Accredited Standards Committee*
National Committee for Information Technology Standards (NCITS)

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Date:	May 10, 1999
Reply to:	John Lohmeyer

To: T10 Membership
From: Ralph Weber / John Lohmeyer
Subject: SCSI Working Group Meeting -- May 5, 1999
            Manchester, NH

Agenda

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2. Approval of Agenda
3. Attendance and Membership
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Results of Meeting

1.   Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Wednesday May 5, 1999. He thanked Zane Daggett of Hitachi Cable Manchester for hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated.

2. Approval of Agenda

The draft agenda was approved with the following additions and changes:

6.10   Drive Self Test (99-179r0) [Evans]

The following agenda items were added during the course of the meeting:

6.11 Untagged Command Support in FCP-2 [Galloway]

3. Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for T10 member-ship. 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        Electronic Mail Address
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Mr. Lawrence J. Lamers P  Adaptec, Inc.            ljlamers@ieee.org
Mr. Bill Mable         P  Amphenol Interconnect    bmable@spectra.net
Mr. Gregg Neely        O  Andataco                 greggn@andataco.com
Mr. Bill Galloway      P  BREA Technologies, Inc.  billg@breatech.com
Mr. Dennis Lang        A  Circuit Assembly Corp.   dennisl@circuitassembly.
                                                   com
Mr. Robert C. Elliott  P  Compaq Computer Corp.    Robert.Elliott@compaq.com
Mr. Tom Coughlan       V  Compaq Computer Corp.    tom.coughlan@digital.com
Mr. Stephen K. Wilson  A  Crossroads Systems, Inc. steve@crossroads.com
Mr. Ben-Koon Lin       P  Fujitsu (FCPA)           blin@fcpa.fujitsu.com
Mr. Brad Culp          V  Hewlett Packard Co.      brad-culp@hp.com
Mr. Zane Daggett       P  Hitachi Cable Manchester,zdaggett@hcm.hitachi.com
                          Inc
Mr. George O. Penokie  P  IBM Corp.                gop@us.ibm.com
Mr. Dan Colegrove      A# IBM Corp.                colegrov@us.ibm.com
Mr. Dennis Moore       P  KnowledgeTek, Inc.       dmoore@ix.netcom.com
Mr. John Lohmeyer      P  LSI Logic Corp.          lohmeyer@ix.netcom.com
Mr. Ralph O. Weber     A  LSI Logic Corp.          roweber@acm.org
Mr. Steve Stefek       V  LSI Logic Corp.          steve.stefek@lsil.com
Mr. Pete McLean        P  Maxtor Corp.             pete_mclean@maxtor.com
Mr. Charley Riegger    A  Maxtor Corp.             charles_riegger@maxtor.
                                                   com
Mr. Jay Neer           A  Molex Inc.               jneer@molex.com
Mr. Martin Ogbuokiri   O  Molex Inc.               mogbuokiri@molex.com
Mr. Allen King         A  Mylex Corp.              allenk@mylex.com
Mr. John Meneghini     V  Noble Technologies, Inc.
Mr. Mark Evans         P  Quantum Corp.            mark.evans@quantum.com
Mr. Gerald Houlder     A  Seagate Technology       Gerry_Houlder@notes.
                                                   seagate.com
Mr. Robert Morris      P  Silicon Systems, Inc.    bob.morris@ti.com
Mr. Erich Oetting      P  Storage Technology Corp. erich_oetting@stortek.com
Mr. David Peterson     O  StorageTek Network Sys.  dap@network.com
                          Grp
Mr. Robert N. Snively  P  Sun Microsystems         bob.snively@sun.com
                          Computer Co
Mr. Kenneth J. Hallam  P  UNISYS Corporation       ken.hallam@unisys.com
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Mr. Paul D. Aloisi      P   Unitrode Corporation      aloisi@unitrode.com
Mr. Richard S. DeMars   V   Unitrode Corporation      demars@unitrode.com
Mr. Jeffrey L.          P   Western Digital           Jeffrey.L.Williams@wdc.
Williams                    Corporation               com

33 People Present

Status Key:  P    -   Principal
             A,A# -   Alternate
             O    -   Observer
             L    -   Liaison
             V    -   Visitor
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4. Physical Topics

4.1 Bus Width Determination (98-236r0) [Sippy]

The group agreed to drop this topic from future agendas.

