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Information technology – Small Computer System Interface (SCSI) – Part 415: SCSI Architecture Model - 5 (SAM-5)



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INFORMATION TECHNOLOGY – SMALL COMPUTER SYSTEM INTERFACE (SCSI) –

Part 415: SCSI Architecture Model - 5 (SAM-5)

FOREWORD

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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 (SCSI)*, can be found on the ISO and IEC web sites.

The text of this document is based on the following documents:

CDV	Report on voting
JTC1-SC25/2828/CDV	JTC1-SC25/2862/RVC

Full information on the voting for the approval of this document can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2, except as described in 3.4 and 3.5.

A bilingual version of this publication may be issued at a later date.

IMPORTANT - The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

The purpose of this document is to provide a basis for the coordination of SCSI standards development and to define requirements, common to all SCSI technologies and implementations, that are essential for compatibility with host SCSI application software and device-resident firmware across all SCSI transport protocols. These requirements are defined through a reference model that specifies the behavior and abstract structure that is generic to all SCSI I/O system implementations.

Figure 1 shows the relationship of this document to the other standards and related projects in ISO/IEC 14776 (all parts) as of the publication of this document.

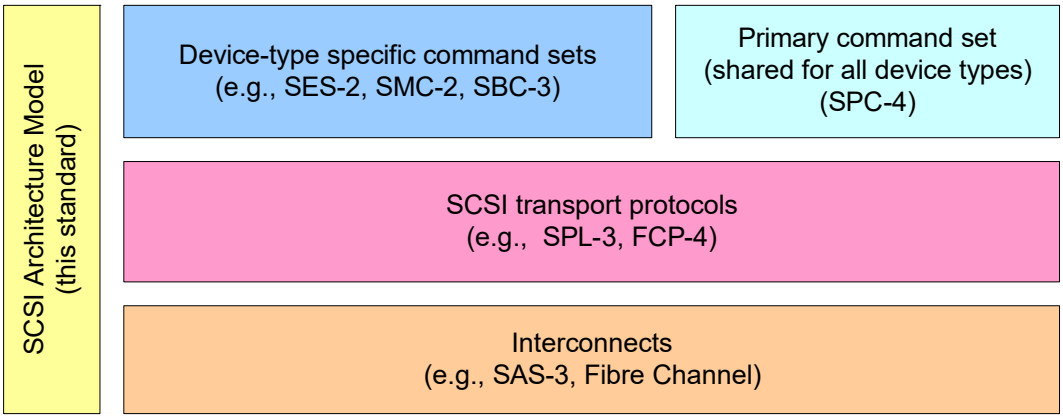


Figure 1 — SCSI document structure

The SCSI document structure in figure 1 is intended to show the general applicability of the documents to one another. Figure 1 is not intended to imply any hierarchy, protocol stack, or system architecture relationship.

The functional areas identified in figure 1 characterize the scope of standards within a group as follows:

SCSI Architecture Model: Defines the SCSI systems model, the functional partitioning of the SCSI standard set and requirements applicable to all SCSI implementations and implementation standards.

Device-Type Specific Command Sets: Implementation standards that define specific device types including a device model for each device type. These standards specify the required commands and behaviors that are specific to a given device type and prescribe the requirements to be followed by a SCSI initiator device when sending commands to a SCSI target device having the specific device type. The commands and behaviors for a specific device type may include by reference commands and behaviors that are defined by other command sets.

Shared Command Set: An implementation standard that defines a model for all SCSI device types. This document specifies the required commands and behavior that is common to all SCSI devices, regardless of device type, and prescribes the requirements to be followed by a SCSI initiator device when sending commands to any SCSI target device.

SCSI Transport Protocols: Implementation standards that define the requirements for exchanging information so that different SCSI devices are capable of communicating.

Interconnects: Implementation standards that define the communications mechanism employed by the SCSI transport protocols. These standards may describe the electrical and signaling requirements essential for SCSI devices to interoperate over a given interconnect. Interconnect standards may allow the interconnection of devices other than SCSI devices in ways that are outside the scope of this document.

The term SCSI is used to refer to ISO/IEC 14776 (all parts).

INFORMATION TECHNOLOGY - SMALL COMPUTER SYSTEM INTERFACE (SCSI) -

Part 415: SCSI Architecture Model - 5 (SAM-5)

1 Scope

The set of Small Computer System Interface (SCSI) standards consists of this document and the SCSI implementation standards described in 4.2. This document defines a reference model that specifies common behaviors for SCSI devices, and an abstract structure that is generic to all SCSI I/O system implementations.

The set of SCSI standards specifies the interfaces, functions, and operations necessary to ensure interoperability between conforming SCSI implementations. This document is a functional description. Conforming implementations employ any design technique that does not violate interoperability.

The following concepts from previous versions of the SAM standard are made obsolete by this version:

a) support for the SPI-5 SCSI transport protocol;
b) Contingent Allegiance;
c) the TARGET RESET task management function;
d) basic task management model;
e) untagged tasks; and
f) linked command function.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 14776-454, *Information technology - Small computer system interface (SCSI) - Part 454: SCSI Primary Commands - 4 (SPC-4)*

INCITS 497-2012, *Information Technology Automation/Drive Interface Commands - 3 (ADC-3)*

3 Terms, definitions, symbols, abbreviations, and conventions

3.1 Terms and definitions

3.1.1
additional sense code
combination of the ADDITIONAL SENSE CODE field and the ADDITIONAL SENSE CODE QUALIFIER field in the sense data (see 3.1.104 and SPC-4)

3.1.2
aggregation
form of association that defines a whole-part relationship between the whole (i.e., aggregate) and its parts

Note 1 to entry: This definition only applies when used in relation to UML.

Note 2 to entry: See 3.6.