Preface

Note The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

This guide explains the use of Transaction Language 1 (TL1) for the Cisco ONS 15454 and Cisco ONS 15327 systems. Use this guide in conjunction with the appropriate publications listed below.

Revision History

Date	Notes
March 2007	Revision History Table added for the first time.
August 2007	Updated the Preface chapter.
July 2008	Removed G1000 card name from the RTRV-PM-<MOD2> command in Chapter 3, TL1 Command Descriptions.

For installation, turn up, provisioning and maintenance procedures, refer to the *Cisco ONS 15454 Procedure Manual, R4.1.1 and R4.5*. For trouble clearing, alarm troubleshooting, and hardware replacement procedures, refer to the *Cisco ONS 15454 Troubleshooting Guide, R4.1.1 and R4.5.* For detailed reference information, refer to the *Cisco ONS 15454 Reference Manual, R4.1.1 and R4.5*.

Document Organization

The *Cisco ONS 15454 and Cisco ONS 15327 TL1 Command Guide, R4.1.x and R4.5* is organized into the following chapters:

- Chapter 1, "Getting Started" explains how to gain access to TL1, command syntax, autonomous messages, provision a DS3E card in CTC using TL1, CTC interoperability, security level privileges associated with each command, command completion behavior, test access configurations, PCA provisioning and FTP software download.

- Chapter 2, "TL1 Gateway" describes the TL1 Gateway and provides procedures and examples for implementing TL1 Gateway on a four node ring.
- Chapter 3, "TL1 Command Descriptions" lists TL1 commands by category and then lists each command and autonomous message supported by the ONS 15454 and the ONS 15327.
- Chapter 4, "TL1 Command Components" describes the components of TL1 commands including, default values, access identifiers (AIDs), and parameter types.
- Chapter 5, "Ring Provisioning" provides sample procedures for setting up STS or VT circuits over existing path protection and bidirectional line switch ring (BLSR) configurations.
- Chapter 6, "TL1 Performance Monitoring" provides TL1 performance monitoring (PM) information and scheduled PM report provisioning.
- Chapter 7, "TL1 Alarms and Errors" lists TL1 alarms and errors supported by the ONS 15454 and the ONS 15327 including descriptions and severity.

Document Conventions

This publication uses the following conventions:

Convention	Application
boldface	Commands and keywords in body text.
[ ]	Keywords or arguments that appear within square brackets are optional.
{ x | x | x }	A choice of keywords (represented by x) appears in braces separated by vertical bars. The user must select one.
Ctrl	The control key. For example, where Ctrl + D is written, hold down the Control key while pressing the D key.
`screen font`	Examples of information displayed on the screen.
< >	Command parameters that must be replaced by module-specific codes.

Note Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the document.

Caution Means *reader be careful*. In this situation, the user might do something that could result in equipment damage or loss of data.

Warning **IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. To see translations of the warnings that appear in this publication, refer to the translated safety warnings that accompanied this device.

Note: SAVE THESE INSTRUCTIONS

Note: This documentation is to be used in conjunction with the specific product installation guide that shipped with the product. Please refer to the Installation Guide, Configuration Guide, or other enclosed additional documentation for further details.

Obtaining Optical Networking Information

This section contains information that is specific to optical networking products. For information that pertains to all of Cisco, refer to the Obtaining Documentation and Submitting a Service Request section.

Where to Find Safety and Warning Information

For safety and warning information, refer to the *Cisco Optical Transport Products Safety and Compliance Information* document that accompanied the product. This publication describes the international agency compliance and safety information for the Cisco ONS 15454 system. It also includes translations of the safety warnings that appear in the ONS 15454 system documentation.

Cisco Optical Networking Product Documentation CD-ROM

Optical networking-related documentation, including Cisco ONS 15xxx product documentation, is available in a CD-ROM package that ships with your product. The Optical Networking Product Documentation CD-ROM is updated periodically and may be more current than printed documentation.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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