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Information technology – Small computer system interface (SCSI) – Part 223: Fibre channel protocol, third version (FCP-3)

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The list of all currently available parts of the ISO/IEC 14776 series, under the general title *Information*

technology – Small computer system interface, can be found on the IEC web site.

This International Standard has been approved by vote of the member bodies and the voting results may be obtained from the address given on the second title page.

INTRODUCTION

The Small Computer System Interface (SCSI) command set is widely used and applicable to a wide variety of device types. The transmission of SCSI command set information across Fibre Channel links allows the large body of SCSI application and driver software to be successfully used in the high performance Fibre Channel environment.

This standard describes the protocol for transmitting SCSI commands, data and status using Fibre Channel FC-FS-2 Exchanges and Information Units. Fibre Channel is a high speed serial architecture that allows either optical or electrical connections. The topologies supported by Fibre Channel include point-to-point, fabric switched and arbitrated loop. All Fibre Channel connections use the same standard frame format and standard hierarchy of transmission units to transmit the Information Units that carry SCSI information.

This standard is divided into the following clauses:

Clause 1 is the scope of this standard.

Clause 2 enumerates the normative references that apply to this standard.

Clause 3 describes the definitions, abbreviations and conventions used in this standard.

Clause 4 provides an overview of the protocol for transmitting SCSI information over Fibre Channel.

Clause 5 describes the Information Units used to transfer SCSI commands, data and status across a Fibre Channel connection.

Clause 6 describes the Basic Link Services and Extended Link Services used by the protocol for transmitting SCSI information over Fibre Channel.

Clause 7 describes the FC-GS-4 Name Server objects defined for FCP-3.

Clause 8 describes the FCP FC-4 Link Service definitions for the protocol for transmitting SCSI information over Fibre Channel.

Clause 9 describes the details of the Information Unit formats.

Clause 10 defines the SCSI management features for Fibre Channel, including the SCSI mode pages used by the protocol for transmitting SCSI information over Fibre Channel.

Clause 11 defines the timers used for FCP-3 error recovery algorithms.

Clause 12 defines the error recovery algorithms for FCP-3.

The Fibre Channel Protocol for SCSI, Third revision (FCP-3) standard has the following annexes:

Annex A is a normative description of the relationship between the services defined by SAM-3 and the corresponding functions defined by this standard.

Annex B is an informative annex that provides examples of the protocol for transmitting SCSI information over Fibre Channel.

Annex C is an informative annex providing examples of the FCP-3 error recovery mechanisms.

Annex D is an informative annex describing techniques for discovering SCSI device capabilities over Fibre Channel.

Annex E is an informative annex providing examples of the content of ELSs used during FCP-3 recovery operations.

This standard is part of the SCSI family of standards developed to facilitate the use of the SCSI command sets for many different types of devices across many different types of physical interconnects. The architectural

model for the family of standards is ISO/IEC 14776-413, *Information technology - SCSI Architecture Model - 3 (SAM-3).*