Case Study Assignment: Exploring Field Test Mode on Smartphones

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IMEI Number (International Mobile Equipment Identity): It's like the identity number of your phone, usually 15 digits long. It's permanent and helps identify your device if it's lost, stolen, or blacklisted. Every phone has a different IMEI, so it's useful for tracking or blocking the device. You can find it by dialing *#06# on most phones.

MAC Address (Media Access Control address): This is a unique code assigned to your device's Wi-Fi or Bluetooth. It's a 12-digit code (usually separated by colons or dashes) and helps identify devices on a network. It doesn't change unless you change the hardware. Every time your phone connects to Wi-Fi, it sends the MAC address to the router.

IP Address (Internet Protocol address): This can either be static (doesn't change) or dynamic (changes over time). It's like your device's address on the internet, helping route traffic to and from your phone. There are two versions, IPv4 and IPv6, and your IP can change based on the network you're connected to.

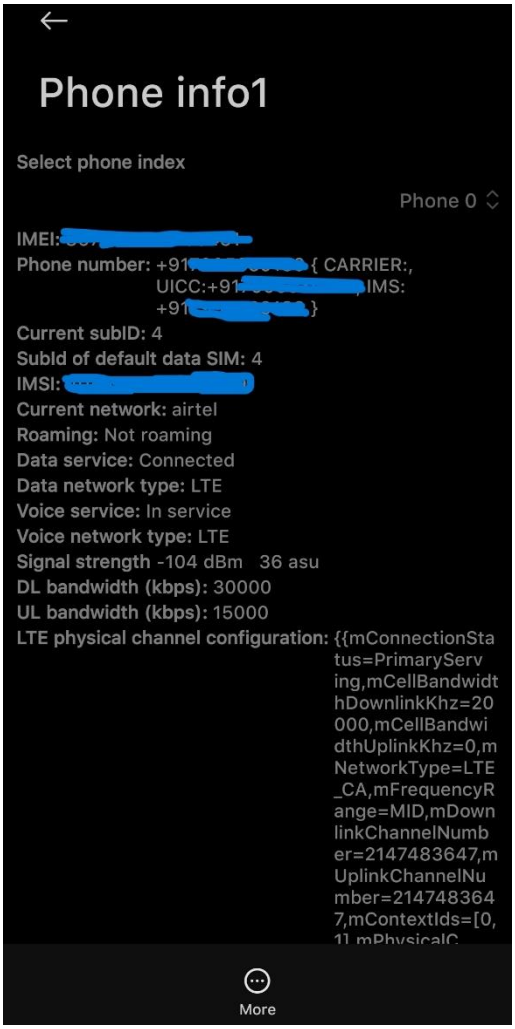
Network Operator/Brand (Name of the cellular provider): This is basically the company that runs your mobile network, like Jio, Airtel, Vodafone, etc. They manage your SIM card and provide your call and data services. The operator decides the network coverage and speed you get.

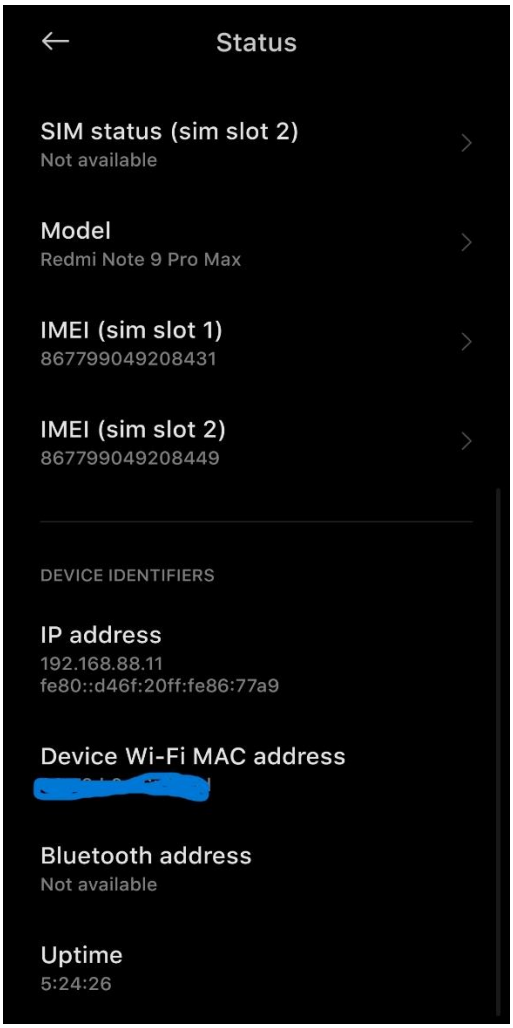
Network Type (4G LTE, 5G, etc.): This shows what kind of network technology you're using. 4G LTE is common and gives pretty fast internet speeds, but 5G is the latest and much faster. The network type also affects how quickly you can download or stream things, and the availability of these types depends on your operator and location.

Signal Strength (Measured in dBm): It's basically how strong the connection between your phone and the network tower is. dBm is in negative numbers, so -50 dBm is excellent, and -120 dBm is no signal at all. Poor signal means calls can drop or data can get slow.

Download/Upload Bandwidth (Physical channel configuration and speed): This measures how fast your device can download (receive) and upload (send) data. Higher bandwidth means faster speeds. It's affected by the network type (like 4G or 5G), the number of users, and the physical configuration of your mobile connection.

Mobile Location Information (LAC - Location Area Code and CID - Cell ID): These are numbers used by mobile networks to identify where you are. The LAC tells what area your phone is in (like a section of a city), and the CID is the specific cell tower you're connected to. Together, they help the network manage calls and data transfers in your area.


Phone info1
Select phone index
Phone 0
IMEI:
Phone number: +91 { CARRIER:,
UICC:+91 ,IMS:
+91 }
Current subID: 4
SubId of default data SIM: 4
IMSI:
Current network: airtel
Roaming: Not roaming
Data service: Connected
Data network type: LTE
Voice service: In service
Voice network type: LTE
Signal strength -104 dBm 36 asu
DL bandwidth (kbps): 30000
UL bandwidth (kbps): 15000
LTE physical channel configuration: {{mConnectionStatus=PrimaryServing,mCellBandwidthDownlinkKhz=20000,mCellBandwidthUplinkKhz=0,mNetworkType=LTE_CA,mFrequencyRange=MID,mDownlinkChannelNumber=2147483647,mUplinkChannelNumber=2147483647,mContextIds=[0,
More


Status
SIM status (sim slot 2)
Not available
Model
Redmi Note 9 Pro Max
IMEI (sim slot 1)
867799049208431
IMEI (sim slot 2)
867799049208449
DEVICE IDENTIFIERS
IP address
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Device Wi-Fi MAC address
Bluetooth address
Not available
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5:24:26