

CMT-06-010

***Fibre Optic &
OTDR & DWDM***

Expert Training Course

2 DAYS DURATION - DESIGNED FOR ALL SKILL LEVELS

“Telecommunications training that provides knowledge plus experience.”



CELEMETRIX
the art of measurement



Repair | Calibration | Training | Rental | Professional Services

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COURSE OUTLINE

CMT-06-010-A

Optical Theory as it relates to measurement techniques

1. Understanding Telecommunications network architecture
2. Basics of Fibre Optics – Units of measurement
3. Single Mode and Multimode cable principles
4. Light Propagation principles
5. Laser Transmission System Theory
6. Optical Connectors
7. Laser Safety and OH&S

CMT-06-010-B

Acquiring a suitable and accurate OTDR trace

1. Index of Refraction
2. Pulse Width Selection
3. Deadzone effects on an OTDR trace
4. Selecting the most suitable Range and resolution setting
5. OTDR Trace Acquisition time
6. Wavelength test selection
7. Practical exercises and assessment of each of the items discussed

CMT-06-010-C

Evaluating OTDR trace elements

1. OTDR Trace Basics
2. OTDR Trace elements
3. Measuring OTDR trace features using an OTDR (PMD related)
4. OTDR Fault Conditions – Trace examples provided (Dispersion effecting)
5. Effects of Incorrect OTDR parameter setup
6. Techniques for accurate fault locating
7. Practical exercises and assessment of each of the items discussed

CMT-06-010-D

Introduction to DWDM Link Certification

1. What is DWDM and why is it used
2. DWDM System Components
3. Data Rate
4. Link Dispersion budgets
5. Channel Spacing
6. C & L band DWDM & CWDM
7. Optical Return Loss
8. Introduction to Chromatic Dispersion
9. Introduction to Polarisation Modal Dispersion

CMT-06-010-E

Fibre Optic validation of DWDM circuits

1. Measuring and assessing Chromatic Dispersion test results
2. Measuring and assessing Polarisation Modal Dispersion test results
3. Totalling and compensating the effects of CD & PMD
4. Infrastructure Faults that cause DWDM faults
5. Aligning 1625nm OTDR Testing with PMD results
6. Prioritisation of Infrastructure for DWDM
7. Future Direction of xWDM

CMT-06-010-F

Theory Assessment

1. Theory - Complete the written assessment covering all items discussed
2. Practical assessment – Complete an optical report using supplied traces

COURSE INFORMATION

Course locations: Melbourne, Adelaide, Sydney, Hobart, Canberra, Cairns, Brisbane, Darwin & Perth.

Course times: 8.30am to 4.30pm

Duration: Two Days

Training is available Australia-wide. Please contact Celemetrix for details.

Included: Instructor, Data Projector, Test Equipment (Tri Band), CD & PMD test equipment, fault box, ORL equipment & Training manual per attendee, 1 week phone support.

COURSE OVERVIEW

Designed for experienced optical technicians, this course provides the information required to confidently assess the suitability of an optical link for high bandwidth multi wavelength transmission deployment (DWDM).

Attendees will be introduced to complex optical fault analysis principles using an OTDR as well as dedicated test plan development and execution using dispersion and ORL test equipment. Attendees will have the opportunity to perform live testing for all elements needed to validate high bandwidth infrastructure (+10Gb/s).

10-12 people per course

Training available throughout Australia.

INDUSTRY PROBLEM

- The telecommunication industry has seen a decline of the transfer of skills from experienced technical personnel to new personnel.
- Knowledge transfer to complete projects to the required quality/time standards has become increasingly scarce.

CELEMETRIX SOLUTION

- Training programs are designed to protect against poor quality network builds, which result in costly rework and service interruptions.
- Emphasis on the importance of maintaining standardised installation and commissioning practices.
- Skill in the transference of knowledge is what we believe to be the "art of training".
- Unlike other training organisations which focus primarily on technology - Celemetrix Training Services are structured toward Field Operations staff. Technology theory is combined with practical elements to reinforce the learning process.
- Specifically designed training manuals, enhanced practical exercises and technical phone support ensure your investment delivers increased levels of productivity and confidence.

All our training courses can be customised to meet your individual requirements.

All our trainers are qualified with Cert IV Assessment and Workplace Training from Corporate Training Australia.

FURTHER INFORMATION

Call or email Celemetrix today, our courses result in the highest knowledge transfer and are Telstra Certified.



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