TekINSIDE media

# IPTV Technology

## Description

This training course is dedicated to any attendee who expresses interest in learning more about IPTV. It is a great opportunity for any actors of the TV ecosystem such as TV broadcasters, network operators, terminal manufacturers and system integrators to learn more about this technologies and systems.

## Course Objective

This training course aims at providing basic theoretical and practical knowledge on the technology of IP Video, IPTV monitoring and measurements.

## Course Pre-Requisite

No specific television or broadcast knowledge is required. But general familiarity with technical concepts is assumed. Some knowledge, experience and exposure in IT Technology and Video/Audio principles will be better.

## Course Duration

This training course usually takes place over a day. This could be extended on specific request.

## Trainer

Training course led by the technical expert who has a few years of working experience in analog video, digital video, audio technologies, MPEG and RF; and has conducted related equipment and technology training programs to a wide range of industries ranging from broadcast to telecommunications to education to the military. Trainer was trained by the international training consultancy.

## Format

Classroom explanation and demonstration
Each delegate completing this course will receive a full set of course note and certificate of attendance

## Course Content

- Introduction
  - IPTV Features
  - IPTV Vs. Internet TV
  - Overview of IPTV Architecture
  - IPTV system Overview
  - IPTV Delivery technologies

- Video Compression
  - Need for Compression
  - Key to Compression
  - MPEG Compression Technologies

- MPEG Transport Stream
  - System Layer – MPEG Stream Types
  - Program Stream & Transport Stream Packet Structures
  - CBR vs VBR
  - Program Clock Reference

- IP Networking Fundamentals
  - Network Overview
  - Layer & OSI Model
  - IP Addresses, Datagrams and Packets
  - IP Network Equipment

- Video Over IP
  - Video Encapsulation
  - Encapsulating Media Data
  - Transport Protocols
  - Packet Transport
  - Transport Methods

- IPTV Signaling
  - Basic Concepts
  - Unicasting & Multicasting
  - Joining & Leaving Multicast

- IPTV Issues & Problems
  - IPTV Challenges
  - Video Problems
  - Physical Layer & Protocol Stack Problems

- IPTV Monitoring & Measurements
  - Network Impairments
  - Three Principles of IPTV
  - IP Video Flow Behavior
  - IPTV QoS / QoE
  - Measurement Parameters
  - IPTV Test Methodology
  - Test Tools & Technology
  - Cross Layer Measurement & Test
  - Distributed Multi-Layer Monitoring

- Summary