Course Instructor : Claudio Crini, Dr. Eng. (certified Guest Instructor at I&C Training Institute, Siemens Group)

PDH Basics (TG2510-01S)

Brief Description

- In this course, you acquire basic knowledge of PDH technology. You will learn about the main methods of multiplexing as well as the digital signal hierarchy. Synchronization, clock adaptation, frame structure and justification which are all discussed in detail. The main structure of multiplexing, in addition to the basic methods of measurement technology are outlined. Discussions about base-band transmission of digital signals including the interface codes, regeneration and the many causes of bit errors complete this course.

Target Group

- All personnel starting a sequence of PDH or SDH training, from Planning and Engineering to Management Experts and Service should attend.

Learning Target

- To give instructions on application, structure, and methods of PDH multiplexing, an introduction to PDH technology leading to SDH technology.

Prerequisite

- Participants must have technical knowledge in telecommunications.

Contents

- Application of Plesiochronous Multiplex Systems
  - Introduction
  - Digital Signal Hierarchies
  - Connecting Options for the Digital Multiplex Systems
- Time-Division Multiplexing of Digital Signals
  - Basic Methods of Multiplexing
  - Synchronization between Transmitting End and Receiving End
  - Definition of Plesiochronous Digital Signals
  - Clock Alignment of Plesiochronous Signals
  - Basic Pulse Frame Structure
  - Realization of the Positive Justification Method
- Frame Structure of the Digital Signal Hierarchies
  - Frame Structure of 8, 34, 140 Mbit/s Hierarchies
  - Timing Sequence of the Multiplex Process
  - Transmission of Additional Data Channels with Y-Bits
- Measurements at Multiplex Systems
  - In-Service Measurement
  - Out-of-Service Measurement

For additional information:
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- Functional Units of the Multiplexer
- Functional Units of the Demultiplexer

- Baseband Transmission of Digital Signals
  - Introduction
  - Interface Codes
  - Digital Signal Regeneration
  - Reasons for Bit Errors

Notes

- This course can be delivered as face-to face classroom

Duration

1.00 days

Max number of participants

10

Course Type

Theoretical course