UMTS Overview

Who Should Attend?

This course is intended for anyone who wants to learn about issues concerning UMTS architecture and functionality.

Course Content

1. Overview.
2. Standardisation.
3. Radio Access Evolution.
4. Evolution of the GSM Core Network.
5. UMTS Specification Releases.
6. R99: UMTS Network Architecture.
7. WCDMA—Spreading Spectrum.
8. Channellisation.
9. Scrambling.
10. Power Control.
11. Handover.
12. Radio Interface Protocol Stack.
13. UTRAN Architecture.
14. Radio Network Signalling.
15. Circuit-switched (CS) Domain.
16. Packet-switched (PS) Domain Nodes.
17. Common CS and PS Domain Nodes.
18. General Network Architecture.
19. R4: MSC Server and Media Gateway.
20. R5: Network Architecture.
21. IP-Multimedia CN Subsystem (IMS).
22. IMS Registration.
23. High Speed Downlink Packet Access.
24. R7: HSPA+.
25. Evolution of Services.
26. Basic Services.
27. WAP—WML and Internet.
28. Open Service Access.
29. Virtual Home Environment.
30. Charging and Billing.
31. UMTS Terminal Architecture.
32. UICC, USIM and Terminals.
33. R8: Evolved Packet System (EPS).
34. R10: Towards 4G.

Course Objectives

This is an intermediate technical course, which covers all aspects of architecture and

functionality of third generation cellular networks—UMTS, preparing you for the coming of 3G.

Prerequisites

The participants should have knowledge of GSM/GPRS.

Training Structure

Two-day training divided into logical sessions.

Methodology

Instructor-led course. Lectures and theoretical exercises.