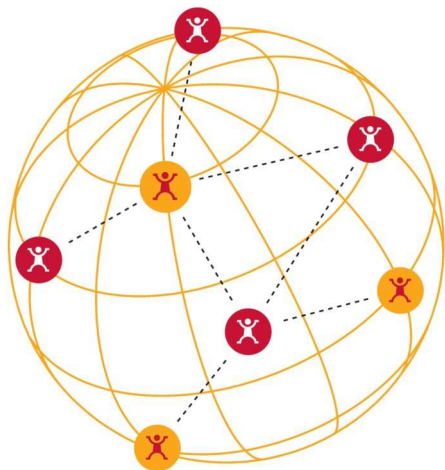


## TRAINING PROGRAM OUTLINE



### ENG-204E ATM SWITCHING TECHNOLOGY

#### DESCRIPTION

A 5-day Training Program to provide participants with a detailed understanding of the Asynchronous Transfer Mode (ATM) switching technology, including the services and access methods available to users, equipments, protocols, implementation requirements and test procedures needed to maintain the network.

#### OBJECTIVES

- Provide an understanding of key features, concepts and terminology of ATM
- Describe switching technology transfer modes
- Identify applications of ATM
- Compare and contrast ATM with traditional networking technologies
- Describe the standard interfaces to an ATM network
- Diagram the ATM protocol stack and show its relation to the Open System Interconnection (OSI) reference model
- Provide an understanding of the operation and features of the ATM layer
- Describe how ATM fits in the Local Area Network (LAN) environment



- Explain ATM network management concepts
- Introduce ATM test procedures
- Define and develop required ATM test performance phases

## TOPICS

- Data communication principles
  - Communication services
  - Analogue and digital data transmission
  - Transmission modes
  - Interface standards
  - Multiplexing
  - Switching techniques
  - Circuit switching
  - Concepts and elements of digital switching and transmission
  - ITU-T digital hierarchy
- OSI reference model
  - Description of lower and upper layers
  - Protocols and services
  - Data transmission through the OSI model
  - Standards organizations
- Packet switching concepts
  - Network topology and configuration
  - Packet switching
  - Frames and packets
  - Virtual circuits
  - Virtual calls
  - Logical channel number
- ATM
  - ATM networks
  - ATM layer protocol
  - ATM layer management protocol



- ATM Adaptation Layer (AAL) protocols
  - AAL protocol for constant bit rate (AAL1) services
  - AAL type 3/4 common part protocol
  - AAL type 5 common part protocol
  
- User–Network Interface (UNI) signaling: overview of Q.2931
  - Addressing
  - Overview call control
  - Message functional definition and contents
  
- ATM in a LAN environment
  - Local Area Network Emulation (LANE)
  - Congestion control
  
- ATM network management
  - Integrated Local Management Interface (ILMI)
  - ILMI Management Information Base (MIB) and services
  - ATM MIB
  
- ATM testing
  - Monitoring of ATM traffic

## TARGET AUDIENCE

- Telecommunications managers and personnel responsible for the planning, development and implementation of ATM switching equipments and networks
- Managers looking to complement their skill–set by gaining a good understanding ATM switching concepts



## METHODOLOGY

Our Training Programs combine expert presentations, workshops, case studies and discussions on real-life situations faced by participants. Complete training material is provided to all participants for future reference and follow-up action plans.

## LOCATION

Our Training Programs are held at regular intervals in selected cities around the world. Upon request, our expert trainers can lead Training Programs at the location of your choice. If interested, please contact us at [training@neotelis.com](mailto:training@neotelis.com).

## EXPERTISE

Neotelis provides consulting and training services to telecommunications organizations worldwide. Its team of experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 100 countries around the world.

