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Abstract— the fifth-generation 5G technology stands for mobile technology. 5G generation 1G 2.5 G and 3 out of telecommunications in the world perform better with each passing day has seen a number of improvements. Mobile computing in this rapid revolution in this paper is also the fifth generation of mobile communication technology focuses on all preceding generations we learn, conversations, etc. Work that way changes our day to day life. The fifth-generation network affordable broadband wireless connectivity offer (very high speed). Paper on fifth generation technology network architecture does. Currently 5G is officially over. The fifth-generation research worldwide wireless Web (www), Dynamic ad-hoc wireless network (Don) and real are being made on the development of the wireless world. Users call volume and will experience a high level of data transmission that enables VoIP (voice over IP) on fifth-generation focus. Fifth generation techniques always want advanced features in cellular phones that will meet the needs of all customers. 5G features in the mobile network users can connect too many wireless technologies together and can switch between them. It will support IPv6 and the upcoming mobile technology flat IP. Fifth generation technology etc. electronic transactions (e-payment, e-transaction) support, will offer services like documentation.

Keywords— 5 G, 5G Architecture, Evolution from 1G to 5G, Comparison of all Generations, Why 5G?

I. INTRODUCTION

Wireless communication has started in the early 1970s. The next four decades, a mobile wireless technology 5G has been developed by 1G for generations. Prior to the fifth generation technology that users provide experienced very high bandwidth. This powerful fifth-generation technologies and creates a great demand in the future in which various new advanced features. Now day-wireless and mobile technologies such as third-generation mobile networks (UMTS-universal mobile telecommunications system, CDMA2000), LTE (long term evolution), Wi-Fi (IEEE 802.11 wireless network), exist as WiMAX (IEEE 802.16 wireless and mobile networks), as well as sensor networks, or personal area networks (e.g. Bluetooth, ZigBee) as. Mobile terminals are based on circuit switching which includes a variety of interfaces such as GSM. All wireless and mobile network that all data and signaling network layer IP (Internet Protocol) will be transferred, through this means all IP theory applies. The fifth generation of technology users and have fun with amazing technology and Bluetooth

Pico nets kids never said etc. camera, MP3 recordings, video player, audio player, big phone memory to provide the kind of facilities. Worldwide wireless Web (www)-fifth generation wireless mobile multimedia wireless Internet network is completely right in the real world, which without limitation communications, Can be. The fifth generation is based on-ji technology 4. 5 wireless mobile Internet network Las-CDMA (code division multiple access and synchronize large area), OFDM (orthogonal frequency division multiplexing), MCCDMA (multi carrier code division multiple access), UWB will be supported by, which are real wireless world (ultra wideband), network LMDS (local multipoint distribution service), And IPv6. The fifth-generation technologies call the tremendous volume of data capabilities and unrestricted and aired within the latest mobile operating system provides infinite data together. The fifth generation is a significant difference and 4 g world should add more services and benefits. Fifth generation without limitation must be more intelligent technology that interconnects all over the world. This generation can open new dimensions to

our lives and our lifestyle will change by 2020 for information, entertainment and communication around universal, is expected to be released to the world of sustainable use.

II. EVOLUTION

Mobile communications in mobile technology due to a revolution in the last few years and has become more and more popular. This revolution is very high due to the increase in telecom customers. This revolution 1G-2G-first generation, second generation, third generation, and then 3G-4G-5G fifth lead generation, second generation.

A. First Generation(1G)

1G emerged in the early 1980s. It includes analog systems and is known as the popular cell phone. It won't be like this for mobile telephone systems (MTS), advanced mobile phone system (AMTS), improved mobile telephone service (IMTS) introduction of mobile technologies, and push to talk (PTT). This frequency 150 MHz, a frequency-division modulation technique voice calls is used, which uses analog radio signal multiple access (FDMA) voice calls were after all the poor, handoff unreliable voice capacity, links, and no security to keep unwanted largely by third parties to make a victim of these calls Played back, radio towers [3].

B. Second Generation(2G)

2G emerged in the late 1980s. This sound uses digital signals for transmission and speed of 64 Kbps. SMS (short messaging service) allows and 200 kHz to 30 use of bandwidth. For the next 2-ji 2.5 G system packet and circuit switched domain and to 144 Kbps data rate uses provide. E.g. GPRS, CDMA and EDGE [3].

C. Third Generation(3G)

It increased the clarity with which uses extensive bran wireless network. Data packets are sent through the technology called switching. Voice calls are explained through circuit switching. Verbal communication as well as its data services, television/video, like new, used for global roaming services. It operates at 2100MHz and high speed Internet service is a bandwidth of 15-20MHz used, video chatting.3G a person can contact a small village has been contracted for is that this world

wide band voice channel uses the other person is in any part of the world and even can also send a message with [3].

