Accredited Standards Committee*
X3, Information Technology

To: Membership of X3T10

From: Ralph Weber, Secretary X3T10
Larry Lamers, Vice-chair X3T10
John Lohmeyer, Chair X3T10

Subject: Minutes of X3T10 SCSI Working Group Meeting
Bedford, NH -- September 12-13, 1995

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Agenda

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    6.6 Device Identification Page Proposal (95-240) [Lohmeyer]
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    7.1 What is in a name? [Milligan]
    7.2 Systems Issues Considerations [Penman]

8. Meeting Schedule

9. Adjournment

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Results of Meeting

1.   Opening Remarks

John Lohmeyer, the X3T10 Chair, called the meeting to order at 9:00 a.m., Tuesday September 12, 1995. He thanked Charles Monia of Digital Equipment Corp. for hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated. Copies of the draft agenda and general information on X3T10 were made available to those attending.

2.   Approval of Agenda

The draft agenda was approved with the following additions:

> 6.1 Persistent Reservations Proposal (95-229r1) [Snively]
> 6.5 Set Capacity (95-260r1) [Houlder]
> 6.8 Secure Multiple Port Operations [Snively]
> 6.9 Informational Exception Control Page [Houlder]
> 7.2 Systems Issues Considerations [Penman]

3.   Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for X3T10 membership. Working group meetings are open to any person or organization directly and materially affected by X3T10'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. Norm Harris           P   Adaptec, Inc.              nharris@eng.adaptec.com
Mr. Lawrence J. Lamers    A#  Adaptec, Inc.              ljlamers@aol.com
Mr. Edward Fong           P   Amdahl Corp.               esf10@amail.amdahl.com
Mr. Charles Brill         P   AMP, Inc.                  cebrill@amp.com
Mr. Bob Atkinson          O   AMP, Inc.                  rdatkins@amp.com
Mr. Ron Roberts           A   Apple Computer             rkroberts@aol.com
Mr. Peter Johansson       P   Congruent Software, Inc.   pjohansson@aol.com
Mr. Paul Entzel           O   Conner                     paul.entzel@conner.com
Mr. Charles Monia         P   Digital Equipment Corp.    monia@shr.dec.com
Dr. William Ham           A#  Digital Equipment Corp.    ham@subsys.enet.dec.com
Mr. William Dallas        A#  Digital Equipment Corp.    dallas@wasted.enet.dec.
                                                         com
Mr. Robert Reisch         P   Eastman Kodak Co.          reisch@sector.kodak.com
Mr. Mark Hamel            V   EMC Corp.                  hamel@emc.com
Mr. Ralph O. Weber        A#  ENDL Associate             roweber@acm.org
Mr. Edward Lappin         P   Exabyte Corp.              tedl@exabyte.com
Mr. Andy Chen             A#  Fujitsu Computer Prods     achen@fcpa.fujitsu.com
                              Amer
Mr. Tim Norman            A#  Fujitsu
                              Microelectronics/ECD
Mr. Zane Daggett          A#  Hitachi Cable              74354.2576@compuserve.com
                              Manchester,Inc
Ms. Nancy Cheng           A#  Hitachi Computer Products  n_cheng@hitachi.com
Mr. George Penokie        P   IBM Corp.                  gop@rchvmp3.vnet.ibm.com
Mr. Duncan Penman         P   IIX Consulting             penman@netcom.com
Mr. David Rosenboom       V   K-Tec Electronics
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Mr. Tommy Yeung	V	K-Tec Electronics	
Mr. Dean Wallace	P	Linfinity Micro	75671.3443@compuserve.com
Mr. Pete McLean	P	Maxtor Corp.	pete_mclean@maxtor.com
Mr. Param Panesar	O	Pioneer Research	
Mr. Skip Jones	P	QLogic Corp.	sk_jones@qlc.com
Mr. James McGrath	P	Quantum Corp.	JMCGRATH@QNTM.COM
Mr. Edward A. Gardner	A	Quantum Corp.	gardner@acm.org
Mr. Gerald Houlder	A	Seagate Technology	Gerry_Houlder@notes. seagate.com
Mr. Greg Alvey	V	Solution Technology	g.alvey@genie.geis.com
Mr. Erich Oetting	P	Storage Technology Corp.	Erich_Oetting@Stortek.com
Mr. Robert N. Snively	P	Sun Microsystems Computer Co	bob.snively@eng.sun.com
Mr. John Lohmeyer	P	Symbios Logic Inc.	john.lohmeyer@symbios.com
Mr. Rod DeKoning	V	Symbios Logic Inc.	rod.dekoning@symbios.com
Mr. Tracy Spitler	V	Symbios Logic Inc.	tracy.spitler@symbios.com
Mr. Arlan P. Stone	A	UNISYS Corporation	arlan.stone@mv.unisys.com
Mr. Paul D. Aloisi	P	Unitrode Integrated Circuits	Aloisi@uicc.com
Mr. Tak Asami	A	Western Digital Corporation	asami@dt.wdc.com

