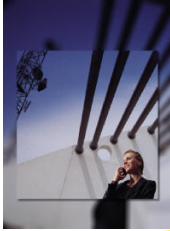


Mobile Systems



The IMS functionalities can be defined in three planes; Application, Control and User each plane has a specific aim and is connected vertically with other planes. The use of IMS is primary within Mobile networks but can also be of benefit in other networks. This course will give a good understanding of IMS nodes and functions.

IMS

OBJECTIVES

- Understand IMS..
- GSM core network evolution
 - general ideas
 - nodes and functions
 - application plane
 - control plane
 - user plane
 - and the SIP protocol
 - concepts
 - security
 - charging
 - protocols
 - services

TARGET GROUP

- People working with core networks in mobile or other systems. The job can be..
- service
 - development
 - management
 - roaming

PRECONDITION

- The standard level requires general knowledge in mobile systems and data communication

Standard - 2 days

Content day1

- ✕ **GSM evolution to R-4**
 - GSM/GPRS/EDGE/UMTS
- ✕ **IMS overview**
 - P-I-/S-CSCF
 - HSS
 - BGCF
 - MGCF
 - Session set-up
- ✕ **Application plane architecture**
 - Application Servers
 - Reference points and protocols
- ✕ **Control plane architecture**
 - Reference points and protocols
- ✕ **User plane architecture**
 - Reference points and protocols

✕ SIP

- Architecture
- SIP - message format
- Registration
- Sessions and services
- SIP extensions
- SIP compression

Content day2

✕ IMS Concepts

- Registration
- Session initiation
- Identification
- Discovering IMS entry point
- Assignment of S-CSCF
- User profile
- Connectivity IMS-CS
- Registration example
- Session example

✕ Security services

- Security model
 - authentication and key agreement
 - network domain security
 - security for SIP-based services
 - security for HTTP-based services

✕ Charging

- Architecture
- charging information correlation
- charging information distribution

✕ Protocol summary

- RTP, RTCP
- MEGACO
- DIAMETER
- IPSec
- COPS

✕ Services

- Presence
- Messaging
- Conferencing

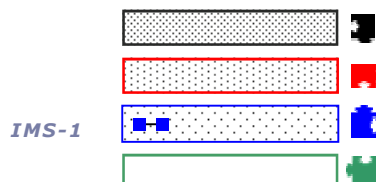
✕ Traffic case

- Example of IMS session

✕ Summary and beyond R-6

Products

IMS-1:IMS (2 days)



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