BASIC CELLULAR SYSTEM

There are mainly two types of Basic cellular system

Circuit Switched

In a circuit-switched system, each traffic channel is dedicated to a user until its cell is terminated.Circuit-switched systems can be of two types:

1.Analog Circuit-Switched System

2.Digital Circuit-Switched System

Packet Switched:

In packet-switching,the packets are sent towards the destination irrespective of each other. Eachpacket has to find its own route to the destination. There is no predetermined path; the decision as to which node to hop to in the next step is taken only when a node is reached. Each packet finds its way using the information it carries, such as the source and destination IP addresses.

COMPONENTS OF A BASIC CELLULAR SYSTEM

MOBILE SWITCHING CELL

Mobile Switching Center (MSC) is a key part of the cellular/GSM network system. It acts as a central part of a network controlling subscriber calls.

Public Switched Telephone Network

A public switched telephone network is a combination of telephone networks and telephone services. It includes fixed-line, digital, satellite, switching centers, such as nodes or satellites and cable systems. A PSTN lets users make landline telephone calls, and another

Analog Circuit-Switched System

A basic analog cellular system consists of three subsystems:

1. A Mobile Unit
2. A Cell Site
3. A Mobile Telephone Switching Office(MTSO) with CONNECTIONS to link the three subsystems

Digital Circuit-Switched System

A Basic Digital System consists of four elements:

1. Mobile Station
2. Base Transceiver Station (BTS)
3. Base Station Controller (BSC)
4.Switching Subsystems

Packet Switched System

1.MS:Providesthe voice and packet data services. It is also called UE (User Equipment).

2.NodeB:Thename for base station in GSM.

3.RNC(Radio Network Controller): Controls the radio resources of the NodeBs that are connected to it. Its function is similar to BSC. A device PCU(Packet Control Unit) converts the data stream into packet format.

4.SGSN(Service GPRS Support Node): Analogous to MSC/VLR in the circuit-switched system. This includes mobility management, security, and access control functions. It interfaces to HLR.