

neotelis

ENG-506 - Wi-Fi/WiMAX: Planning, Design & Deployment

Description

A 5-day Training Program to provide participants with essential knowledge of WiMAX and Wi-Fi technologies, applications and services, as well as regulatory, marketing and business objectives.

Objectives

- Present all relevant and important topics from basic RF theory to link budget math, including:
  - Standards: PHY and MAC protocol layers, security, QoS and interoperability
  - Technology: equipment manufacturers, products, systems and services
  - Regulatory: spectrum policies and licensing
  - Planning: frequency, capacity, coverage and interference
  - Design: site survey and selection, engineering and network design
  - Deployment: project management, vendor selection, installation and commissionin
  - Optimization: testing and troubleshooting

- Identify the components of WiMAX and Wi-Fi products and systems
- Explain the detailed layers and protocols covered in the IEEE standards such as 802.16-2004 for WirelessMAN, 802.11 for WirelessLAN and 802.16e for mobility
- Provide an in-depth understanding of wireless voice, video and data access systems from a technical perspective combined with regulatory, market and business objectives
- Develop the skills to plan, design and deploy an efficient and profitable wireless data network
- Plan for growth, operational support and emerging technologies

Topics

Part I - Wireless overview

General Overview of WiMAX and Wi-Fi

- Identify the components of WiMAX and Wi-Fi systems
- Explore the various standards, forums and suppliers
- Understand the network architecture, deployment challenges, marketing and business opportunities

Part II - Wi-Fi

Radio Frequency (RF) fundamentals

Spread spectrum technologies

Organizations and standards

PHYsical and MAC layers

Network operations

Hardware installation, configuration and management

Troubleshooting Wireless LANs

Wireless LAN Security

Part III - WiMAX

Overview

- Basic network architecture
- Regulatory and spectrum policies
- Frequency bands and standards
- Applications and services
- Products and systems
- Current deployments

IEEE Standard for Local and Metropolitan Area Networks

- Service specific convergence sublayer
- Medium access control common part sublayer
- Privacy sublayer
- Physical sublayer
- Quality of Service (QoS)
- Emerging standards

Engineering planning, design, deployment and optimization

- Project management
- Radio and traffic engineering
- Site engineering and planning
- Network, backhaul and core engineering

- Commissioning and troubleshooting
- Network management systems

Marketing and business opportunities

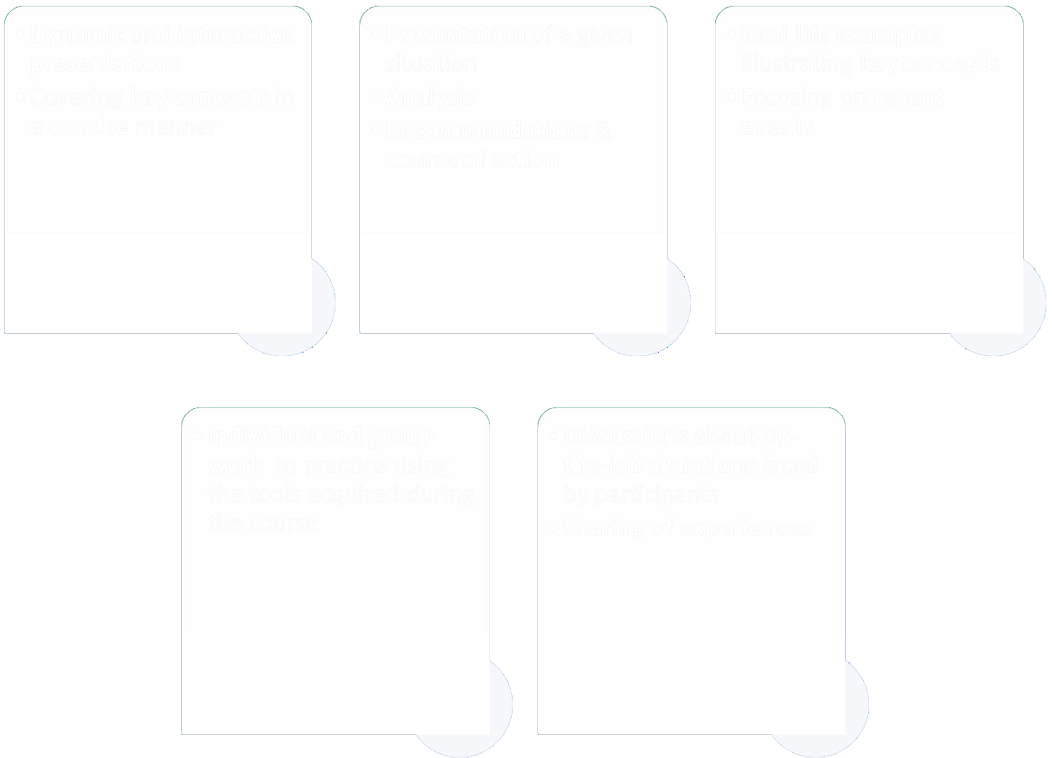
- Market analysis summary
- Market segmentation and service offering
- Strategy and implementation
- Sales, cost of sales, capital and operational costs
- Personnel plan

Target Audience

- Telecommunications engineers, technicians and personnel responsible for the design, planning, deployment and management of wireless voice, video and data access networks
- Entrepreneurs, managers, marketing and sales professionals looking to complement their skill-set by gaining a good understanding of WiMAX and Wi-Fi technologies, applications and services, market and business opportunities
- Telecommunications regulators responsible for spectrum policies, coordination and standard radio system plans

Methodology

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



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.



4802 de Verdun St, Office #1, Montreal, QC, H4G 1N1 Canada
Tel: +1 514 281 1211 Fax: +1 514 281 2005
info@neotelis.com