

Accredited Standards Committee*
X3, Information Technology

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Project:

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Reply to: John Lohmeyer

To: Membership of X3T10

From: Ralph Weber, Secretary X3T10
John Lohmeyer, Chair X3T10

Subject: Minutes of X3T10 Plenary Meeting #16
Colorado Springs, CO -- July 18, 1996

Agenda

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 - 8.15 SCSI-3 Medium Changer Commands (SMC) Status {Project 999-D} [Oetting]
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 - 8.18 SCSI-3 Fast-20 Parallel Interface (Fast-20) {Project 1071-D} [Lamers]
 - 8.19 SCSI Parallel Interface - 2 (SPI-2) {Project 1142-D} [Ham]
 - 8.20 SCSI Enhanced Parallel Interface (EPI) Technical Report {Project 1143-D} [Ham]
 - 8.21 SCSI Fibre Channel Protocol - 2 (FCP-2) {Project 1144-D} [Snively]
 - 8.22 Boot Considerations Technical Report {Project 1154-DT} [Penman]
 - 8.23 SCSI-3 Serial Bus Protocol 2 (SBP-2) {Project 1155-D} [Johansson]
 - 8.24 SCSI Architecture Model - 2 (SAM-2) {Project 1157-D} [Monia]

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- 8.25 SCSI-3 Enclosure Commands (SES) {Project 1212-D} [Snively]
- 8.26 SCSI Controller Commands (SCC-2) {Project xxx-D} [Penokie]
- 8.27 High Availability Profile (HAP) Technical Report {Project xxx-DT} [Hagerman]

9. Old Business

- 9.1 Results of SPC Letter Ballot (96-012)
- 9.2 Electronic Notification Procedure (95-146r2) [Lohmeyer]

10. New Business

- 10.1 MMC-2 Command Set Project Proposal (96-185) [Roberts]
- 10.2 Actions on Working Group Recommendations
 - 10.2.1 Request for DEVICE INTERNAL RESET ASC/ASCQ (96-192r0) [Monia]
 - 10.2.2 Clarification of sleep mode (96-140) [Penokie]
 - 10.2.3 RESERVE(6) and RELEASE(6) (96-183) [Stephens]
 - 10.2.4 READ(6) (96-183) [Stephens]
 - 10.2.5 Change to Device Identification VPD Page (96-214) [DeKoning]
 - 10.2.6 Several SSC Proposals [Lappin/Stephens]
- 10.3 Project Proposal for SCSI Unified Parallel Requirements (SUPR) (96-188) [Lamers/Lohmeyer/Ham]
- 10.4 Terminator Issue [Milligan]
- 10.5 RESERVE ELEMENT(6) and RESERVE ELEMENT(6) [Oetting]

11. ISO

- 11.1 ISO Report [Milligan]

12. Liaison Reports

- 12.1 X3T11 Liaison Report [Cummings]
- 12.2 X3T13 Liaison Report [Milligan]
- 12.3 SFF Industry Group [Allan]
- 12.4 IEEE 1394 [Johansson]
- 12.5 IEEE P1285 Status
- 12.6 PCMCIA Report []
- 12.7 SCSI Trade Association (STA) [Jones]

13. Review of Action Items

14. Meeting Schedule

- 14.1 Authorization of Working Group Meetings

15. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer, the X3T10 Chair, called the meeting to order at 1:00 p.m., Thursday July 18, 1996. He thanked Symbios Logic for allowing him to host a meeting close to home.

John said that X3 Subgroup Membership forms and the X3T10 Mailing Subscription form were available on the document table. He said that people should use the X3 forms to insure the X3 Secretariat has the latest membership information. These forms should be mailed directly to the X3 Secretariat.

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:

- 10.2.1 Request for DEVICE INTERNAL RESET ASC/ASCQ (96-192r0) [Monia]
- 10.2.2 Clarification of sleep mode (96-140) [Penokie]
- 10.2.3 RESERVE(6) and RELEASE(6) (96-183) [Stephens]
- 10.2.4 READ(6) (96-183) [Stephens]
- 10.2.5 Change to Device Identification VPD Page (96-214) [DeKoning]
- 10.2.6 Several SSC Proposals [Lappin]
- 10.4 Terminator Issue [Milligan]
- 10.5 RESERVE ELEMENT(6) and RESERVE ELEMENT(6) [Oetting]

3. Attendance and Membership

The membership requirements were reviewed. X3 rules permit one vote per organization. An individual from a new organization must attend two out of three consecutive plenary meetings. He/she may apply for voting membership the second meeting via a letter to the Chair of X3T10. The individual may vote at the second plenary meeting. Working group meetings do not count toward attendance requirements.

