



Who Should Attend?

This training is an excellent choice for engineers and managers who are already familiar with LTE and are beginning to introduce VoLTE in their network.

Course Scope

1. Introduction.
 - LTE.
 - IMS.
 - MMTel.
 - VoLTE.
 - SR-VCC.
 - SCFB & SMSoSGs.
 - RCS.
2. LTE Overview.
 - Network Structure.
 - Attach Procedure.
 - Default and Dedicated Bearer.
 - PCRF Usage.
 - QoS Parameters.
 - Efficient Handling of VoIP in E-UTRAN – SPS, DRX, DTX.
 - Fast Re-transmissions.
 - Link Adaptation.
 - AMR-NB and AMR-WB Speech Coder.
 - Fast Signalling.
 - Service Continuity.
3. IMS Overview.
 - IMS Architecture Components.
 - Application Servers.
 - Addressing and Routing Principles.
 - IMS Registration.
 - IPX.
 - Security.
 - Number Portability.
4. Voice Call.
 - Mobile-to-Mobile Call.
 - Interworking with CS Systems – Calls Between VoLTE and CS Terminals.
 - Coexistence of VoLTE and CSFB – T-ADS.
5. Supplementary Services.
 - MMTel and VoLTE Supplementary Services.
 - Synchronisation of Subscriber Profiles Between CS and IMS Domains.
 - Examples of Supplementary Service Procedures.
6. SMS.



- SMSoIP Service Architecture.
- SMS Transfer.
- Integration with SMS Router.
- 7. SR-VCC.
 - SR-VCC Handover from LTE to 2G/3G CS Network.
 - SR-VCC Service Architecture.
 - SR-VCC Related Identities.
- 8. CSFB and SMSoSGs.
 - Traditional CS Services in LTE without VoLTE Support.
 - CSFB and SMSoSGs as the Intermediate Solution for Roaming Subscribers and Emergency Calls.
- 9. Security.
 - 3GPP & IMS Authentication and Key Agreement.
 - Ciphering.
 - Generic Authentication Architecture.
- 10. Emergency Calls.
 - Emergency Service Categories.
 - Domain Selection for Emergency Call Set-up.
 - Architecture.
 - Emergency Registration.
 - Geographical Positioning.
- 11. Roaming, Interconnect, Charging & Accounting.
 - LBO.
 - IBCF.
 - TrGW.
 - BGCF.
 - Charging Architecture.
 - Offline and Online Charging.

Course Objectives

VoLTE Overview is an intermediate level technical training focused on GSMA IR.92 IMS Profile for Voice and SMS over LTE. VoLTE is presented in the broad context of existing multi-RAT mobile systems. Hence, the training explains not only IMS architecture and procedures but also integration of VoLTE with the existing network infrastructure and services (including CSFB and SMSoSGs).

Prerequisites

The participants should be familiar with basic aspects of mobile network architecture and services. Background knowledge of LTE is highly recommended.

Training Structure



Two-day training divided into logical sessions.

Methodology

Instructor-led training. Lectures and multimedia presentations.