



ET 2.0: Telecommunications Technical Curriculum (TTC)

Program 5: Audio/Video Knowledge

Course 2: Digital Cable Television

PROGRAM OVERVIEW

The ExperTech 2.0 series is a library of CD-ROM or intranet-based products covering key communications topics. Seminar style presentations provide telecom professionals with easy access to the information they need. Topics are presented by Hill Associates instructors renowned for their technical expertise, industry experience, and outstanding presentation style.

The *Telecommunications Technical Curriculum (TTC)* has a total of five programs, each of which consists of one or more courses. TTC is a modular, yet comprehensive program designed around the needs of those who want the details but cannot attend a more traditional classroom-based, leader-led program.

Program 5: Audio/Video Knowledge is a four course series that deals with concepts and terminology related to services focused on the delivering audio and video services over a cable network. In this second course of the series, *Digital Cable Television*, we provide an overview of the current and historical drivers for digital television, a review of digital compression techniques (with an emphasis on MPEG), and an overview of options for transporting digital signals to the subscriber. The course concludes with an examination of digital modulation strategies.

Program 5, Course 2: Digital Cable Television runs 107 minutes, and includes four lessons of audio, interactive elements, review slides, section knowledge checks, and a final exam. The participant can expect to spend about twice this amount of time to complete the course.

This program has three primary objectives:

- Provide an overview of digital television transmission concepts
- Explain and differentiate among the details associated with various digital compression and transport techniques and standards
- Discuss the details behind various strategies for modulating digital information for transport

Specific topics can be developed, or packaged together to create a unique and customizable curriculum. All of our standard titles are available for preview at our store (www.hill.com/store).

About Hill Associates

At Hill Associates, we excel at creating custom talent development programs. Our experts help identify and assess your needs, and create training and educational programs that exactly meet those needs. Though we specialize in information technology, we've strengthened companies and organizations in a wide range of industries for over 25 years. Let us help you create a world-class talent development program that moves your business forward.

PROGRAM OUTLINE

Lesson 1: From Analog to Digital

- Introduce the drivers for the move to digital television
- Examine historical issues related to satellite and HDTV
- Assess the advantages of moving to digital television

Lesson 2: Digital Compression

- Explore concepts related to the compression of digital television including digitization of video, entropy and predictability, spatial and temporal compression, and MPEG standards
- Discuss audio digitization and compression techniques

Lesson 3: Digital Transport

- Present options for the transport of digital audio and video
- Examine the basic features of the MPEG-2 Systems Layer
- Identify sources of digital television standards

Lesson 4: Digital Modulation

- Explore strategies for modulating digital information for transport including BPSK, QPSK, QAM, and 8-VSB
- Examine signal measurement techniques