

Boost your skills with



UDcast's Mobile TV Training

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for Mobile TV  
Training*



**UDcast**

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# UDcast Mobile TV Training

From the leader in the DVB-H IP Encapsulation, you will get a 2 day training on Mobile TV theoretical and practical aspects.

The training is delivered at the UDcast Headquarters situated in Sophia-Antipolis, one of the leading technology parks in Europe, which is located on the French Riviera, 20 minutes drive from the Nice International Airport. This airport is reachable with all major Airlines, as well as with a substantial number of low-cost airlines directly from many cities in Europe.

Hotels are available in the technology park itself, as well as in nearby larger towns like Nice, Antibes or Cannes.

During the training you will have the opportunity to meet key UDcast people involved in the development of Mobile TV, as well as the UDcast business people who are intimately familiar with the worldwide Mobile TV landscape.

The training includes on-site lunch and refreshments. Training hours are approximately from 09:00 to 17:50 with a 1 hour lunch break.

## Training Pre-requisites

To fully benefit of this course, you should have a basic knowledge of TCP/IP.

## Course Outline

### Day 1 MORNING

#### ■ Mobile TV overview

- > History towards DVB-H standard
- > DVB-H standard novelties:
  - Time Slicing and Power Saving
  - MPE Forward Error Correction
  - 4k mode and TPS bits
- > DVB-SH architecture overview
  - Satellite Component
  - Complementary Ground Component
  - Frequency planning SC / CGC / 3G
- > DVB-SH highlights
  - RF features
  - Time slicing
  - Power saving
  - Error Protection

# Course Outline

## Day 1 MORNING

- SHIP
- > Mobile TV conceptual overview
  - OMA-BCAST and CBMS
  - Electronic Service Guide
  - Service Purchase and Protection
- > DVB-H/SH challenges
- > Mobile TV technologies DVB-H/SH, DMB, MediaFLO, ISDB-T
- > Differences between Digital TV and Mobile TV
- > Mobile TV network architectures: Mobile Operator and Broadcaster view
- > Summary

## Day 1 AFTERNOON

### ■ DVB-T/H/SH physical layer

- > DVB-T, -H and -SH transmission systems
- > Frequency Spectrum and Bandwidth
- > Coded Orthogonal Frequency Division Multiplexing
- > IFFT Inverse Fast Fourier Transform
- > Guard Interval
- > Doppler and Echo effects
- > Constellation and Hierarchy
- > Interleaving and Coding
- > OFDM Frame Structure, Pilot Carriers and TPS bits
- > DVB-H Specifics:
  - 4k mode
  - TPS Bits
  - In-depth Interleaver
- > DVB-SH Specifics:
  - Adaptation
  - Turbo coding
  - Time interleaving
  - Framing and modulation
  - OFDM mode
  - TDM mode

### ■ DVB-SH link layer

- > IISO/IEC 13818-1
  - MPEG2 Transport Packets and Sections
  - Tables
- > ETSI DVB standard
  - Tables: NIT, SDT, TDT, EIT, INT

# Course Outline

## Day 1 AFTERNOON

### Multi-Protocol Encapsulation

- > ETSI DVB-H standard
  - Time-Slicing
  - Modifications to MPE header
  - MPE-FEC
- > MPE-iFEC
  - Purpose
  - Operating principles
  - Example walk-through
  - Parameter selection guidelines
- > SH Services
  - Rationale
  - Implications: IPDC, DVB services, SFN, SHIP
- > Reference information
  - SI/PSI tables
  - Glossary
  - Documentation

### UDcast Mobile TV Solution

- > Product overview
  - IP Encapsulator (IPE-10)
  - IPE-Manager
  - iSplicer
  - GOLDENEAGLE Analyzer & Silver monitor
- > Feature highlights
  - Time slicing, channels & sub-channels
  - Statistical multiplexing
  - Content protection
  - Loss-free handover
  - Session management
  - MIP / SHIP insertion
  - Monitoring
  - Regionalization

## Day 2 MORNING

### The UDcast IP Encapsulator (IPE-10)

- > Initial setup
- > Monitoring
- > Troubleshooting
  - Self-tests
  - Alarms & logs
  - System graphs

# Course Outline

## Day 2 MORNING

### The UDcast IPE-10 MIP / SHIP pilot API

- > Features
- > Protocol description
- > Use case

### The UDcast IPE-Manager

- > Understanding DCO, NO, Channels, fundamenta concepts
- > SNMP access to the IPE-Manager
- > Initial Setup of IPE-Manager
- > Configuration of IPE-Manager device
- > Understanding the workspace
- > Setup of DVB-H network infrastructure
- > Management of sessions

### Hands-on

## Day 2 AFTERNOON

### Flexible distribution with UDcast iSplicer

- > Reminder on distribution architectures
- > Challenges of centralized distribution
  - Regional Content
  - Addressable Advertising
  - Microcellular coverage
- > Delta-T calculation: Issues and Possible solutions
- > Distribution to Transmitter Issues
- > The MIP /SHIP Protocol
- > UDcast iSplicer functional description
- > UDcast iSplicer configuration and operation

### DVB-H/T/SH monitoring and analysis

- > Setup of the Analyzer
- > Configuring monitoring and setup of alarm parameters
- > Visualising error history
- > RF layer Monitoring (RF levels, constellation, guard Interval)
- > MPEG-2 TP layer analysis (PID distribution)
- > Expert Mode: SI/PSI and time-slicing analysis

### Hands-on

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