5. Protocol Topics

5.1 SAM-2 Review [Weber]

Ralph Weber reported that his work on the EXTENDED COPY command had prevented progress on SAM-2.

5.2 Task Set Full Definitions (reflector messages)

Dave Peterson presented concerns about the definition of TASK SET FULL in SAM-2. The group discussed the concerns and recommended some changes. However, the group felt that the changes should undergo a formal review. Ralph Weber volunteered to draft a change proposal for SAM-2 that can follow a formal review process.

5.3 Making TTD and CIOP obsolete (99-147, -165) [Snively/Lamers]

Bob Snively proposed that the Target Transfer Disable (TTD) and Continue I/O Process (CIOP) messages be made obsolete. He further stated that the messages as documented today do not produce the intended results when used in combination with command queuing. John Lohmeyer noted that the original motivation for the two messages has been overtaken by technological innovations.

Larry Lamers stated that architects at Adaptec believe that the Continue I/O Process function will be useful in future implementations of packet protocol. He noted that recent private discussions have suggested that the Continue I/O Process message, as presently defined, may not be a feature that can be used directly in packet protocol. Bob Snively and George Penokie suggested that the best way to use Continue I/O Process in packet mode would be to allow it to be made obsolete and then redefine it for packet protocol. Bill Galloway and Gerry Houlder supported Bob Snively in the position that TTD and CIOP, as presently defined, will not provide the capabilities that Larry appeared to think they do.

A discussion of the one reflector message concerning the need for TTD and CIOP concluded that the message did not describe an existing use, only a potential desire to use these messages.

George Penokie asked that the group recommend acceptance of 99-147r0 for inclusion in SPI-3. The recommendation was approved 12:2:1.

5.4 Arbitration Fairness Control (99-160r1) [Elliott/Houlder]

Rob Elliott presented a proposal to give a more generic name to the three fair arbitration bits in the disconnect/ reconnect mode page, which included making the three bits a single three-bit field in SPC-2. Rob further proposed that continuation of the current FCP usage would be achieved by defining the bits to have their current SPC meaning in FCP-2. A wording correction was proposed by Ralph Weber and agreed to by the group. Rob will prepare 99-160r2 for inclusion in SPC-2.

Larry Lamers raised questions about the part of 99-160r1 that applies to SPI-3. George Penokie agreed to correct the wording to say 'negotiates to disable QAS' when he incorporates the proposal in SPI-3. However, continued discussion of the topic surfaced more problems. A promising approach seemed to be writing the requirements so that a target could use QAS arbitration but not win any arbitrations in those cases where fairness to non-QAS targets required it. However, several of those present wanted to consider this approach more carefully.

The group unanimously recommended approval of those portions of 99-160r2 (rev 1 as modified) for inclusion in SPC-2 and FCP-2, and that those portions of 99-160r2 that apply to SPI-3 be deferred to July for more through consideration by the SPI-3 working group.

5.5 Port Control mode page [Lamers/Weber]

Larry Lamers, George Penokie, Gerry Houlder, and Ralph Weber agreed that there are no problems in this area any more. They recommended that this item be dropped from future agendas.

6. Command Set Topics

6.1 SCSI Socket Services (SSS) Rev 0 Review [Parker]

George Penokie noted that a motion to close the project is expected at the T10 plenary meeting.

6.2 Device locks command (98-225r1) [Houlder]

Gerry Houlder announced that 98-225r2 is available for group consideration. He stated that no discussion was necessary at the meeting as further revisions to the proposal are anticipated. Gerry requested that the item remain on the agenda for future meetings so that the future revisions of the proposal can be discussed and considered for incorporation in SPC-2.

6.3 INQUIRY version information [Weber]

Ralph Weber described how the descriptor version proposal (99-110r1) was integrated in SPC-2 revision 9. He described the definition of code values in the normative part of SPC-2 and the description of how the values are derived in the informative Annex C. Gerry Houlder requested that values shown in the normative part of SPC-2 be shown in hexadecimal format; Ralph agreed to attempt to do that.

Ralph noted that standards under development do not have a normative code value. The group requested that version code value zero be used for such standards. Ralph agreed to make that change.

Bob Snively asked that several Fibre Channel related standards be assigned version codes. Ralph stated that version codes would be assigned to documents approved by T10 and asked Bob to bring requests for such assignments to the T10 meeting. Ralph noted that T10 drafts accepted as committee drafts, approved for letter ballot, approved for public review, or forwarded to ANSI would automatically have version codes assigned.

