

# TRANSMISSION NETWORK PLANNING FOR GSM, UMTS AND LTE

## Course Description

The course “Transmission Network Planning for GSM, UMTS and LTE” covers transmission media used as bearer network between nodes in WCDMA. It is described how to calculate the extra transmission capacity which HSPA and LTE requires. The Transmission Network Planning covers the nominal planning, the detailed planning as well as the principles for network design. Focus is set on the WCDMA Systems Core Network and the Evolved Packet Core, EPC. Microwave links, leased line and SDH optical equipment are studied. IP is used as the transport layer technology. If required, migration scenarios from ATM to IP can be included.

## Content

- Requirement Analysis
- Network Baseline / Review / Evaluation
- Services and Traffic Planning
- Network Architecture and Topology Planning
- Signaling Network Planning
- Network Design and Dimensioning
- Nominal and detailed transmission planning process
- Input parameters to the dimensioning process
- Dimensioning the Iu, Iur, Iub and other interfaces
- Backbone Connectivity Network Design
- Network Migration
- Network Plan
- Traffic Modeling
- Impact from EDGE, HSPA and LTE on Transmission Planning
- Implementing redundancy
- IP/Ethernet



## Target audience

Target audience is radio and transmission engineers and project managers as well as network architects.

## Pre-requisites

The participants should have good working knowledge on mobile systems and IP in general.

## Course length

2 days

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