



ET 2.0: Telecommunications Technical Curriculum (TTC)

Program 5: Audio/Video Knowledge

Course 3: Audio and Video Equipment

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 third course of the series, *Audio and Video Equipment*, we provide an overview of the architecture of a cable television system, including signal acquisition systems, signal processing elements, signal transport, and subscriber equipment. The course includes a discussion of video services including broadcast video, narrowcast video, and video on demand (VOD). Ad and emergency alert insertion are also reviewed.

Program 5, Course 3: Audio and Video Equipment runs 92 minutes, and includes five 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 a detailed review of the architectural and equipment elements that are part of a cable television network
- Explore the types of audio/video services delivered over that network
- Explore the relationship among various services and spectrum usage, including program access control mechanisms

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: Cable System Architecture

- Identify and describe the four components of the cable network architecture
- Discuss signal acquisition, processing, transport, and subscriber terminal equipment

Lesson 2: Service Requirements

- Examine broadcast, narrowcast, and interactive video services
- Explore the relationship among various services and spectrum usage, including program access control mechanisms

Lesson 3: Ad Insertion and Emergency Alerts

- Review mechanisms for analog and digital insertion of alerts and advertisements
- Discuss the concept of video on demand (VOD)

Lesson 4: Video Receiver Architectural Elements

- Explain the basic functions of a modern video receiver (set-top box)
- Examine the various cable connectors implemented by these systems

Lesson 5: HFC Architectural Elements

- Examine the architectural elements of the hybrid fiber/coax (HFC) cable plant, including elements of both the coaxial distribution network (amplifiers, subscriber tapes, coaxial cable) and the optical distribution network (optical nodes and fiber)