

Telecommunications networks

If you are wondering how a traditional fixed line telephone network or a mobile network works, then this course is right for you.

The course is structured in easy to understand modules which explain the concepts behind this technology. Modern fixed and mobile telecommunications are discussed from the perspectives of data and voice networks.

Target Group / Requirements

The course is focussed to the needs of participants from sales, management and human resources who are new to the subject of telecommunication; and to all others who are interested in a general overview of telecommunications networks. Prerequisite for this course is a general technical basic knowledge.

Course Content

Set-up of a telecommunication network

- General structure, hierarchies, interfaces
- Access technologies
(radio and wired access, analog and ISDN connection, DSL)

Basic Technological Concepts

- Duplex Methods – two-way simultaneous communication
- Multiplexing Methods – techniques to share resources between users
- Transfer Modes – networking solutions (circuit switching / packet switching)
- Transmission Networks – network technology (TDM, PTM & ATM)

Traditional Telephone Networks

- Network Structure and Hierarchy – provide logical representation of network parts
- Customer Premises Equipment – devices owned by users to connect to the network
- Access Network – connection between customer equipment and network
- Core Network – transmission of voice and data traffic inside networks

Mobile Networks

- Mobile evolution - history of cellular mobile communication up to today
- GSM Network Components – elements which make up a complete GSM network
- GSM Radio Interface – transmission over the air from antenna to mobile device

Data Networks

- Technologies (ATM, Ethernet, TCP/IP) – overview of the various current solutions
- The Internet – TCP and IP explained with reference to the OSI model
- Switching and Routing – the difference between a 'router' and a 'switch'
- LAN – architecture and cabling explained

Course Duration:

3 days

Course Number:

N1000

Requirements:

General technical basic knowledge

Mobile Data Networks

- GSM 2nd and 2.5 Generations – HSCSD, GPRS and EDGE explained
- 3rd Generation – UMTS networks, standards and multiplexing solutions
- Data services and platforms – intelligent networks and WAP

Network Convergence

- Converged networks – everything over one network
- CS & PS Networks – evolution and needs of circuit and packet switched networks
- VoIP market trends – why the market is developing real-time services of data networks
- VoIP network methods – looks into the latest IP solutions providing QoS in IP networks

Trends in Radio Networks

- Wireless in all areas: WLAN, WiMAX and the others
- Future ideas: Interworking of technologies

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 1894354-0
- email: training@tfk.de or
- via our website www.tfk.de/training

You will receive a confirmation of your registration. We can also advise 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.