



# 1603 SMX OPERATIONS AND MAINTENANCE COURSE CONTENT

## SYSTEM INTRODUCTION

- Use the 1603 SMX (SONET Multiplexer extra) documentation
- Understand SONET (Synchronous Optical Network) basics
- Identify linear and ring configurations
- List the different network configurations used with the 1603 SMX

## 1302 NMX SETUP

- Open the 1301 NMX Network Manager
- Connect the 1301 NMX to the local network
- Create a new network list
- Logon to a 1603 SMX NE
- Understand the different parts of a 1301 NMX dialog screen Customize 1301 NMX
- Customize 1301 NMX
- PC requirements
- Connection setup for a 1603 SMX Network Element
- Navigation through network windows and network element windows

## HARDWARE AND SIGNAL FLOW

- List the hardware used to comprise the 1603 SMX
- Identify the relationship between modules and signal types
- Identify protect switching ratios
- Identify signal paths through the 1603 SMX

## COMMON EQUIPMENT

- List the functions of the common equipment plug-in units
- Identify the function of the alarm interface
- List the four clock modes
- Identify the compatibility of modules

## PROVISIONING

- Provision equipment and facilities for a DS1 drop group
- Provision equipment and facilities for a DS3 drop group
- Provision equipment and facilities for an OC3 drop group
- Provision equipment and facilities for an OC12 drop group
- Provision equipment and facilities for a Fast Ethernet 10/100 drop group
- Provision equipment and facilities for a Gigabit Ethernet 1000Mbit/s drop group

## CROSS-CONNECTS

- Provision DS1 cross-connects in an UPSR configuration and successfully test with a test set
- Provision DS3 cross-connects in either a UPSR or BLSR configuration and successfully test with a test set

OVER PLEASE

## NETWORK SYNCHRONIZATION

- List the two major synchronization functions for the 1603 SMX
- Select NE synchronization reference
- Define the quality levels used in determining the quality of synchronization references
- Enable/disable SYNC messaging
- Setup network synchronization for different network configurations

## PERFORMANCE MONITORING

- Retrieve performance monitoring information
- Initialize PM registers

## SYSTEM MAINTENANCE

- Isolate a problem to a local or remote NE
- Isolate an NE problem to a plug-in or facility
- Isolate, test and replace defective plug-in
- Setup, test, and remove loopbacks on different facilities
- Software loading
- Backups and System Restore

## CONTACT INFORMATION

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