
2G & 3G Network Capacity Optimization Radio, Transport & Core Network

Training Description

Capacity is the most issue in Network Planning and Optimization activities. Capacity problem impact Network KPI mostly in accessibility, give contribution in retainability degradation (ex. increasing drops) and integrity degradation (ex. low throughput). This training will give detail explanation to design capacity both in 2G & 3G networks in three main area : Radio, Transport and Core Network, also explain strategy to handle future traffic increment and traffic mobility.

Training Objectives

At the end of this workshop, participant will be able to:

- Participant understand about Traffic Theory
- Understand and know how to calculate QoS and GOS
- Understanding Busy Hour and Busy Day Concept
- Participant understand about Utilization and Occupancy Concept
- Participant understand about 2G and 3G Radio Capacity & Dimensioning
- Understand about Transport Capacity & Dimensioning
- Understand about Core Capacity Management

Training Duration : 2 Days

Syllabus :

Traffic Theory

Erlang B & Erlang C

QoS and GOS

Utilization and Occupancy Concept

Busy Hour and Busy Day Concept

Radio Capacity Management

2G Radio Capacity & Dimensioning :

- Control Channel
- Traffic Channel
- TCH Channel
- SDCCCH Channel
- PDCH Channel for GPRS/EDGE
- PCH Load and LAC Dimensioning
- BSC Load

3G Radio Capacity & Dimensioning :

- Power
- Channel Element
- Code
- RNC Load

Transport Capacity & Dimensioning :

- Abis Dimensioning
- Iub, IuCS, IuPS and Iur
- Abis over IP and IP Transport

Syllabus :

Core Capacity Management

- **CS Core Network Dimensioning**
 - Average Circuit Group (CGR) Utilization
 - Signalling Link Load
 - VLR Load
 - HLR Load
- **PS Core Network Dimensioning**
 - SGSN Load
 - GGSN Load
 - Inter-GSN Traffic
 - DNS Load
 - DHCP Load
 - Firewall Load
 - Border Gateway Load
 - Charging Gateway Load
 - Core LAN Switch Load
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Traffic Prediction and Forecasting

Capacity Overload Handling & Mitigation Plan