Course Name: Anritsu Introduction to Spectrum Analysis

Course Overview: This course provides a broad overview of the functions found in modern spectrum analyzers using the Anritsu MS2711D Handheld Spectrum Analyzer as an example. Included are a review of some RF Basics, a function by function description of operation and common measurements such as Channel Power, Occupied Bandwidth, ACPR, Field Strength and C/I with labs to reinforce important topics.

Course Length: One Day

Who should Attend:

- Wireless Carriers
- Base Station OEMs
- Field Engineers
- Site Managers
- WLAN Installers

You will Learn:

- Review of RF Basics
- A thorough understanding of Handheld Spectrum Analyzer operation
- How to make measurements such as Channel Power, Occupied Bandwidth, Adjacent Channel Power, Field Strength, and Carrier to Interference Ratio

Prerequisites: None

Customizable Course: No

Course Content:

Introduction

Modulation

- Amplitude Modulation
- Frequency Modulation
- Pulse Modulation

Spectrum Analyzers

- Basic Operation
- Block Diagram
- Characteristics
- Frequency Range
    - Frequency Resolution
    - Sensitivity and Noise Figure
    - Video Filtering

    - Signal Display Range
    - Dynamic Range
    - Resolution- Bandwidth

Lab 1: Basic Operation

Lab 2: Modulation

Measurement Fundamentals

- Effect of Resolution- Bandwidth
- Effect of Video Bandwidth
- Sweep Limitations
- Attenuation
- Resolving Closely Spaced Signals
- Harmonic Distortion
- Creating a Spectral Mask

Lab 3: Advanced Measurements

Field Measurements

- Occupied Bandwidth
- Channel Power
- Adjacent Channel Power
- Out of Band Spurious Emissions
- Field Strength
- C/I Ratio

Lab 4: Cellular Base Station Measurement