

Proteus MX/MXD Operations & Maintenance – 1 Day

COURSE TOPICS:

Overview of the Proteus MX / MXD Radio

- Key Features
- Native TDM and native Ethernet
- ACM (Adaptive Code Modulation)
- Software Defined Radio - License Keys
- Element Manager
- Hardware Configurations
- Architecture – Indoor and Split Mount
- Signal Processing Unit (SPU)
- RF Unit
 - Outdoor RF Unit
 - Indoor RF Unit

Standard Data Interfaces

- DS1
- DS3
- OC3
- 1000BaseT

Other External Connections

- Power
- IF (Intermediate Frequency)
- TLI (TDM Line Interface)
- Optical
- Network Management System
- Ethernet

Integrated Traffic Management

- Microbus
- DACS
- SHARP (Self Healing Alternate Route Protection)
- RRP (Rapid Ring Protection)

Provisioning

- Data payload mapping
- CLI (Command Line Interface) versus Element Manager
- Network Management System (NMS)
- Simple Network Management Protocol (SNMPc)

Overview:

The Proteus MX / MXD Operations and Maintenance course is an instructor lead theory and hands on training class. Along with theory of operations the students will work on a Proteus radio link on equipment configuration and troubleshooting. This course is conducted by certified Microwave Network instructor with extensive practical field experience.

Objective:

Upon completion of the course the student will understand the Proteus MX / MXD operations and work with the Element Manager to configure, provision and troubleshoot radio.

Prerequisites:

Completion of Fundamental of Microwave Radio course or understanding of following:

- Basic microwave systems operations
- Basic RF knowledge: modulation, propagation, power and signal measurements
- Fundamentals of networking

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Troubleshooting and Repair

- Alarms
- Firmware Download Process
- Configuration Backup and Restore

Protection and Diversity

- Hot Standby (1+1 versus 1+0 versus 1+n)
- SHARP (Self Healing Alternative Route Protection) – TDM
- Rapid Ring Protection – Ethernet
- Diversity: Space and Frequency

Hands On Practical Exercises – ½ Day

- Configuration Backup and Restore
- Hands-on troubleshooting and correction
- Remove and replace Transceiver and Channel Unit
- Payload Configuration
- Chart Recorder
- Software Updates

* Note – Course material subject to change.