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.

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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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