

## Introduction to Optical Transport Networks and G.709 Testing

This one-day course covers the basics of optical transport networks (OTNs) and how it relates to the ITU-T G.709 recommendation. The training session discusses both theoretical and practical aspects; namely, G.709 test applications using EXFO's FTB/IQS-8115/8120/8130 SONET/SDH Analyzers.

### Content

#### Part 1: Optical Transport Networks (OTNs) and the ITU-T G.709 Recommendation

- › Demand for more bandwidth
- › DWDM technologies and their limitations
- › ITU-T G.709 recommendation
  - › Definition
  - › Rates and benefits
- › Transport networks
- › Layers and hierarchy
- › Forward error correction (FEC)

#### Part 2: G.709 Testing Applications Using EXFO's FTB/IQS-8115/8120/8130

- › Interface specification test
- › DUT response test
- › Mapping and demapping client signals
- › FEC behavior test
- › Stress test

### Pre-Requisites

- › EXFO's FE-1081 – Introduction to Legacy SONET Testing
  - or
- › EXFO's FE-1082 – Introduction to Legacy SDH Testing
  - or
- › Equivalent knowledge of legacy SONET and/or SDH technology

### Methodology

The first part of this course consists of lectures using PowerPoint presentations and demonstrations, while the second part consists of specific hands-on testing exercises using EXFO's FTB/IQS-8115/8120/8130 SONET/SDH Analyzers.

**Typical Schedule** (can be modified to accommodate attendees' working schedule)

### INTRODUCTION TO OPTICAL TRANSPORT NETWORKS AND G.709 TESTING

**8:00 a.m. to 12:00 p.m.**

Part 1: Theory

› Optical transport networks (OTNs) and the ITU-T G.709 recommendation

**12:00 p.m. to 1:00 p.m.**

Lunch

**1:00 p.m. to 5:00 p.m.**

Part 2: Hands-On Session

› G.709 testing applications using EXFO's FTB/IQS-8115/8120/8130

### Documentation

Attendees will receive a binder containing copies of presentations and other printed handouts, if applicable. When available, a CD containing the electronic version (PDF format) of the presentation, as well as related application notes, will also be provided.

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