



## Wireless Traffic Concepts

**Course Length:** 2 days

**Description:** This course provides students with a fundamental knowledge base for wireless traffic concepts required to optimize customer service levels and equipment quantities. This interactive course will provide lectures, discussions and exercises on: traffic and data terminology, proper usage of blocking formulas, and trunk sizing procedures. The Wireless Traffic Concepts course will compare similarities and differences between the wireless and wireline networks to maximize connectivity. Issues associated with data projection will also be addressed.

### **Course Outline:**

- **Wireless Architecture**
  - ✓ Wireless Network Components
  - ✓ Public Switched Telephone Network (PSTN) Components
  - ✓ Signaling Components
  - ✓ Connecting the Wireless Network to the PSTN
  
- **Traffic Terminology**
  - ✓ Seasonal Variations
  - ✓ Daily Variations
  - ✓ Hourly Variations (Busy Hour)
  - ✓ Oddball Days
  
- **Traffic Data**
  - ✓ Peg Count
  - ✓ Overflow
  - ✓ Minutes of Use (MOU)
  - ✓ Percent Occupancy
  - ✓ Sampling Measurements
    - Customer Usage
    - Maintenance Usage
    - Erlangs
    - CCS
  - ✓ Holding Time Usage Formula
  - ✓ Errors in Sampled Data
  - ✓ Validation of Data

### **Blocking Concepts**

- ✓ Offered and Carried Load
- ✓ Blocking Assumptions
- ✓ Use of Poisson Tables
- ✓ Trunk Group Efficiency
- ✓ Trunk Group Size versus Overloads

### • **Trunking**

- ✓ Alternate Routing
- ✓ Use of Erlang B Tables
- ✓ How to Handle “peakedness”
- ✓ Use of Neal-Wilkinson B Tables
- ✓ Use of Erlang C Tables

### • **Data Trending**

- ✓ “Eye-balling” Technique
- ✓ Linear Least Squares Method

Exercises are provided throughout the course, reinforcing a practical understanding of the material.

**What You Will Learn:** In this course you will learn the importance of identifying customer traffic characteristics on wireless networks. Data collection and validation techniques will be explored in detail. Students will learn how to apply various blocking formulas (Poisson / Erlang) to maximize customer service levels. These concepts will facilitate the building and maintenance of an optimal trunk network.

**Who Will Benefit From This Course:** This course is recommended for anyone in the wireless industry responsible for the design, engineering and administration of traffic sensitive components in the wireless network.

**Course Prerequisites:** None

**Instructors:** All of our instructors have years of experience developing and teaching technical courses at Telcordia Technologies (Bellcore) Learning Services in Lisle, IL.. They are all SS7 certified and CompTIA CTT+ Certified Professionals.

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