

CASE STUDY ASSIGNMENT : EXPLORING FIELD TEST MODE ON SMARTPHONES

- **IMEI Number (International Mobile Equipment Identity):**

A distinctive 15 character code assigned to devices, for tracking purposes and preventing stolen phones from connecting to networks.

It aids in recognizing the device, on networks. Tracing it in the event of theft.

- **MAC Address (Media Access Control address):**

Each device connected to a network is given an identification code linked to its network interface card (NIC) allowing for communication, within the network.

The significance lies in confirming the recognition of devices, within networks such, as Wi Fi and Ethernet.

- **IP Address (Internet Protocol address):**

Each device connected to the internet is given a number to recognize it and enable communication, between devices.

Determining the location of a device, on a network is crucial, for directing internet traffic.

- **Network Operator/Brand:**

Referring to the mobile phone service provider, like AT&T or Vodafone.

The significance lies in deciding the network setup and the services accessible, to the device.

- **Network Operator/Brand:**

The cellular technology utilized by the device, for connectivity (for example generation and 5th generation).

The significance lies in assessing the speed of data transmission, as the reliability and delay, in mobile communication systems.

- **Signal Strength (Measured in dBm):**

The signal strength, on your device is measured in decibel milliwatts (dBm).

The significance of this lies in its impact, on the quality of calls and data transmission speed as the overall connectivity of the network.

- **Download/Upload Bandwidth:**

The term describes how quickly information can be transferred to or, from the internet.

The speed at which data can be transferred plays a role, in influencing the performance of the internet.

- **Mobile Location Information (LAC - Location Area Code and CID - Cell ID):**

In a mobile network systems context lies LAC. A label, for a cluster of cells. While CID signifies the identification number assigned to a cell tower.

The significance lies in its capability to monitor the whereabouts of devices and improve the efficiency of network connections.

SCREENSHOTS:

- **Field Test Mode (For Samsung device) :**

ServiceMode	:	ServiceMode	:
HPLMN(404-40) sim_state(1)		-/- - - -	
Slot 1 with DDS		RSRP RSRQ SINR CQI/RI/L	
Serving PLMN(404-94) - LTE		- - - -/-/-	
Service(Available-2)		RB MCS MOD(QAM) BLE	
NW sel: Auto		-/- -/- -/- -/-	
ATT# 0, TAU# 0		-----	
EMM(Registered-0) TAC(55357)		UplayerInd: 0, RestrictDCNR: 0	
LTE RRC: CONN BAND: 40		ENDC Status: Inactive	
BW: 20.0MHz		NR MSTC: OFF	
Earfcn: 39150, PCI: 57		SCG Failure Cause: -	
R0 RSRP: -96, RSRQ: -16, SNR: 8		TP DL ALL: 0.0 Mbps	
R1 RSRP: -92, RSRQ: -16, SNR: 6		TP NR: 0.0, LTE: 0.0	
RSRP: -92, RSRQ: -15, SNR: 10		TP UL ALL: 0.0 Mbps	
Tx Pwr: -3 dBm		TP NR: 0.0, LTE: 0.0	
paging_cycle: 1280 ms		CDRX: ON_Dur: 10/Inact: 100	
MOD(QAM): DL: -, UL: 64QAM		IMEI Certi: PASS 2 0	
CA Added		MIPI TEST SUCCESS	
(S1) BAND: 40, BW: 10.0MHz		Current DAT Event : 2	
(S1) Earfcn: 39294, PCI: 57		Dual SIM Model	
(S1) RSRP: -94, RSRQ: -18, SNR: 13			
UNKNOWN - kbit/s			
TAS: Default			

< IMEI information

IMEI (slot 1)

350352780221330

IMEI SV (slot 1)

01

IMEI (slot 2)

350543410221332

IMEI SV (slot 2)

01

< Status information

스마트폰의 현재 상태

IMEI information

IP address

100.76.35.157

2401:4900:9164:b5a9:10e0:a48c:8f2b:859d

Wi-Fi MAC address

Phone Wi-Fi MAC address

5C:ED:F4:7F:9B:2B

Bluetooth address

5C:ED:F4:7F:9B:2A

Ethernet MAC address

Unavailable

Serial number

RZCT904KDLN

Up time

177:44:55

Phone status

Official

Rated

DC 9 V; 2.77 A