Report on a Case Study in Field Test Mode
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Goal:

This case study aims to investigate and comprehend important networking data on cellphones through the use of diagnostic tools like Field Test Mode. The objective is to gather crucial network-related information from Samsung, iPhone, or Android devices and evaluate the importance of each characteristic.

Type of Device Used: VivoZ1X

Network Data Gathered International Mobile Equipment Identity **(IMEI) Number:**
SLOT1:
SLOT2:

Definition: Each mobile device is uniquely identified by its IMEI. Network providers use it to determine whether devices are legitimate and to prevent phones that have been stolen or compromised from connecting to the network.
Importance: Network operators can secure networks, track devices, and handle hardware-related problems with the aid of the IMEI.

Devices on a local network can be uniquely identified by their MAC address, which is a hardware identification.
Significance: It facilitates device authentication and network traffic management in both wired and wireless networks.

Definition: An IPv4 or IPv6 address is a special address that is given to your device for network communication.
Significance: It is essential for internet service access and data routing between networked devices.

The telecoms company that provides the device with cellular service is known as the network operator.
Importance: When determining roaming, network availability, and service-specific parameters, the operator's identity is crucial.
Type of Network : 5G

Definition: The type of network, 5G reflects the generation of mobile communication technology being employed.

Relevance: The type of network has an impact on signal strength, data rates, and the general mobile experience.

Strength of Signal (dBm):-92dBm

Decibels per milliwatt (dBm) is the unit of measurement for signal strength. It displays how well your smartphone and the cellular tower are connected.

Relevance: Better call quality, quicker data speeds, and fewer missed connections are all correlated with stronger signal strengths (nearer 0 dBm).

The maximum rate of data transfer (upload and download) between a device and a network is referred to as bandwidth.

Significance: It establishes the maximum speed at which information can be sent or received, impacting the efficiency of file sharing, streaming videos, and browsing.

Mobile Location Information (LAC and CID)

Definition: LAC (Location Area Code) and CID (Cell ID) provide details about the specific cellular tower serving the device.

Importance: This information helps network operators manage traffic and handover between towers during movement.

Network
Airtel | airtel

Mobile network state
Connected

Service provider info
Not available.

Service state
In service

Signal strength
–98 dBm 42 asu

Mobile voice network type
LTE

Mobile data network type
NR NSA

Roaming
Not roaming

IMEI (slot 1)
350886065355743

IMEI SV (slot 1)
01

IMEI (slot 2)
354836585355745

IMEI SV (slot 2)
01

Status information

<

SIM card status

IMEI information

IP address
100.92.61.102
2401:4900:4dd1:5eae:416e:9c01:556:be15

Wi-Fi MAC address

Phone Wi-Fi MAC address
Unavailable

SIM card status

IMEI information

IP address
100.92.61.102
2401:4900:4dd1:5eae:416e:9c01:556:be15

Wi-Fi MAC address

Phone Wi-Fi MAC address
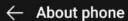BC:F7:30:55:23:84

Bluetooth address
BC:F7:30:55:23:83

Ethernet MAC address
Unavailable

Serial number
RZCW71JN6KA

Funtouch OS

Model number	vivo 1917
vivo ROM	Funtouch OS_10.5
Android version	11
Processor	2.3 GHz Snapdragon 712 Octa-core
RAM	8.00 GB
Phone storage	128 GB
IMEI 1	868860046411839
IMEI 2	868860046411821
Android security update	2021-12-01
CPU real-time data	>
Hardware version No.	MP_0.1
Software version	PD1921DF_EX_A_8.73.8
Baseband version	10_GEN_PACK-1.457703.10.472871.4

M346BXXS5CXH1

Kernel version

5.10.198-android12-9-28577532-abM346BXXS5CXH1
#1 Wed Aug 21 18:57:11 KST 2024

Build number

UP1A.231005.007.M346BXXS5CXH1

SE for Android status

Enforcing
SEPF_SM-M346B_12_0001
Wed Aug 21 19:09:34 2024

Knox version

Knox 3.10
Knox API level 37
HDM 2.0 - 7

Service provider software version

SAOMC_SM-M346B_ODM_INS_14_0010
INS/INS,INS/INS

Security software version

ASKS v8.1 Release 20240926