Need of 5G Networks

The number of user equipments are getting increased by a large number and the corresponding requirement of the bandwidth for the large amount of data to get transmitted , there must be large enhancement to the current technology. Here in this section the need of 5g network is highlighted.

Devices scalability - The user devices such as mobile phones , video monitoring devices , sensors , AI robots , smart televisions , intelligent watches etc. are growing at very high rate . So we need a powerful network to support connections between such large number of devices.

Large amount of data stream rate - As the number of devices in the society is so large such that the data transmission and trading is also comparatively massive . In a study conducted in 2018 that says the data trading is 100 times more than 2014 and would definitely result overburdening the network we use today . So we require a network that would be able to work efficiently in such conditions with high data trading capabilities which can be obtained by introducing new architectures , technologies etc in the current network.

Utilise the spectrum - The uplink and the downlink in the current network are not very efficient in the terms if usage of spectrum provided. The spectrum provided to them still have a large portions under-utilised . So the current network requires a access control mechanism to ensure the usage of spectrum efficiently in both the uplink and downlink. Also the broadening of spectrum is required (above 3 GHz) and novel spectrum mechanism is needed to be introduced .

Latency must be minimal - The upcoming mobile cell networking is expected to support a number of real time apps , services in which the quality service in terms of latency , data loss , data delay, bandwidth and quality in terms of users and network providers are going to be varying . So, new 5g technology must be visioned to implement it such that real- time and delay - bound services are optimal in experiencing the above apps.