LTE & EPC - Principles and Overview

LTE – Long Term Evolution – is the working title for the development of a new mobile standard by the standardization body 3GPP. Within the training, the new standard and its basic features will be explained, similarities and differences to UMTS highlighted and interworking between UMTS, GMS and LTE will be described. Further the new network architecture and its interfaces will be introduced, the so-called System Architecture Evolution. To complete the introduction, an overview of the main procedures as for example Network Attach and Scheduling will be provided.

Target Group / Requirements

The training addresses UMTS/GSM specialists and staff working in network planning, optimization or network operation. Basic knowledge of UMTS/GSM networks is expected.

Course Content

What is LTE and EPC?
- Objectives of LTE and EPC
- History of Mobile Networks from GSM/UMTS to LTE/EPC
- LTE/EPC Key parameters and key concepts

Network Architecture
- Evolved Packet System Architecture: All IP network
- E-UTRAN: The new eNB
- Evolved Packet Core EPC (MME, S-GW, PDN-GW)
- Architecture models
- What is different to UMTS/GSM?
- What happens to voice and SMS services in LTE?
- QoS in LTE/EPC

How does LTE work?
- New air interface of LTE
- Resources in LTE: Time and Frequency Domain
- Flexible Bandwidth in LTE
- Physical Channels and Signals in LTE
- How is the Resource Grid used?
- MIMO
- Spectrum Allocation
- FDD and TDD in LTE
- Peak Data Rates in UL and DL
- UE Capabilities

LTE/EPC Procedures
- Scheduling in eNB
- Layer 3 Procedures in LTE/EPC
- Mobility in LTE/EPC

Course Duration:
   1 day

Course Number:
   NW1245

Requirements:
   Basic knwoledge of Mobile Networks

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Interworking LTE/UMTS/GSM

- Mobility Concept LTE – UMTS/GSM
- Network Enhancement for Inter RAT Handover

Certification

- Certificates are given to all participants at the end of the course about the successful completion.

Course Registration:

Please contact us via

- phone: +49 89 1894354-405
- email: training@tfk.de or
- via our website www.tfk.de/training

You will receive a confirmation of your registration. We can also advice you concerning the best combination of course contents.

For clients with special requirements the optimal training concept can be customized. Modules from our training portfolio can be combined to meet your company-specific needs.