MPIRICAL

Innovating Telecoms Training

"

The instructor clearly explained the content of the course. Thanks.

"

▶ Watch our course intro video.

SS7 and Sigtran Explained

Course Description

Originally designed for TDM based transport, SS7 is the foundation of signalling within PSTN and PLMN networks. This course will catalogue the operation of SS7, both from an architectural and procedural perspective. Key focus will be placed on the operation of the MTP lower layers, as well as analysis of SCCP and ISUP. In addition, this course will also focus on the transport of SS7 across IP based transport networks. As part of this, the Sigtran User Adaptation layers will be examined, as well as the operation of SCTP.

This course has no prerequisites.

6	6	
Hours Learning (OnlineAnytime)	**CPD Learning** **Credits**	**Level: 2** **(Intermediate)**

This course will contain the following sections:

1. SS7

Topic areas covered include:

- Signalling System No.7 Networks.

- SS7 Terminology:
    - Signalling Point.
    - Signalling Point Codes.
    - Using STPs for Crossing Point Code Boundaries.
    - Signalling Link.
    - Signalling Link Set.
    - Signalling Link Selection.
    - Signalling Route.
    - Signalling Route Set.

- SS7 Protocols:
    - SS7 Protocol Stack.
    - SS7 Specifications.

- Message Transfer Part 1.

- Message Transfer Part 2.

- Message Transfer Part 3.

- Signalling Connection Control Part:
    - SCCP Architecture.
    - SCCP Connectionless Control.
    - SCCP Connection Oriented Control.

- SCCP Routing:
    - Global Title.

- SCCP Addressing:
    - Global Title Format.

- SCCP Management:
    - Signalling Point Status Management.
    - Subsystem Status Management.

SS7 (cont.)

- Focus on ISUP:
    - Typical ISUP Call Establishment.

- Application Parts:
    - TC Structure.
    - Dialogue Types.

- Component Sublayer.

- Transaction Sublayer.

- Example Procedure.

- Dialogue Portion.

2. Sigtran

Topic areas covered include:

- Sigtran Drivers.

- Sigtran Framework:
    - Signalling Transport Architecture.

- Sigtran Protocols.

- SCTP Architecture:
    - SCTP Endpoints.
    - SCTP Associations.
    - SCTP Packets.
    - SCTP Streams.

- SCTP Operation:
    - Data Transmission and Acknowledgement.
    - Shutting Down the Connection.

6
CPD Learning Credits

ITP
ITP accredited course

OnlineAnytime

- User Adaptation Layers:
    - Application Servers and Application Server Processes.
    - SCCP User Adaptation.
    - ISDN User Adaptation.
    - MTP3 User Adaptation.
    - MTP2 User Adaptation.
    - MTP 2 Peer to Peer Adaptation.

- Focus on M3UA:
    - Routing Keys and Routing Contexts.
    - M3UA Message Set.
    - Example Procedure – ASP Activation.
    - Example Procedure – Data Transfer.
    - Example Procedure – Signalling Network Management.

Watch a Sample Video Online

ENTERPRISE
Need to train a large group?

mpirical.com/enterprise

TEAM
Training for a team?

mpirical.com/team-training

INDIVIDUAL
Looking for yourself?

mpirical.com/individual-training

NetX

The Mpirical Network Visualisation Solution: **NetX Bringing Telecoms to Life!**
Imagine the benefits of having an entire mobile network available from your desktop.

- Where you can view a complete network map.
- Watch call flows across the network.
- Investigate network procedures.

NetX does this... and even more with our NetX customization options!
NetX is not just a learning aid, it is a valuable resource in the day to day activities of any telecoms professional and has been spotlighted as such by the 3GPP.

Explore NetX further at www.mpirical.com/netx

+44(0)1524 844669   enquiries@mpirical.com   **www.mpirical.com**