D. Fourth Generation(4G)

4G 100Mbps. 4 g is a download speed and greater clarity to see the TV programs and with previous generations send data much faster than 3-ji and multimedia newspapers the same as additional services such as facility provides the [3]. LTE (long term evolution) is regarded as the 4G technology. 4-ji wireless broadband access QOS and rate set by forthcoming applications like to accommodate the requirements being developed, multimedia messaging service (MMS), video chat, mobile TV, HDTV content, digital video broadcasting (DVB), minimal services like voice and data, and other uses of bandwidth services. [2].

III. 5G NETWORK ARCHITECTURE

Fifth generation mobile wireless and mobile network system model for all IP-based model. All-IP network (AIPN) cellular communication market is able to meet the growing demand. It technologies. Uses packet switching AIPN and provides customized performance and continued development costs all radio is a common platform for access. The fifth-generation network architecture (new architecture has an important role in which) a user terminal and free, Autonomous radio access technologies (rat) consist of a number of [1]. 5G network architecture in mobile portals, mobile commerce, mobile healthcare, mobile Government, mobile banking and others all IP-based mobile applications and services, cloud computing resources (CCR) are offered through. Configurable computing resources (e.g., cloud computing networks, servers, storage, applications, and services) for convenient on-demand network access to a model. Cloud computing applications and consumers without Internet access to your personal data on any computer with permission to use. CCR Reconfigurable links Punarvinyasan data model with data from remote punarvinyasan RRD associated with multi technology core (RMTC) (RDM). A main challenge for different radio access RMTC technologies to deal with the increase. Core all IP platform based on the convergence of cloud computing and nanotechnology, radio, and. Core network status and/or the user changes his or her

communication functions based on the demands. RMTc WLAN 802.11 x 2G/GERAN and UTRAN 802.16 WMAN, plus 3 x-jj/4-jj/the different radio access technologies EUTRAN is connected. , EV-do, CDMA2000 ... read more Etc. /95 as other standards also are capable of in this way. Intaroaprebiliti process parameters and mechanism of heterogeneous access systems [6] to choose from both Terminal and RMTc enabled.

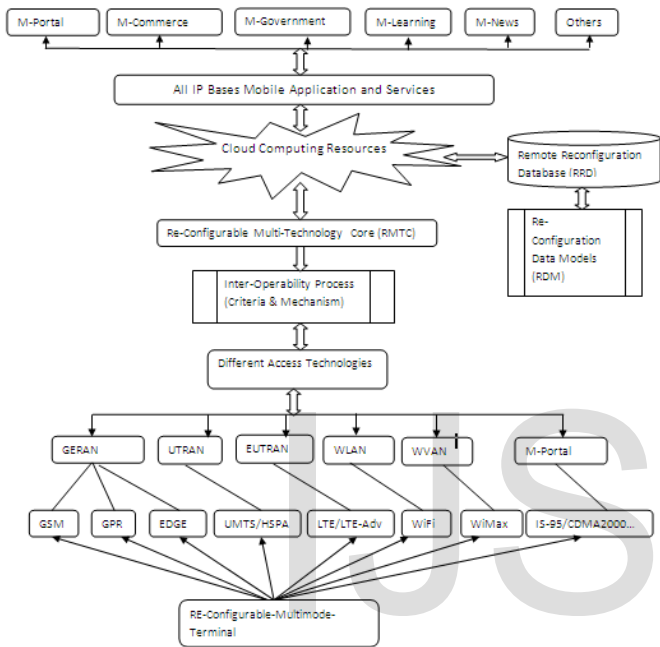


Fig. 1 5G Network Architecture [6].

IV. WHY NEED OF 5G?

- Very high speed, high efficiency, and low cost per bit [7].
- This interactive multimedia, voice, video, Internet, more effective and more attractive supports other broadband services, and bi-directional, precise traffic statistics [7].
- 5G technology gives access and global service portability.
- This is due to high error tolerance provides high quality service.
- This is a time of which about 65,000 connection to broadcast up to gigabit capability is provided.

- Human life as artificial intelligent (AI) combined with more applications to communicate with mobile phones can be established, which will be surrounded by artificial sensors [6].
- 5G technology user better and can get fast solutions that use remote management.
- 5G technology to upload and download speed is very high.
- 5G technology crazy cell phone users and bi-directional big bandwidth shaping offered high resolution [3].
- 5G technology offer unique sustainability transporter square entrance [3].

V. CONCLUSION

Mobile and wireless networks for the development of higher data rates and is going toward all IP theory. Mobile terminals only for applications each year more and more on board memory, processing power, and longer battery life are achieved. 5G all IP platform based on cognitive radio, SDR, Nano, cloud computing and are included in the latest technologies. It is possible to keep the network as simple, and ultimately deliver more functionality's initial Internet nodes for philosophy, mobile networks will become reality in the future generations of hope, here referred to as 5G.

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