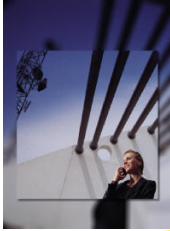


Mobile Systems



The UMTS 3G networks is an evolution from previous GSM networks. UMTS was defined first in R-99 with the main difference from previous network in radio capacity. The new air interface, UTRAN, together with the separation of the Radio Access Network and Core Network prepared for a higher grade of flexibility.

UMTS

OBJECTIVES

- Understanding UMTS..
- development
 - concepts
 - architecture
 - mobile equipment and USIM
 - speech coding and transcoding
 - UTRAN
 - core network
 - services
 - UMTS signalling and traffic
 - GSM/UMTS integration

TARGET GROUP

- People in working with GSM/UMTS in..
- service
 - management
 - development

PRECONDITION

The UMTS standard level requires general knowledge of mobile systems and telecommunication.

Standard

Content day1

- ✕ **UMTS development**
- ✕ **Services and their system requirements**
- ✕ **UMTS concepts**
- ✕ **System Architecture**
 - Access Network (UTRAN)
 - Core Network
- ✕ **Mobile Equipment and the SIM-card**
- ✕ **Speech coding and transcoding units**

✕ UTRAN

- Modulation methods for band spreading
- UMTS codes; Scrambling and Channelisation
- Radio theory primer
- Handover types
- Power regulation principles

✕ Core Network

- Split architecture
- ATM or IP in CS domain
- Signalling gateways
- Nodes and protocols in PS domain
- IMS primer; requirements, nodes and features

✕ UMTS signalling and traffic

- UTRAN
 - Bearers and connections
 - Protocols and channels
 - Internal signalling
 - Core Network signalling
- Traffic case
 - Speech
 - Data
- ✕ **GSM/UMTS integration**
 - Requirements for merging
 - Network selection
 - Cell selection
 - Handover
 - Link Performance
 - Radio resource management
 - System capacity

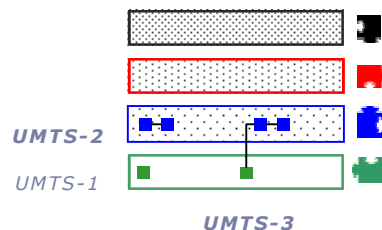
Products

UMTS-1:UMTS Insight (1 day)

UMTS-2:UMTS (2 days)

Product Combinations

UMTS-3:UMTS-1+2 (3 days)



Content day2

- ✕ **Services**
 - OSA concept
 - Service Network
- ✕ **UE**
 - Mobility management states and UE activities
 - Authentication and security

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