

Mobile Communication Technology

1G

- Used for voice calls as analog signal
- No data was transmitted
- Speed up to 2.4 kbps
- Poor voice quality
- Large phone with limited battery life
- No data security

2G

- In this generation, few features like simple text messaging were added.
- New services such as text messaging, packet data(for MMS and internet access), called ID and also introduced SIM (Subscriber Identify Module) card.
- Data transfer rate up to 64kbps
- Disadvantage was low network range, slow data rates.
- To overcome these two problems two new network – CDMA and EDGE (Enhanced Data Rate for GSM evolution) were introduced.

3G

- In this generation Web browsing, email, video conferencing, video downloading, picture sharing and other smartphone technologies were introduced.
- Devices are called smartphones
- Fast communication, data speed between 144kbps to 2Mbps
- High quality voice transmission
- Supported multimedia (playing music, viewing videos, video calls etc)
- Mobile TC, Mobile internet

4G

- The speed of this generation is from 100 Mbps to 1Gbps
- Based on LTE-Advanced (Long Term Evolution)
- Voice as VoIP (Voice over Internet Protocol (VoLTE))
- Better Video calling than 3G, Video conferencing etc.

5G

- It is yet to be implemented in India which promises superfast data transfer rate upto 20Gbps along with energy saving.

WIRELESS FIDELITY: Protocols allows devices to connect to the internet without a direct line from your Device to ISP (Internet Service provider). Its maximum coverage area is 100 meters. Transmission speed upto 54 mbps. It is mostly used in LAN Application. It uses Radio wave spectrum.

Wi-Fi HOTSPOT: a hotspot is a venue that offers Wi- Fi access. We can share out internet through Wi-Fi hotspot. We can set Hotspot with or without password. With mobile we can connect upto 10 devices with hotspot (However it depends upon type of device)

Wi-Max: Stands for wireless inter-operability for Microwave access. Wi-Max is used in MAN Applications. Wi-Max network range to max 90kms. Wi-Max transmission speed can be up to 70mbps.

