



Who Should Attend?

Anyone willing to understand the differences between 2G, 3G, 4G and 5G systems and the way they can coexist in telecoms environment providing high speed mobile access to diversified services.

Course Scope

1. Introduction to Mobile Networks
 - What is it all about?
 - History of cellular networks
2. 2G and 3G Network Architecture
 - GSM/EDGE Radio Access Network (GERAN) Architecture
 - UMTS Terrestrial Access Network (UTRAN) Architecture
 - Core Network Architecture
 - Circuit Switched (CS)
 - Domain Packet Switched (PS) Domain Nodes
 - Common CS and PS Domains' Nodes
3. 3GPP Specifications' Releases
4. Evolution towards 4G Networks
 - R99: General Network Architecture Radio Access Methods WCDMA - Spreading Power Control Handover
 - R4: MSC Server and Media Gateway
 - R5/R6: Network Architecture IP-Multimedia CN Subsystem (IMS) High Speed Downlink Packet Access
 - R7: HSPA+
 - R8/R9 Long Term Evolution (LTE) Orthogonal Frequency Division Multiple Access (OFDMA) E-UTRAN Architecture Evolved Packet Core (EPC) Architecture Self Organizing Networks (SON)
5. Evolution of Services
 - Basic Services WAP/WML and Internet
 - Open Service Access
 - Virtual Home Environment
 - Rich Communication Suite
6. R10: LTE-Advanced - 4G Systems
7. 5G system architecture
8. IoT

Course Objectives

This training course presents the evolutionary path of mobile systems starting with 2G systems (GSM/GPRS/EDGE) through 3G (WCDMA, HSxPA), 4G (LTA, LTE-A) systems to 5G and IoT standards following 3GPP documentation and real world implementations. Among different aspects of a mobile systems major pressure is put on network architecture including radio access and core network. Additionally, the course also covers evolution of



services.

Prerequisites

Ability to understand technical subjects. Prior knowledge of mobile systems would be an advantage when attending the course.

Training Structure

Two-day training divided into logical sessions.

Methodology

Instructor-led training.