Accredited Standards Committee*
InterNational Committee for Information Technology Standards (INCITS)

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Date: July 14, 2005
Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber and John Lohmeyer
Subject: SCSI Commands, Architecture, & Protocol Working Group Meeting -- July 12-13, 2005
           Colorado Springs, CO

Agenda

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7. Old Business
    7.1   Style Guide (05-085) [Penokie]
    7.2   Trusted In/ Out Introduction (05-161) [Thibadeau]
8. New Business
9. Review of Working Drafts
10. Review of Recommendations to the Plenary
11. Meeting Schedule
12. Adjournment

Results of Meeting

1. Opening Remarks

George Penokie called the meeting to order at 9:00 a.m. Wednesday, July 13, 2005. He thanked John Lohmeyer of LSI Logic for hosting the meeting.

As is customary, the people attending introduced themselves.

2. Approval of Agenda

The draft agenda was approved with no additions or changes.

No items were added/revised during the course of the meeting.

3. Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for T10 membership. Working group meetings are open to any person or organization directly and materially affected by T10's scope of work. The following people attended the meeting:

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            Name                  S        Organization
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Mr. William Lynn                     P  Adaptec, Inc.
Ms. Pat Thaler                       P  Agilent Technologies
Mr. James A. Lott, Jr.               P  Dallas Semiconductor
Mr. David Black                      A  EMC Corp.
Mr. Kenneth Hirata                   A  Emulex
Mr. Robert H. Nixon                  P  Emulex
Mr. Ralph O. Weber                   P  ENDL Texas
Mr. Mike Fitzpatrick                 P  Fujitsu
Mr. Michael Banther                  V  Hewlett Packard Co.
Mr. Rob Elliott                      P  Hewlett Packard Co.
Mr. Dan Colegrove                    P  Hitachi Global Storage Tech.
Mr. George O. Penokie                P  IBM / Tivoli Systems
Mr. Kevin Butt                       A  IBM Corp.
Mr. Robert Sheffield                 P  Intel Corp.
Mr. Dennis Moore                    AV  KnowledgeTek, Inc.
Mr. Pat LaVarre                      P  Lexar Media, Inc.
Mr. Joe Breher                       V  Lingua Data
Mr. Brian Day                        V  LSI Logic Corp.
Mr. Steve Johnson                    V  LSI Logic Corp.
Mr. John Lohmeyer                    P  LSI Logic Corp.
Mr. Mark Evans                       P  Maxtor Corp.
Mr. David Peterson                   P  McDATA
Ms. Emily Hill                       P  Microsoft Corp.
Mr. Mark Overby                      P  Nvidia Corp.
Mr. Edward A. Gardner                V  Ophidian Designs
Mr. James Williams                  AV  Oracle
Dr. Steve Gorshe                     V  PMC-Sierra, Inc.
Mr. Craig W. Carlson                 A  QLogic Corp.
Dr. Paul Suhler                      A  Quantum Corp.
Mr. Gerald Houlder                   P  Seagate Technology
Mr. William Martin                   P  Sierra Logic, Inc.
Mr. Delroy  Miller                   V  Software Architects Inc
Mr. Charles Binford                  A  Sun Microsystems, Inc.
Mr. Ron Mathews                     AV  UNISYS Corporation
Mr. Curtis Stevens                   P  Western Digital
Mr. Rich Ramos                       V  Xyratex

36 People Present

Status Key:  P   -  Principal
             A,A# -  Alternate
             AV  -  Advisory Member
             L   -  Liaison
             V   -  Visitor
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4.   SCSI Architecture Model Topics

4.1 SAM-4:Converting to UML part 1 (04-023) [Penokie]

George Penokie requested that discussion of this topic be deferred to the next meeting.

5. Command Set Topics

5.1 Reservations Proposals

No reservations proposals were brought before the group.

