

Voice over LTE Overview

First deployed in 2009, there are now more than 300 commercial LTE networks. High speed data has been the key LTE driver, with mobile voice mostly on 2G/3G networks. However, given rapidly expanding LTE coverage, operators are now trialing Voice over LTE (VoLTE) services.

This 3 hour workshop outlines VoLTE services, protocols and architectures.

Who would benefit from this course?

Those in technical roles associated with the LTE rollouts. Course participants may include network operators, vendors, service providers, application developers, management staff and engineers.

Outline

The course begins with an overview of 2G/3G circuit switched voice and over the top (OTT) communication services. EPS and IMS architectures are then outlined, along with a brief SIP signalling overview. Circuit Switched Fallback (CSFB) and Single Voice Radio Call Continuity (SVRCC) are then considered, focusing on the LTE and 2G/3G signalling interactions.

Multimedia Telephony (MMTel) standards are then reviewed, followed by an overview of the GSMA VoLTE standard and how it defines LTE voice services. LTE call setup and voice QOS mechanism are then considered. The workshop concludes with an overview of VoLTE trials and deployment scenarios, and evolving Rich Communication Services.

Course Objectives

Those completing this course should be able to:

- Describe Circuit Switched Voice architectures
- Outline the key Evolved Packet System (EPS) and IMS architecture components
- Understanding SIP signalling operation
- Describe Circuit Switched Fallback (CSFB) and Single Voice Radio Call Continuity (SVRCC) architecture and operations
- List the key capabilities outlined in the MMTel standard
- Understand VoLTE call setup, QOS and emergency call procedures
- Outline the extent of worldwide VoLTE trials and the VoLTE business drivers
- Describe the capabilities enabled by the Rich Communications Suite (RCS)