phones.
  3. The 3rd Generation have provides faster communication.
  4. In 3rd Generation is large capacities and broadband capabilities.
  5. This 3G provide TV streaming/mobile TV/phone calls.[4,7]

![Fig: 3rd Generation Network Diagram.](image)

### 2.3 The 4th Generation Technology we have.
The 4th Generation is offers the downloading speed of 100Mbps. now-a-days 4G provides same feature as 3G and it should be additional services like Multi-Media Newspapers, TV programs etc….[3,5]

The 4th Generation is providing the clarity and send Data much faster than the previous Generations. In the 4G considered technology like LTE (Long Term Evolution). The 4G is also one of the wireless broadband access, Multimedia Messaging Service (MMS).[5,4]

In the 4th Generation providing video chat, mobile TV, HDTV content, and also it giving facility Digital Video Broadcasting (DVB). It would provide the minimal services like voice and Data, and other utilized for bandwidth.[3,5]

- **The basic features of 4th Generations.**
  1. The 4G having capable of provide 10Mbps-1Gbps speed.
  2. This is having high quality streaming video.
  3. The 4G is combination of Wi-Fi and Wi-Max.
  4. But the 4G implement to hard.
  5. Its having battery uses is more and its hardware is complicated.[1,5]
2.4 The 5th Generation technology we have. The 5th Generation was almost refer or started from late 2010s. The 5th Generation facilities for the far better level Or might be seen technology includes far better level of the Connectivity and network coverage.\cite{4,6}

One of the main focus of 5th generation will be world Wireless World Wide Web (WWWW). And the 5th Generation Will be complete wireless communication and no limitation for use. \cite{4,7}

After the 4th Generation upcoming one of the faster and smart network is a 5th Generation. It will be master faster of previous technology. It may be soon (probably by 2020).\cite{2,3}

- The basic features of 5th Generations.
  1. The 5th generation will be highly supportable to the WWWW.
  2. And the 5th generation will be high speed, high capacity.
  3. It will be provides large broadcasting of data in the Gbps to uses.
  4. The 5G provides the Multi-media newspapers, and the TV programs.
  5. And this will be more clarity (HD clarity).
  6. Its will be able to faster data transmission that of the previous Generation.
  7. Its phone memory size will be large.
  8. Its dialing speed, clarity in audio/video is fast.
  9. It can supports internet multimedia, voice, Streaming video etc...
  10. It will be more effective and attractive.\cite{4,8}
Fig: 5th Generation Network diagram.

III. CONCLUSION

WORLD OF MOBILE WIRELESS COMMUNICATION IS RAPIDLY DEVELOPING. THE LAST FEW YEAR HAVE Experienced a remarkable growth in wireless industry. The 5th generation is going to be new mobile revolution in mobile market. In the 5th generation will used new technical and technology that will be used in the new 5G cellular or mobile telecommunications in the systems. The 5G Trials have already started on 5G which may be lead to its commercial availability around 2020. The world is demanding try to become completely wireless uses and uninterrupted access to information at anytime and anywhere.

REFERENCES