5.2 SCSI Primary Commands Proposals

5.2.1   SPC-4: Log Page-Subpages (04-389) [Butt]

Kevin Butt noted that work on 04-389 cannot proceed until work is farther along on agenda item 5.2.7 and to a lesser degree on agenda item 5.2.5.

A new concern raised by Kevin was defining an acceptable mechanism for resetting a log page and all its subpages. The group offered advice on how best to accomplish this. George Penokie agreed to continue investigating details of the proposed solution with Kevin privately.

5.2.2   SPC-4 VPD Page 83 Identifier s/b Designator Changes (05-003) [Weber, Penokie]

Ralph Weber presented a proposal to change the name of descriptors in the Device Identification page from Identification Descriptors to Designation Descriptors (05-003r2). A change was requested in the glossary definition of Designation and Ralph agreed to prepare a new revision.

Ralph Weber moved that 05-003r3 (r2 as modified) be recommended for inclusion in SPC-4. George Penokie seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2.3   SPC-4: Enable Background Operation Error Reporting Bit (04-371) [Penokie]

George Penokie presented a proposal to add a background error reporting to the Informational Exceptions mode page (04-371r1). Editorial errors were noted and George agreed to prepare a new revision of the proposal.

George Penokie moved that 04-371r2 (r1 as revised) be recommended for inclusion in SPC-4 and SBC-3. Bill Martin seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2.4   SPC Security Commands proposal (05-157) [Houlder]

Gerry Houlder presented the latest revision of the Trusted Out and Trust In commands definitions (05-157r1).

Problems were discussed regarding the mechanism for using key reference values larger than one byte.

Matching Trusted In responses with Trusted Out commands was another area of concern. The absence of an I_T_L nexus constraint among the Trusted In tests listed in the proposal was a problem for many present. Bi-directional commands were discussed as an alternative but incompatibilities in that approach relegated it to the least preferred option. Matching based on I_T_L nexus and reference key seemed to be preferred. If application concurrency proves to be a problem in Gerry's research over the next two months, other options will need to be considered.

Gerry agreed to revise the proposal to address issues raised by the group and return for further consideration at the next meeting.

5.2.5   SPC-4: Log Command Corrections (05-232) [Penokie]

George Penokie presented a proposal (05-232r0) to align the Log Page annex with the proposal numbered 05-242r0 (see agenda item 5.2.7).

Michael Banther raised concerns about log counters that increment to their maximum value. The current definition requires that all counters in the log page be stopped. Defining a mechanism to support other behaviors was discussed. The idea was generally acceptable and Michael agreed to prepare a detailed proposal.

5.2.6   Obsolete Per Initiator Port in SPC-4 (05-230) [Weber]

Ralph Weber reviewed the history of the 'per initiator port' coded value in Mode Page Policy VPD page (05-230r0) and explained the motivation for making the coded value obsolete.

Ralph Weber moved that 05-230r0 be recommended for inclusion in SPC-4. Mark Evans seconded the motion. In the absence of objections, the motion passed unanimously.

5.2.7   SPC-4, Combinations of bits and fields in the LOG SELECT CDB and log parameters (05-242) [Evans]

Mark Evans presented a summary of the various LOG SELECT command CDB parameters and their effects (05-242r0). Questions were raised about seemingly inconsistent behaviors and concerns were boiled down to four cases where one reading of the current standard says that the saved parameters are replaced with the default parameters by a single command and a different reading says that two commands are required to achieve the same result.

Mark agreed to prepare a new revision of the proposal for consideration at the next meeting.

5.2.8   SPC-4 Create well known LUN for security commands (05-252) [Houlder]

Gerry Houlder reviewed a proposal to define a well known logical unit for processing Trusted Out and Trusted In commands that affect an entire SCSI device (05-252r0). The usefulness of and appropriate use cases for well known logical units was discussed. No significant issues were raised regarding the content of the proposal, but Gerry stated that final action on the proposal must be coordinated with action on 05-157 (see agenda item 5.2.4).

