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AIM: TO Study Architecture of GSM. (7)

System Architecture

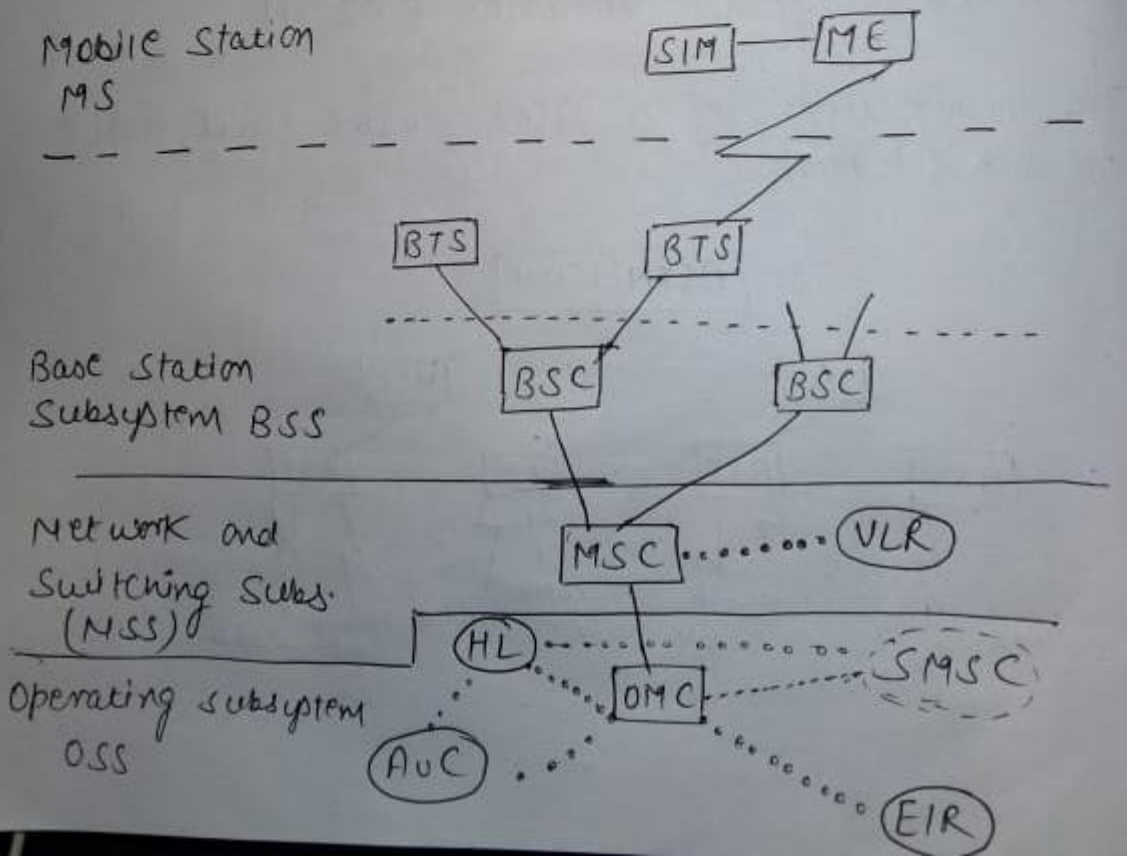
- A GSM network consists of several functional entities, whose functions and interfaces are defined. The GSM Network can be defined in following broad parts.
  - The mobile station (MS)
  - The Base Station subsystem (BSS)
  - The Network Switching Subsystem (NSS)
  - The operating suppat subsystem (OSS)
- A GSM Public land mobile network (PLMN) consist of atleast one service area controled by a mobile Switching Center (MSC) connected to the public Switched Telephone Network (PSTN)
- The architecture of a GSM public land Mobile Network (PLMN)

- A Base Station Subsystem (BSS) Consist of
  - Base station Controller (BSC)

→ At least one radio access point or base Transceiver Station (BTS) for mobile stations (MS), which are mobile phones or other handheld devices (for example PDA Computers) with phone interface.

→ A BTS, with its aerial and associated radio frequency components is the actual transmission and reception component.

→ A more detailed architecture of a single MSC Controlled service area is outlined in fig.



- Components of the tree GSM network system.
- Radio subsystem (RSS) consisting of BSSs and all BSS connected MS devices.
  - Network and switching subsystem (NSS)
  - Operating subsystem (OSS)

ME = Mobile Equipment
BTS = Base Receiving Station
BSC = Base Station Controller
MSC = Mobile switching Center
VLR = Visitor location Register
OMC = Operation and Maintenance Center
AuC = Authentication Center
HLR = Home location Register
EIR = Equipment Identity Register
SMSC = Short Message Service Centre.