Course Name: Wireless 911 Service Improving Accuracy and Performance

Course Overview:
TESSCO has created a course that will provide two days of focused training on the 911 Wireless Location System (WLS) and the Location Measurement Unit (LMU). This practical course will provide a hands-on program to increase the knowledge and proficiency of technicians and engineers on the methods and techniques required to improve wireless 911 location accuracy and system performance. Finetune the points or products and techniques of particular importance to your operations. Our skilled instructors and staff will tailor the module to meet your requirements

Course Length: 2 Days

Who should attend?
- Field Service Technicians
- Switch Technicians
- Design Engineers
- Managers/Field Supervisors
- Field Engineers
- Contractors/Installers

You will learn:
- 911 phases and FCC accuracy commitments
- Functionality of wireless location system and system architecture
- Calculation processes, accuracy improvement issues, TDOA, AOA
- LMU overview, system connections, RF functions, fine tuning of location and RF
- T1 channel mapping, testing and verification
- GPS concepts and accuracy (GDOP, TFOM, holdover, anomalies)
- System element software, upgrades, testing and verification
- How to validate operation and service verification to SMLC, SCOUT, EMS

Prerequisites: None

Customizable Course: Yes

Course Content:

Day 1 Classroom (8 hours)

Location Based Services
- Applications
- Wireless E-911
- FCC Requirements

Wireless Location System

- Network Architecture
- LMU – SMLC
- SCOUT – EMS
- WLG
- Call Processing
- PSAP

LMU Overview

- Connections
- Field/Switch Comm's
- CPU & DSP
- Lat/Long AMSL/AGL
- Alarms & Faults

GPS Concepts

- Review of GPS
- Alarms and Faults
- GPS Engines
- GDOP
- WAAS
- GPS Anomalies
- Accuracy

RF Functions

- GPS Antennas
- Downlink Antennas
- Beacons Signal Strength
- Sector RSSI
- Receiver Gain

Day 2 Classroom (8 hours)

RF Testing

- Sector Bands & Channels
- Signal to Noise Ratio
- Calculations
- Noise & Interference

T1 (DS0)Connection

- Connections to T1
- Channel Mapping
- Network Configurations

- Testing Methods

LMU Alarms and Faults
- Timing Phases
- TFOM
- Holdover
- Temperature Thresholds
- DSP Faults

System Elements & Software
- LMU Boot / Flash
- FPGA
- GPS
- Recent Versions
- Uploading Process
- Install from EMS

Service Accuracy Process
- SMLC Link
- Updating SCOUT
- Survey and Validator
- EMS Testing
- EMS Uploading to LMU
- EMS Alarms and Reports
- Verification with PSAP
- Drive Testing

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