

CMT-08-070

SDH OPERATIONS & MAINTENANCE Training Course

2 DAYS DURATION - DESIGNED FOR ALL SKILL LEVELS

“Telecommunications training that provides knowledge plus experience.”



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CMT-08-070

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COURSE OUTLINE

CMT-08-070-A

Introduction to Transmission Technologies

1. Digital transmission fundamentals.
2. PCM encoding and transmission.
3. Transmission Network Synchronization.
4. Telecommunications Network Architecture.
5. Introduction to PDH and SDH.

CMT-08-070-B

PDH Technical Principles

1. What is PDH, its capabilities and disadvantages.
2. Framing standards G.703 and G.704.
3. Alarms and Error performance.
4. Evolution of SDH and PDH into today's networks.

CMT-08-070-C

SDH Technical Principles

1. What is SDH and its advantages.
2. International Standards – SDH/SONET.
3. Deployment strategies using SDH.
4. SDH Multiplexing concepts.
5. Bit Rates and frame structure (Up to 40G).
6. Transporting application data using Virtual Containers and Concatenation.
7. SDH Circuit protection and redundancy functions.
8. Circuit Management alarm information functions within SDH.
9. Element Management.
10. Packet based technology integration (Ethernet) using SDH transport
 - i. LCAS
 - ii. VCAT
 - iii. GFP
11. FEC G.709 transmission standards.
12. SDH as it relates to CWDM and DWDM.

CMT-08-070-D

Practical Exercises

1. Quality assurance testing – BERT.
2. Monitoring and modifying key SDH transmission criteria.
3. Statistical analysis of a PDH and SDH Network.

CMT-08-070-E

Course Assessment

1. Theoretical Assessment.

COURSE INFORMATION

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

Course Time: 8.30am to 4.30pm.

Duration: Two days.

Training is available Australia-wide.

Please contact Celemetrix for details.

Included: Instructor, Data Projector, 1 x SDH tester, 1 x Ethernet tester ancillaries and hardcopy course manual for each attendee.



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CMT-08-070 SDH OPERATIONS & MAINTENANCE**COURSE OVERVIEW**

Designed for all skill levels, this course provides the information required to confidently understand, maintain and assess the quality of SDH/TDM networks. Attendees will be introduced to all components of PDH, TDM and traditional SDH networks as well as build relevant components and test the performance of an SDH circuit. This course also includes relevant elements of next generation SDH accommodating for efficient transmission of packet (Ethernet/IP) based transmission over SDH including GFP/LCAS/VCAT.

Attendees will also be provided with relevant information as to how SDH integrates into large scale networks and associated technologies including DWDM.

12 -15 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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