

Course Name: Anritsu Interference Analysis

Course Overview: Two day class which includes basics of spectrum analysis along with a focus on the important topic of Interference Analysis. Learn how to make common measurements and how to identify and locate interfering signals. Includes hands on labs using the Anritsu MS2711D Handheld Spectrum Analyzer. Presentation includes a discussion of Summitek's Oasis II™ Software and its application.

Course Length: Two 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
- Fundamentals of Interference in Wireless Networks
- A process for determining if interference is causing a problem and locating its source
- Practical tips on measuring interference

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 Measurements

Fundamentals of Interference in Wireless Networks

Practical Tips on Measuring Interference

Lab 5: Interference Measurements of a WLAN Access Point

Lab 6: Manual Determination of Interference

Lab 7: Automated Determination of Interference using Summitek Oasis II Software

Lab 8: Master Software Tools