# **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

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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.