39 People Present

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

John Lohmeyer reported that Fast-20 has completed first public review successfully. The editing changes from ANSI have been incorporated and will need a vote of approval at the plenary.

4.1   SPI-2 and EPI Study Group Report

Bill Ham reported on the SPI-2 study group (see 95-316). The model of the terminator was reworked.

4.2   Propagation Delay Length Limit [Ham]

This topic is a carry-over from the SPI-2 meeting.

The propagation time allowed was discussed. Bill has a formula to calculate the length:

$$(200-T_{dd}-2T_r)/T_{pd}$$

where T_{dd} is the summation of the delay in all devices; T_r is the propagation delay through the transceivers; T_{pd} is the propagation speed of the medium. The T_r is not needed if specified at the connector.

4.3   EPI Draft Document Outline [Ham]

This topic is a carry-over from the SPI-2 meeting.

Bill Ham reviewed the document outline (see 95-320). Charles Monia volunteered to prepare a proposal for the LUN Bridge topic.

4.4   Hybrid SPI-2 (continued) [Spitler]

Tracy Spitler presented the packaging issues related to Hybrid SPI-2 for terminators. This issue will get further discussion at the next SPI-2 working group.

5.   Protocol Topics

5.1   Addressability of TARGET RESET task management function (94-236r1) [Snively]

Bob review his proposal for a TARGET RESET task management function. He accepted an action item to craft a paragraph(s) for SAM-2 on hierarchy. A new message value in SIP for LOGICAL UNIT RESET was requested.

5.2   Public Review Comment Resolution on SBP (95-277) [Roberts]

Resolution of the public review comments was completed at the last SBP study group meeting. Complete information should be available in the next mailing. A project proposal for an SBP-2 standard will be made at the plenary.

5.3   FCP use of Disconnect-Reconnect Mode Page (95-208r2) [Gardner]

Ed Gardner led a discussion of 95-208r2. There was a lengthy discussion of whether the single page format should apply to all protocols. The most favored alternative was making the contents of the entire mode page protocol specific. Eventually, the working group supported continuation of the current (protocol common mode page) definition condition. This was confirmed in a straw-poll vote of 13:2.

Having settled the general issue, the group discussed specific wording problems with specific fields in the mode page. A very small number of editorial changes were made. George Penokie discussed details of the proposed SIP definitions. George expressed general approval of the SIP proposals.

In the absence of any objections, the working group recommended that the plenary approve the proposal, as revised.

5.4   SCSI-3 Interlocked Protocol (SIP) [Penokie]

George Penokie brought in rev 6 and went through a review of the document.

6.   Command Set Topics

6.1   Persistent Reservations Proposal (95-229r1) [Snively]

Bob Snively presented the latest draft of the Persistent Reservation proposal, 95-229r1. Several issues were raised for Bob to review for more possible changes in the proposal. The changes were considered to be editorial. In the absence of any objections, the working group unanimously recommended that the plenary adopt 95-229r1, as modified, for inclusion in the SPC.