6.4 ECC Correction Spans >= 255 Bytes (reflector messages) [Houlder]

Gerry Houlder reported on the decisions on this subject at the March working group. John Lohmeyer joined Gerry in a discussion of how best to put this item on the to-do list for SBC-2, whenever that project gets initiated. Creation of a formal proposal document seemed to be the best approach and Gerry agreed to write such a proposal (99-189). Gerry requested that this item be dropped from future agendas.

6.5 Suggested changes to REPORT LUNS command for SPC-2 (99-144r1) [Snively]

Bob Snively proposed changes to the REPORT LUNS command that make it more like the INQUIRY command with respect to the handling of ACA and unit attention conditions. In the absence of any objections, the working group recommended that 99-144r1 be accepted for inclusion SPC-2 and SAM-2.

6.6 Extended Copy command (99-143r1, -163) [Snively/Weber]

Ralph Weber presented 99-163r0, a revised and annotated version of the EXTENDED COPY command originally described in 99-143r1. The group provided answers to the dozen questions asked in 99-163r0, discussed several of the data formats in the proposal, and provided Ralph with comments to be applied to a new revision of his proposal. Bob Snively volunteered to help Ralph generate specific definitions of the World Wide Name and N_PORT (D_ID) fields that appear in several target descriptors.

The group agreed to use 99-163 as the EXTENDED COPY command proposal from this time forward. Ralph agreed to prepare 99-163r1 for consideration at the July working group meeting.

6.7 Send command for Processor devices [Lamers]

Larry Lamers requested that the SEND command be made optional in the processor command set. Bill Galloway and John Lohmeyer supported the proposal, as did several others. Ralph Weber asked that the working group recommend that the SEND command be made optional in SPC-2. The working group approved the recommendation 14:1. Jeff Williams said his no vote was because he felt that a written proposal should be the basis for making the SEND command optional.

6.8 Application Client Log Page proposal (99-180r0) [Houlder]

Gerry Houlder presented a request for a log page that application clients can store and retrieve up to 16 Kilobytes of system-specific data for problem diagnosis. John Lohmeyer was concerned that only disks can implement the proposed page, due to the size of the data to be stored, while the page definition is specified for all device types (apparently because SPC-2 is open to revision where SBC is not).

In response to concerns raised by Bill Galloway, Gerry agreed to remove the requirement that two copies be maintained of the log data.

Dave Peterson mentioned similar work going on in SSC and Gerry agreed to coordinate his efforts with Dave. Gerry stated that a revised proposal (based on his discussions with Dave) will be brought to the July working group meeting.

6.9 Still more on Persistent Reservations (99-182r0) [Coughlan]

Tom Coughlan presented a proposal containing three corrections to the persistent reservations definition in SPC-2. Bob Snively protested the proposed change to the REGISTER service action and Tom agreed to write a new proposal that defines a new service action to perform the desired operation.

The other two proposed corrections were not controversial. Tom asked that changes II and III as amended (in 99-182r1) be approved for inclusion in SPC-2. The group unanimously recommended that 99-182r1 be approved for inclusion in SPC-2.

6.10 Drive Self Test (99-179r0) [Evans]

Mark Evans introduced the group to a proposal that more specifically defines the self test mechanisms already specified more generally by the SEND DIAGNOSTIC command. Several comments were made and Mark agreed to revise the proposal based on those comments and bring the revised proposal to the July working group meeting for consideration.

6.11 Untagged Command Support in FCP-2 [Galloway]

Bill Galloway raised questions about the presence of untagged commands in FCP-2. Bill discussed this addition and its effect on SPI-3 packet protocol with Bob Snively, George Penokie, and Jeff Williams. Bob noted that the feature is a direct response to a requirement in SAM. Ralph Weber agreed to write a proposal whose effect would be removing from SAM-2 the requirement for untagged command support.

7.   Other Topics

No other topics were brought to the working group for consideration at this meeting.

8.   Meeting Schedule

The next meeting of the SCSI Working Group will be Wednesday, July 14, 1999 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be at the Double Tree World Arena Hotel (719-576-8900) in Colorado Springs, CO hosted by LSI Logic Corp.

9.   Adjournment

The meeting was adjourned at 6:00 p.m. on Wednesday May 5, 1999.