



Broadband Networks

PROGRAM OVERVIEW

Broadband is everywhere. Access to broadband networking is viewed as critical, so much so that many states are developing plans to provide 100 percent broadband availability. Politicians speak as if access to broadband is to become a universal right.

In this course we examine the various wired and wireless options to providing broadband access for consumers and small business. The course begins by defining broadband and reviewing the current market penetration of the various options.

We examine various wired broadband architectures in detail, including cable modem systems, DSL, and optical fiber-to-the-premises (FTTP), with a look at the challenges faced by companies deploying these. Our final sections of the course review wireless broadband options, including Wi-Fi hotspots and municipal Wi-Fi networks, the status of WiMAX technologies, and the cellular carriers' broadband offerings, including current solutions (HSPA and EVDO Rev A) as well as the proposed Long Term Evolution for 4G networks.

The program has six primary objectives.

- Describe three wired network architectures and three broadband wireless options for broadband networking
- Describe the implementation of high-speed cable modems
- Discuss the advances in DSL in fiber-to-the-node networks
- Describe current and developing fiber-to-the-premises technology
- Describe Wi-Fi, WiMAX (fixed and mobile) and cellular data networks for broadband Internet access
- Discuss voice over IP implementations in broadband networks

Hill Associates can customize this program to address your specific Sales Engineering talent development program goals. We will work with you to identify the specific technologies and solutions you wish to discuss, to understand your particular competitive market, and develop case studies that focus on unique challenges facing your customers.

About Hill Associates, Inc.

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: Market and Applications

- Examine the business and consumer markets, the applications driving broadband, and the challenges the industry faces in deploying it

Lesson 2: Cable Modem Systems

- Explore the technology of the cable infrastructure (HFC), the standards (DOCSIS), and the challenges of the system
- Discuss what it takes to deploy new converged services over cable systems

Lesson 3: Digital Subscriber Line (DSL)

- Present the technological overview of various types of DSL (ADSL, VDSL, HDSL), including the standards, features, and benefits of each
- Discuss what it takes to deploy new converged services over DSL systems

Lesson 4: Fiber-to-the-X

- Provide a technological overview of various broadband fiber access alternatives, including the standards and the economics for deployment
- Discuss what it takes to deploy new converged services over fiber-based systems

Lesson 5: Wireless Broadband

- Describe Wi-Fi, WiMAX (both fixed and mobile), and cellular (HSPA, EVDO, and LTE) broadband data networks
- Discuss what it takes to deploy new converged services over wireless systems