



Course Description

Fiber connected to deliver true triple-play services

Voice Video Data

System Engineering, Installation and Maintenance

Alloptic's training is designed to prepare your network engineers to design and implement a passive fiber optical access network covering the fundamentals of network design using Alloptic equipment. At the conclusion of the class, your technical staff will be able to layout a Passive Optical Network (PON), size and specify head-end electronics to support voice, data, and video services, configure and maintain the system. The course requires a basic knowledge of data networking. The first day of training covers the planning, engineering and equipment description. The second and third days are hands-on system operation and configuration exercises.

Topics of Discussion: (Day one)

System Overview

- Network Architectural Elements
- System Architecture Elements
- System Applications

Alloptic Product Family

System Powering

- Chassis Powering Guidelines
- ONU Powering Guidelines

Optical Budget

- Optical Budget Guidelines
- Budget for RF Applications
- Loss Assumptions
- Two-Fiber Solution
- Splitter Configurations

Bandwidth Considerations

- Chassis Bandwidth Allocation
- Auto Ranging Requirements
- ONU Bandwidth Requirements
- Service Bandwidth Requirements

Service Area Planning

- SCM, OLT, DS3M Modules
- Redundancy
- Chassis/Module Requirements
- ONU Equipment Planning

Network Services

- Timing and Synchronization
- Upstream Data Path Requirements

Typical Deployment Scenarios

- International Applications
- High Rise Deployments
- POTS
- TDM
- Head-end Chassis

QOS

- Service Level Agreements
- VLAN Prioritization

VLAN Considerations

Integration Considerations

- Spanning Tree
- Link Aggregation

IP Video Considerations

- IP Video Services
- VLAN Support
- IGMP Snooping/Proxy
- Video on Demand
- HDTV over IP Video

Voice over IP Considerations

- VOIP Methodology
- VOIP Standards

RF Video Considerations

Maintenance

- Testing TDM Services
- Performance Statistics

(Course is BICSI approved for 16 CEC)



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