Description

A 5-day Training Program to provide participants with an introduction to Third Generation (3G) access protocols and the basic knowledge, tools and methods to plan, design and deploy networks in 3G technology.

Objectives

- Provide an understanding of the features, benefits and operation of the 3G radio access protocol
- Present the 3G terminology and acronyms
- Provide an understanding of the 3G standards and protocols
- Explain how to deploy the 3G technology in networks
- Provide an understanding of 3G network performance
- Explore common 3G traffic scenarios

Topics

Introduction to Third Generation (3G)

- Industry status and perspective
- Standards bodies and relationships
- Evolution scenarios and market projections

Universal Mobile Telecommunications System (UMTS) services and applications

- UMTS bearer service
- UMTS QoS classes

UMTS architecture

- Core Network (CN)
- UMTS Terrestrial Radio Access Network (UTRAN)
- User Equipment (UE)

Wideband Code Division Multiple Access (WCDMA) in 3G Systems

- Main parameters
- Spreading and dispreading
- Multipath radio channels and rake reception
- Power control
- Handover control

UTRAN

- UTRAN architecture
- Protocol model for UTRAN terrestrial interfaces
- UTRAN-CN interface
- UTRAN internal interfaces

Radio interface protocols

- Medium Access Control (MAC) protocol
- Radio Link Control (RLC) protocol
- Packet Data Convergence (PDC) protocol
- Broadcast/Multicast Control (BMC) protocol
- Radio Resource Control (RRC) protocol

Physical layer

- Transport channels
- Spreading and modulation
- User data transmission
- Signaling
- Physical layer procedures
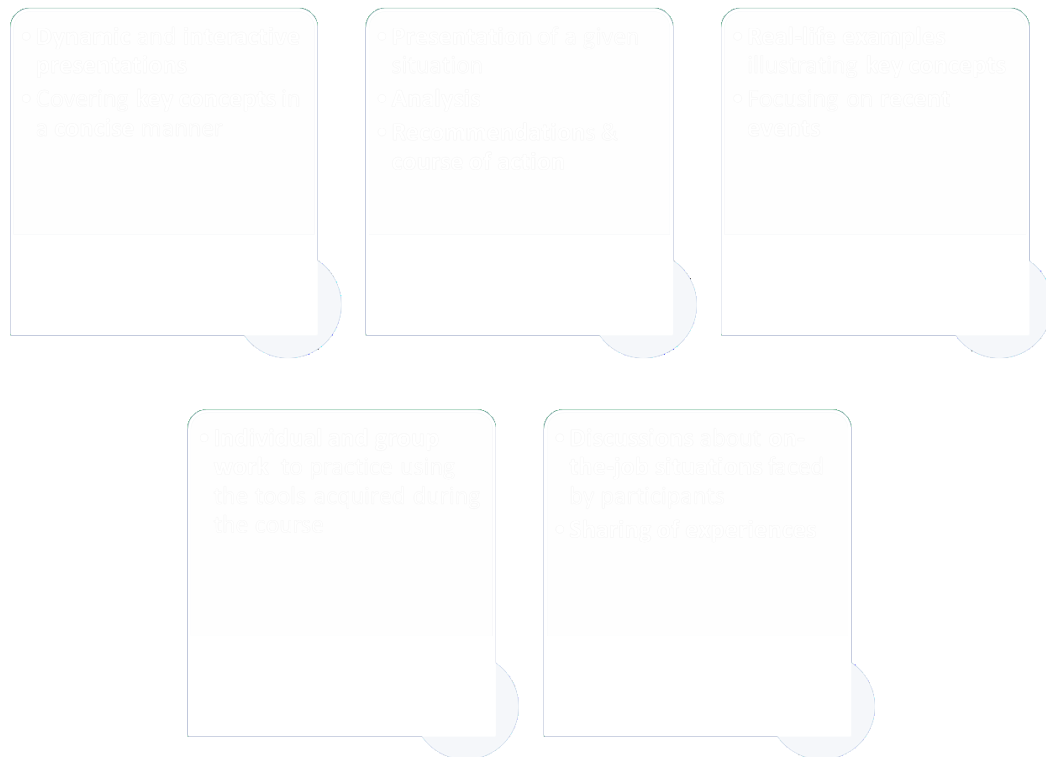- Physical layer performance

Common 3G radio access traffic scenarios

Target Audience

- Telecommunications managers and personnel responsible for the design, planning, deployment and management of 3G radio access technology in their networks and services
- Managers looking to complement their skill-set by gaining a good understanding of 3G radio access protocols fundamentals

Methodology

A combination of engaging activities and dynamic presentations to stimulate and maximize participants' learning.

- Dynamic and interactive presentations
- Covering key concepts in a concise manner

- Presentation of a given situation
- Analysis
- Recommendations & course of action

- Real-life examples illustrating key concepts
- Focusing on recent events

- Individual and group work to practice using the tools acquired during the course

- Discussions about on-the-job situations faced by participants
- Sharing of experiences

Location

A selection of Neotelis' training courses is held in various cities around the world. Please contact us at training@neotelis.com for the complete Yearly Training Calendar.

Neotelis can also deliver in-house sessions of this course specifically for your organization. Please contact us at training@neotelis.com for more information and a Proposal.

About Neotelis

Neotelis provides training, consulting, conferences and publications to the telecommunications industry worldwide. Its team of senior experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 120 countries around the world.