



GSM Overview

Course Length: 2 days

Description: Global System for Mobile Communication (GSM) is the world's leading wireless communication standard. Starting from a brief historical perspective, this course looks at the architecture, elements and interfaces used in GSM. You will gain a thorough knowledge of how mobile communications and services are accomplished in a GSM network.

Course Outline:

- **GSM Architecture Overview**
 - ✓ Worldwide GSM deployment
 - ✓ Trends in mobile telecommunications
 - ✓ GSM network components
 - ✓ GSM identities
 - ✓ GSM interfaces

- **The GSM Air Interface**
 - ✓ Radio link and user access
 - ✓ Physical channels and logical channels
 - ✓ Different types of channels
 - ✓ Frames and channel coding
 - ✓ Call setups using the radio channels

- **GSM Services**
 - ✓ Bearer services and teleservices
 - ✓ Phase I, Phase II and Phase 2+
 - ✓ Short Message Service (SMS)
 - ✓ Supplementary Services

- **Roaming and Call Flow Scenarios**
 - ✓ MAP protocol structure
 - ✓ Authentication and ciphering
 - ✓ Mobile originated calls
 - ✓ Mobile terminated calls
 - ✓ Short Message Service (SMS)
 - ✓ Handovers



- **Phase 2+ and Beyond**
 - ✓ Bearer and teleservices for Phase 2
 - ✓ CAMEL
 - ✓ Location-based services
 - ✓ GPRS and UMTS

Exercises are provided throughout the course, reinforcing a practical understanding of the material. This gives the student practice in analyzing the protocol and understanding how the data being sent and received is used.

What You Will Learn: In this course you will learn about worldwide deployment and roaming issues. In addition, you will learn what the major elements are that make up a GSM system along with interfaces required to support signaling. Call-flow scenarios show how the various elements communicate. The course will also discuss Intelligent Networking in a GSM system along with the current trends.

Who Will Benefit From This Course: This course will be beneficial to Cellular and PCS providers and their agents who need an understanding of the network. Others who could benefit would include planners, sales representatives, network or traffic engineers and interconnection specialists.

Course Prerequisites: A basic knowledge of mobile telephony and signaling would be helpful, but not essential.

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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