



VIDEO OVER IP COURSE INTRODUCTION

This course is important for all telecommunications carriers contemplating deploying video services over their existing or planned copper, fiber or wireless networks. The course will cover the detailed business issues related to the deployment of video services including the reasons why to do it and the risks of deploying or not deploying video services or having a video services strategy.

The technologies required will also be discussed in detail to identify all the necessary components required to deploy a fully integrated working system including content acquisition and management, security and network management.

Who should attend:

While anyone will benefit from the course it is particularly well suited for telecommunications management professionals including General Managers, Plant Managers, Marketing and Sales Executives and Industry Consultants. This course is best suited to those companies and company Executive Management Professionals contemplating deploying video services now or making the decision to do so within the next 36 months.

Prerequisites:

Attendees should be familiar with physical transport layers including copper, fiber, coax, and wireless as well as how to deploy and manage these physical layers. Attendees should also have an understanding of layer two and layer three networking including but not limited to ATM, Ethernet, IP, IP over ATM, and MPLS. Additional understanding of xDSL, FTTx, advanced routing techniques, VLANs, IP multicast, IP unicast, IGMP, MPLS and MPEG video compression and video streaming would be helpful.

Objectives:

Upon completing this course the attendees will be better able to:

- Address the business issues and develop a business case around deploying video services over their existing networks.
- Identify all the components, hardware and software, manufacturers and content suppliers required to deploy a true fully integrated working system.
- Understand the provisioning and management of these services in the field as well as OSS and billing.
- Develop and execute marketing and sales strategies that will support the successful deployment of video services over their existing networks.

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COURSE OUTLINE

1. What is Video Over IP - In this section the history and definition of video over IP will be discussed along with a review of the types of devices required to receive video over IP and its effect on the traditional broadcast model.

- Definition
- Devices
- The Changing Broadcast Model

2. Drivers, Enablers, Risks - This section will cover the competitive environment that is driving the proliferation of video over IP over telecommunications networks as a competitive tool to meet the competitive threats they are now facing from MSOs, Satellite Networks and Power Companies.

- Competition
- Convergence
- Content availability

3. Video Over IP and Broadband - This section will cover the progress of video over IP and its implementation over existing copper, both twisted pair and coaxial, fiber and wireless networks.

- Wireline
- Wireless

4. Video Over IP Components and Systems - This section covers in detail what a complete, end-to-end, video over IP network looks like. We'll look at specifics of every component required to make up an end-to-end video over IP system. We will also show how it will overlay in an existing telecommunications network.

Additional topics to be discussed in detail will include physical transport layers including xDSL over twisted pair, FTTx, coax and HFC, and wireless as well as how to deploy and manage these physical layers. Advanced concepts of layer two and layer three networking including but not limited to ATM, IP, IP over ATM, MPLS, Ethernet. Advanced routing techniques will also be discussed specific to VLANs, IP multicast, IP unicast, IGMP and MPLS. In addition this section will also cover MPEG video compression and video streaming over layer 2 and layer 3 networks in detail.

- Protocols
- Video Headends
- Video Compression
- Broadcast Video (multicast)
- Video on Demand (unicast)
- The Video Over IP Network
- Equipment Manufacturers
- Real World Deployments

5. The Customer Premises - We will discuss the CPE required to deploy Video over IP. This will include DSL modems, in home gateways and set top boxes. We will discuss the features, functionality, software compatibility and how they are wired in the home. We will also address the risks associated with wiring and home networking.

- CPE
- The Set Top Box
- Inside wiring

6. Service Differentiation - This section will cover in detail the middleware, end user interface, features, functionality, and the services accessed and supported by the UI. We will also stress the importance of services differentiation via all digital programming with SDTV and eventually HDTV and video on demand.

- Ease of use
- Middleware
- Set Top UIs
- All digital programming
- Pay per View
- Near Video on Demand
- True Video on Demand

7. The Business Case for Video Over IP - This section will cover the outside plant requirements of deploying video over IP and the associated costs and justification.

- The outside plant
- Copper to Optical or Wireless
- The Triple Play

8. Legal and Regulatory Issues - We will discuss the obvious (and not so obvious) legal and regulatory issues associated with Video over IP. These include not only the cost of programming but also the access to programming that (with other issues) may eventually lead to antitrust actions.

- Regulated vs Non-Regulated
- Equal access to programming
- Anti trust issues on the horizon

9. What will it all look like in the future?

- Demand based?
- IPTV?
- ITV?

Course Review and Summary