

Mobile Phone Call

1. When we switch on the mobile phone, it tries for an **SID** on the Control channel. The **Control channel** is a **special frequency** that the phone and base station use to talk to one another. If the Mobile phone finds difficulty to get link with the control channel, it displays a “**no service**” message.
2. If the Mobile phone gets the SID, it compares the SID with the SID programmed in the phone. If both SID match, the phone identifies that the cell it is communicating is the part of its home system.
3. The phone also transmits a registration request along with the SID and the MTSO keeps track of your phone’s location in a database. MTSO knows in which cell you are when it wants to ring the phone.
4. The MTSO then gets the signal, it tries to find the phone. The MTSO looks in its database to find the cell in which the phone is present. The MTSO then picks a frequency pair to take the call.
5. The MTSO communicates with the Mobile phone over the control channel to tell it what frequencies to use. Once the Mobile phone and the tower switch on those frequencies, the call is connected.
6. When the Mobile phone move toward the edge of the cell, the cell’s base station will note that the signal strength is diminishing. At the same time, the base station in the cell in which the phone is moving will be able to see the phone’s signal strength increasing.
7. The two base stations coordinate themselves through the MTSO. At some point, the Mobile phone gets a signal on a control channel and directs it to change frequencies. This will switch the phone to the new cell.

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