6.2   Set/Sense Environmental Services Function [Snively]

Bob requested guidance from the working group regarding enclosure services (services that manage or detect the state of a drive or device enclosure). He used a very high level summary slide, 95-324, as the basis of the discussion. Bob led a lively discussion and received substantial advice. At the end of the discussion, Bob agreed to draft a specific proposal, probably based on the RECEIVE DIAGNOSTIC RESULTS command.

6.3   Proposed REPORT LUNS command (95-253r1) [Weber]

Ralph presented 95-253r2 and several editorial corrections and enhancements were proposed by the working group. Ralph accepted all the proposals. The working group discussed whether the proposed command should be optional or mandatory. After a couple of straw-poll votes, it was clear that the working group favored making the new command optional.

6.4 Report supported density codes {for SSC} (95-224r5) [Lappin]

Ted asked that the working group review 95-224r5, which was in the mailing and contained many corrections proposed by the last working group meeting. In the absence of any objections, the group recommended that the plenary approve 95-224r5 for inclusion in the SSC.

6.5 Set Capacity (95-260r1) [Houlder]

Gerry Houlder presented 95-260r1. Issues were raised concerning system failures that occur during the process of partitioning disk space. In addition, questions were raised about the problems resulting from deletion of a LUN space definition that is sandwiched between two other LUN space definitions.

The action of the FORMAT UNIT after partitioning was discussed and concerns were raised about the lack of a specific statement in the proposal. The working group directed Gerry to redraft the proposal to match the original issues that it was intended to address, and eliminate many of the bells and whistles that were added since the last meeting. Furthermore, it was concluded that the redrafted proposal should be brought to the next working group meeting.

6.6 Device Identification Page Proposal (95-240) [Lohmeyer]

John stated that he is waiting on input from Gene who is waiting on input from IEEE.

6.7 Reporting Version Information [Milligan]

Gene Milligan was not present to lead a discussion of this topic.

6.8 Secure Multiple Port Operations (95-322) [Snively]

Bob Snively presented 95-322r0, a preliminary draft proposal for extending persistent reservations to become a security tool. Concerns were raised about the ability to spoof some key identifiers in the proposed system. It was concluded that spoofing will always (or almost always) be possible.

Bob next presented details of the preliminary proposal. Concerns were raised about the mechanisms by which proposed security features are protected. Bob proposed that factory intervention is required in some key cases. Some working group members preferred that power failures automatically reset the passwords that apply in the same cases.

Bob agreed to draft a specific proposal based on the ideas discussed by the working group.

6.9 Informational Exception Control Page [Houlder]

Gerry Houlder briefly presented the proposal originally written by Gene Milligan. In the absence of any objections, the working group unanimously recommended that the plenary accept 95-323r0 for inclusion in the SPC.

7. Other Topics

7.1 What is in a name? [Milligan]

Gene Milligan was not present to lead a discussion of this topic.

7.2 Systems Issues Considerations [Penman]

Duncan Penman noted that a project proposal for a technical report will be presented to the plenary for action. The proposed technical report will concern PC Boot Considerations for Devices >8GByte and is document number 95-298r1.

Duncan asked the working group for advice regarding the continued existence of the system issues working group. He noted that most of the issues that have come before the system issues working group have concerned

AT. In view of this fact and other changes around AT standards work, Duncan recommended that the SCSI system issues topics be returned to the SCSI working group agenda and that the systems issues working group cease regularly scheduled meetings.

8.   Meeting Schedule

The next meeting of X3T10 SCSI Working Group will be November 7-8, 1995, in Palm Springs, CA at the Hyatt Regency Suites (619-322-9000), hosted by Western Digital.

9.   Adjournment

The meeting was adjourned at 3:03 p.m. on Wednesday September 13, 1995.