

Abbreviations:

AI: Artificial intelligence.

Cell: the node in the mobile network where the wireless connection is established with the mobile device (Mobile handset).

Serving Cell: The main cell where the wireless link is established with the mobile device.

A cell site or cell tower: Is a **cellular** telephone **site** where antennae and electronic **communications** equipment are placed.

Neighbor Cell: is the cell site that a mobile device with which will establish a connection after moving away from the original cell and getting closer to that cell.

CDR: Call detail record is a data record produced by a telephone exchange or other **telecommunications** equipment that documents the details of a telephone call or other **telecommunications** transaction (e.g., text message) that passes through that facility or device.

Service provider (Operator): The mobile network operator such as AT&T.

Frequency Planning: In the context of mobile radio communication systems, **RF Planning** is the process of assigning **frequencies**, transmitter locations and parameters of a wireless communications system to provide sufficient coverage and capacity for the services required.



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Rehomining: A method, system, and apparatus enables automatic radio base station (RBS) **rehoming** from a first radio network controller (RNC) to a second RNC when the first RNC becomes overloaded and/or automatic resource sharing between/among RNCs when one RNC becomes overloaded.

RAC: Routing Area Code is a fixed length of 1 octet and identifies a routing area within a location area. The **RAC** is part of the RAI (Routing Area Identity).

NoSQL: database provides a mechanism for storage and retrieval of data that is modeled in means other than the tabular relations used in relational databases

SLA: Service Level Agreement is a contract between a service provider and a customer.

IMSI: The International Mobile Subscriber Identity (**IMSI**) is an internationally standardized unique number to identify a mobile subscriber.

A/Gn interface: an interface is a logical link connection or a reference point, between two components in telecommunication infrastructure Gn interface between SGSN and a GGSN.

KPI: key performance indicator is a measure of performance. Such measures are commonly used to help an organization define and evaluate how successful it is, typically in terms of making progress towards its long-term organizational goals.

OMC: Operations and Maintenance Center is connected to all equipment in the switching system and to the BSC. The implementation of **OMC** is called the operation & support system (OSS).

NMS: Network Management System is an application or set of applications that lets network administrators manage a network's independent components inside a bigger



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network management framework. **NMS** may be used to monitor both software and hardware components in a network.

TDR: Time-Domain Reflectometer is an electronic instrument that uses time-domain reflectometry to characterize and locate faults in metallic cables (for example, twisted pair wire or coaxial cable). It can also be used to locate discontinuities in a connector, printed circuit board, or any other electrical path.

MME: Mobility Management Entity plays an important role in LTE EPC architecture. In fact, **MME** is the main signaling node in the EPC. According to LTE University, LTE **MME** is responsible for initiating paging and authentication of the mobile device.

SGW & PGW: Serving Gateway (**SGW**) is a critical network function for the 4G mobile core network, known as the evolved packet core (EPC). The **SGW** resides in the user plane where it forwards and routes packets to and from the eNodeB and packet data network gateway (PGW).

HSS: Home Subscriber Server is the main IMS database which also acts as database in EPC. The **HSS** is a super HLR that combined legacy HLR and AuC functions together for CS and PS domains.

MSC: Mobile Switching Centre is a telephone exchange that makes the connection between mobile users within the network, from mobile users to the public switched telephone network and from mobile users to other mobile networks.

RNC: Radio Network Controller is a governing element in the UMTS radio access network (UTRAN) and is responsible for controlling the Node Bs that are connected to it.



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API: An Application Programming Interface (**API**) is a set of standard software functions an application can use. ... An **API** is also known as middleware. The use of **APIs** makes it possible to develop applications and services independently of the underlying device it will run on.

SDK: Software Development Kit should facilitate development of new **telecom** services such as network plug-ins.

CRM: Customer Relationship Management (CRM) is an integrated management information system that is used to schedule, plan and control the sales and pre-sales activities in an organization.

