Microwave Radio Communication Systems

Tunis (Tunisia)

27 April - 1 May 2025

UK Traininig

PARTNER

Microwave Radio Communication Systems

Introduction

This course is designed to provide participants with a comprehensive understanding of modern Microwave Radio Communication systems. From fundamentals to advanced concepts, participants will delve into the intricacies of microwave technology, equipment, protocols, and management. By the end of the course, participants will be equipped with the knowledge and skills necessary to effectively design, deploy, manage, and maintain microwave radio communication systems.

Course Objectives

- To understand the fundamentals of Microwave Radio Communication systems.
- To gain knowledge about Microwave equipment and advanced technologies.
- To grasp basic IP/Ethernet concepts and their integration with microwave systems.
- To learn about various link types, frequencies, bands, wavelengths, and distances in Line-of-Sight LOS communication.
- To comprehend the role of signal transfer and types of losses in microwave communication.
- To explore PDH and SDH protocols, framing, and modulation techniques.
- To understand alignment procedures and techniques.
- To explore advanced features such as Xpic protection, diversity schemes FD, SD, and N+N link configurations.
- To gain familiarity with IPasolink ODU and its advanced features, including software functions.
- To learn about alarms, status messages, and LCT setup for effective management.
- To understand radio link setup, provisioning, and maintenance control.
- To explore metering, inventory management, and software license setup.
- To gain proficiency in equipment utility, user account management, and security protocols.
- To learn about PNMSj and its features for network element NE connections and operation and maintenance.

Course Outline

Day 1

Fundamentals of Microwave Radio Communication

- Introduction to Microwave Radio Communication
- Basic principles and components
- Frequency bands and regulations
- Line-of-Sight communication

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Day 2

Microwave Equipment and Technology

- Overview of Microwave Equipment
- Advanced technologies in Microwave Radio Communication
- IP/Ethernet integration concepts
- Basic concepts of PNMSi

Day 3

Protocols and Modulation Techniques

- Introduction to PDH and SDH protocols
- Framing in Microwave Communication
- Modulation techniques for microwave transmission

Day 4

Advanced Features and Management

- Xpic Protection and Diversity schemes
- N+N Link configurations
- IPasolink ODU and advanced features
- Alarms, status messages, and LCT setup

Day 5

Network Management and Maintenance

- Radio link setup and provisioning
- Maintenance control and metering
- Inventory management and software license setup
- PNMSj features and NE connections

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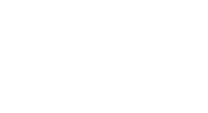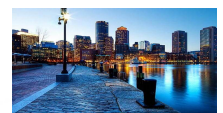|		
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