5.2.9   SPC-4: Statistics and Performance Log Pages (05-248) [Penokie]

George Penokie presented a proposal to convert priority and group number information to log page data (05-248r0).

Concerns were raised about whether the proposed log pages should be defined in SPC-4 or SBC-3 and George agreed to review the issue.

A small number of other issues were raised. A recurring issue was the size of the log parameters. In several cases, specific reasons were given regarding why four bytes of log parameter value were not enough.

George agreed to prepare a new revision of the proposal for consideration at the next meeting.

5.2.10   SPC-4: Update reference to ANSI/IEEE 1212-1994? (reflector message) [Weber]

Ralph Weber reviewed a message from the ANSI Editor noting that IEEE 1212-2001 has replaced IEEE 1212-1994. He requested advice from the group regarding making the change in SPC-4.

Mark Overby noted that the SPC-4 usage of IEEE 1212 related only to defining the Directory ID field in the Device Identification VPD page. He expressed the belief that the 1994 and 2001 versions of IEEE 1212 are identical in regards to their definition of the Directory ID.

Ralph was directed to contact Peter Johansson regarding updating the IEEE 1212 reference in SPC-4 and report to the working group at the next meeting.

5.3 SCSI Block Commands Proposals

5.3.1   SBC-2: Proposal for USB Solid State Drive Mode Sense specification (04-362) [LaVarre]

Pat LaVarre discussed specific implementation issues related to 04-362 with the group and received advice on how to define new additional sense codes (or reuse existing ones) and how to extend media serial number information.

5.3.2   SBC-3, SPC-4: Application ownership of protection information Reference Tag (05-156) [Penokie]

George Penokie presented a proposal to extend the usage of the protection information reference tag in SBC-3 (05-156r2). Several issues were noted in the proposal and George agreed to prepare a new revision for consideration at the next meeting.

5.3.3   More clarification of Application Tag Behavior (05-240) [Houlder]

Gerry Houlder presented a proposal to have an application tag value of FFFFh disable checking on writes in addition to the currently defined disabling of checking on reads (05-240r0). The idea was assailed as being diametrically opposed to the original design center for end-to-end data protection.

George Penokie asked for a per-company straw poll on whether application tag values of FFFFh should disable protection data checking on writes. The straw poll results were:

- Yes – 3
- No – 7
- Abstain – 7

5.4 SCSI Enclosure Services Proposals

5.4.1   SES-2 Display element enhancements (05-011) [Elliott]

Rob Elliott requested that discussion of this topic be deferred to the next meeting.

5.5 Other Proposals

No other proposals were brought before the group.

6.   SCSI Protocol Topics

6.1 Fibre Channel Protocol

The working group identified no Fibre Channel protocol topics as needing consideration.

7. Old Business

7.1 Style Guide (05-085) [Penokie]

Due to the late hour, George Penokie asked that discussion of this topic be deferred to the next meeting.

7.2 Trusted In/ Out Introduction (05-161) [Thibadeau]

Gerry Houlder asked that this topic be removed from this and future agendas.

8. New Business

9. Review of Working Drafts

No requests were made to review working drafts at this meeting.

10. Review of Recommendations to the Plenary

Ralph Weber noted that the following recommendations have been made to the T10 plenary:

> For inclusion in SPC-4:
> 05-230r0 (Obsolete Per Initiator Port in SPC-4) [Weber]
> 05-003r3 (VPD Page 83 Identifier s/b Designator Changes) [Weber, Penokie]

> For SPC-4 and SBC-3:
> 04-371r2 (Enable Background Operation Error Reporting Bit) [Penokie]

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, September 14, 2005 from 9 a.m. to 6 p.m. (or until all agenda items are completed). The meeting will be in Vancouver, BC at the Vancouver Marriott Pinnacle Downtown Hotel (604-684-1128; Reservations: 800-207-4150), hosted by PMC-Sierra.

12. Adjournment

The meeting was adjourned at 5:30 p.m. on Wednesday July 13, 2004.