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INFORMATION TECHNOLOGY – SMALL COMPUTER SYSTEM INTERFACE (SCSI) –

Part 414: Architecture model-4 (SAM-4)

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International Standard ISO/IEC 14776-414 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

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 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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

INTRODUCTION

General

The set of SCSI (Small Computer System Interface) standards consists of this standard and the SCSI implementation standards (see SCSI Standards family). This standard 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 standard is a functional description. Conforming implementations may employ any design technique that does not violate interoperability.

The following concepts are obsolete:

a) support for the SPI-5 SCSI transport protocol (see SAM-2);
b) contingent allegiance (see SAM-2);
c) the TARGET RESET task management function (see SAM-2);
d) basic task management model (see SAM-3);
e) untagged tasks (see SAM-2); and
f) linked command function (see SAM-3).

SCSI standards family

Figure 1 shows the relationship of this standard to the other standards and related projects in the SCSI family of standards as of the publication of this standard.

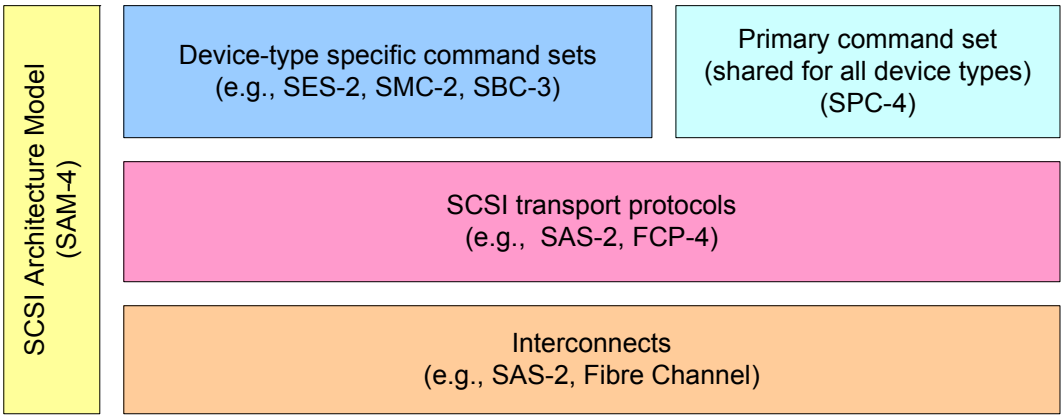

Figure 1 — SCSI standard structure

The SCSI standard structure in figure 1 is intended to show the general applicability of the standards to one another. Figure 1 is not intended to imply a relationship such as a hierarchy, protocol stack, or system architecture.

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 shared by all SCSI devices.

INFORMATION TECHNOLOGY – SMALL COMPUTER SYSTEM INTERFACE (SCSI) –

Part 414: Architecture model-4 (SAM-4)

1 Scope

This part of ISO/IEC 14776 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.

This standard defines generic requirements that pertain to SCSI implementation standards. It also defines implementation requirements. An implementation requirement specifies behavior in terms of measurable or observable parameters that apply to an implementation. Examples of implementation requirements defined in this standard are the status values to be returned upon command completion and the service responses to be returned upon task management function completion.

Generic requirements are transformed to implementation requirements by an implementation standard. An example of a generic requirement is the hard reset behavior specified in 6.3.2.

2 Normative references

The following referenced documents are indispensable for the application 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.

The provisions of the referenced specifications other than ISO, IEC, ISO and ITU standards, as identified in this clause, are valid within the context of this International Standard. The reference to such a specification within this International Standard does not give it any further status within ISO or IEC. In particular, it does not give the referenced specification the status of an International Standard.

ISO/IEC 14776-232, *Information technology - Small computer system interface (SCSI) - Part 232: Serial Bus Protocol 2 (SBP-2)*

ANSI INCITS 365-2002, *Small computer system interface (SCSI) Remote Direct Memory Access (RDMA) Protocol (SRP)*

ANSI INCITS 441-2008, *Automation/Drive Interface - Commands - 2 (ADC-2)*

NOTE 1 Copies of ANSI INCITS standards may be obtained through the ANSI Customer Service Department at 212-642-4900 (phone), 212-302-1286 (fax) or via the World Wide Web at http://www.ansi.org.

T10/1731-D, *Small computer system interface (SCSI) Primary Commands - 4 (SPC-4) (under consideration)*

T10/1799-D, *Small computer system interface (SCSI) Block Commands - 3 (SBC-3) (under consideration)*

T10/1828-D, *Fibre Channel Protocol for Small computer system interface (SCSI) - 4 (FCP-4) (under consideration)*

T10/1760-D, *Serial Attached Small computer system interface (SCSI) - 2 (SAS-2) (under consideration)*

T10/1742-D, *Automation/Drive Interface - Transport Protocol - 2 (ADT-2) (under consideration)*

NOTE 2 Copies of T10 draft standards may be obtained through Global Engineering Documents at 800-854-7179 or via the World Wide Web at http://global.ihs.com.

RFC 3720, *Internet Small Computer Systems Interface (iSCSI)*

NOTE 3 Copies of IETF standards may be obtained through the Internet Engineering Task Force (IETF) at http://www.ietf.org.

OMG Unified Modeling Language (UML) Specification Version 1.5, March 2003

NOTE 4 For more information on the UML specification, contact the Object Modeling Group at http://www.omg.org.