

## Configuring WiMAX Networks

### Course Outline:

#### Module 1: WiMAX Network Overview

At the end of this module you should be able to:

- Diagram a WiMAX network
- List the six major applications of WiMAX
- Converse in the industry-general and vendor-specific WiMAX vocabulary
- Describe the impact of RF regulation on network configuration

#### Module 2: Physical Equipment at the Base Stations

At the end of this module you should be able to:

- List the antenna options for your base station
- Compare and contrast cabling options
- List IP Router and bandwidth management functions
- Compare and contrast backhaul options
- Identify connectors for various backhaul choices

#### Module 3: WiMAX Physical Layer configuration

At the end of this module you should be able to:

- Configure RF channel size and frequency, within the channel options of the base station equipment
- Configure the PHY options for the selected network design
- Configure the base station controllers to match the sectored antenna pattern
- Configure maximum and fallback rates for the uplink and downlink

#### Module 4: WiMAX MAC Layer configuration

At the end of this module you should be able to:

- Configure settings for acceptable bandwidth requests and services
- Configure Retransmission options
- Configure Encryption settings
- Configure Quality of Service requirements for three sample station types

### Course Description:

This course is designed for students who will be installing and configuring WiMAX networks. With the knowledge and experience they acquire, the student will be able to configure the network for optimum Radio Frequency operation, traffic balance, and IP networking performance. Hands-on practice with configuration tools and hands-on labs teach immediately-applicable skills.

SpectroTech can teach industry-general configuration skills, using a number of industry-leading vendor's WiMAX equipment or work with your chosen vendor's equipment and tools to develop the specific configuration labs, for network-specific skills training.

**Course length:** 2 Days

#### Module 5: Internet Protocol Configuration

At the end of this module you should be able to:

- Configure IP address assignment settings, network segments, and Virtual LANs
- Configure IP bandwidth allocations for varying levels of Quality of Service

#### Module 6: Subscriber Station installation and configuration

At the end of this module you should be able to:

- Recite a quick checklist of subscriber-station install steps
- Install a simple residential WiMAX station
- Install a simple point-to-multipoint antenna and transceiver

#### Module 7: Verifying the Configuration

At the end of this module you should be able to:

- Test the network configuration
- Identify trouble spots, and execute simple troubleshooting tasks
- Identify possible interference types and sources
- Test for interference, and configure interference countermeasures
- Use graphical Network Monitoring Tools

#### Module 8: Summary Lab Exercise

Endorsed by: