**Did you ever think how your mobile works? No, I’m not talking about clicking photos,apps and games. Let me be clear, did you ever wonder how does a call go through, how a message is sent, how your SIM enables you to access the Internet? If your answer for any of the questions is a big NO, read below to find out.**

Every MNO is first registered in a country and is granted a certain range of frequencies (spectrum). The MNOs buy the spectrum ranges from the government and operate. In India there are 23 telecom circles. Eg: AP and TS, Delhi, North East etc. The MNOs set up base stations all over the country, which are areas of land, typically hexagonal, and have at least one cell tower. The cell towers are connected to each other, to hand off data in the form of packets of signals – data, voice and text messages. The data is finally brought to the receiver mobile/computer. The MNOs use each others’ towers in many areas, so as to create a complex web that offers the widest possible network coverage area to subscribers. Networks offer two types of SIMs - GSM (Global System for Mobile Communications) and CDMA (Code Division Multiple Access) are two types of SIMs you get in the market. GSM is SIM protected i.e. you can change the SIM , if you want to change a network. CDMA is network protected. The SIM works in unison with the handset, and it’s not enough to change only the SIM if you want to change a network. You have to change the handset (mobile) too.

**The big question – HOW DO THE NETWORKS PROVIDE US INTERNET?**

All the things you do on the Internet, involve sending and receiving data. The data is transmitted in the form of packets. The packets are sent over various servers, which are interlinked with each other. The servers in a country are linked with each other, and also with servers all over the world. So, everytime you use Google, you send packets of data to its server, and Google sends back the required data.

**So, how do they make money?**

Once the MNOs get their licenses from the government, they manufacture SIM cards, which people buy. Every time you make a call, or send a message, the data is transmitted over their licensed spectrums. They may be local call (within the circle) or long distance calls. The money you pay to get your SIM recharged is the money you’re paying to transmit your data over the carrier’s network. The data you use, the videos you watch on YouTube, are all delivered using various networks’ services. This way, the MNOs charge you for using their servers and spectrum for sending data and getting data. Some mobile networks also rent out spaces on their towers to their competitors, which gives them a new stream of revenue. They also get paid by some websites/ OTT platforms for allowing their subscribers to access their content.

**Quarantine Time Read:**

**2G Spectrum Scam in India:**

This is one of the biggest scams in India, involving a number of high ranking government officials of various states, bureaucrats and corporations.