Organizations must also pay the X3 Service Fee (\$300) to maintain membership. The ANSI International Program Fee (also \$300) is billed at the same time.

The Chair said he had sent letters to 8 people from 2 organizations informing them that their membership was in jeopardy due to non-attendance (see 96-024r0) and that their membership would be terminated if they did not attend this meeting. All organizations were represented at this meeting.

Since the last meeting, the X3 Secretariat has ruled that Madison Cable is a separate organization from AMP since they have a separate board of directors (even though they are wholly owned by AMP). John announced that Sony had been re-instated at this meeting.

The X3T10 membership during the meeting was 51 organizations up from 49 organizations last time. Following the meeting, Berg Electronics joined the committee, bringing the total membership up to 52 organizations. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current X3T10 membership list.

4. Approval of Minutes - May Meeting Ft. Lauderdale, FL (X3T10/96-168r1)

The minutes were approved as written.

5. Document Distribution

Members who have any problems with their mailing subscription should deal directly with Katrina Gray (kgray@itic.nw.dc.us) (202) 626-5741.

Larry Lamers requested that all documents for the next mailing be in his hands in electronic format by 10:30 a.m. on Thursday July 25, 1996. Documents received after this time will go into a subsequent mailing.

Larry Lamers reminded the committee of the requirements for document submission to be included in the committee mailing. Since X3T10 meets its document archiving requirements by including the X3 Secretariat on the mailing list, documents included in the mailing must be suitable for archiving. This means that native-format electronic originals with proper identification must be submitted. Document X3T10/95-147 contains the list of requirements for submissions. Document X3T10/95-361r0 contains instructions for expeditious delivery of documents to Larry.

The electronic copies can be emailed directly to Larry (at ljlamers@corp.adapte.com), placed on the SCSI BBS (719-533-7950), or they can be ftp'd to <ftp.symbios.com> and placed in the /pub/standards/io/incoming directory. In the latter two cases, please also send an email to Larry (at ljlamers@aol.com) informing him of the exact file name and location of the file.

As usual, minutes are also available on the SCSI BBS (719-533-7950) and will be distributed to the SCSI Reflector.

To be added to the SCSI Reflector, send an email to majordomo@symbios.com with the line 'subscribe scsi' in the message body. The X3 Secretariat maintains a World Wide Web page at <http://www.x3.org>. Symbios Logic maintains a World Wide Web page on behalf of X3T10 at <http://www.symbios.com/x3t10>.

The current document register is enclosure (3).

6. Call for Patents

This is a regular agenda item to identify any potential patent issues with developing standards.

A document is available from ANSI, "Procedures for the Development and Coordination of American National Standards", at no charge. This document is also on the WWW at http://www.x3.org/help/ansi_sdo.html. Annex I contains the ANSI patent policy.

7. Review of Old Action Items

- 138) Larry Lamers will prepare a SPI amendment document for review and consideration at the May meeting. *Complete*
- 146) John Lohmeyer will forward the SCC-2 Project Proposal (96-152r0) to X3 for further processing. *Complete*
- 147) John Lohmeyer will forward the project proposal for a High Availability Technical Report (96-151r1) to X3 for further processing. *Complete*
- 148) John Lohmeyer will add an agenda item to review the mandatory status of the SBC READ(6) and other commands to the July SCSI Working Group agenda. *Complete*
- 149) Gene Milligan and John Lohmeyer will send a letter to the JTC-1 TAG expressing concerns about the scope and activities of IEC/TC100. *Complete*
- 150) John Lohmeyer will write a letter responding to X3T13/96-009 letter as described by the committee motion. *Complete*
- 151) John Lohmeyer will add an agenda item to review the MMC-2 project proposal to the Plenary agenda. *Complete*

8. Subgroup and/or Project Status Reports

8.1 Project Status Summary and X3/OMC Liaison [Lohmeyer]

John Lohmeyer said that the current X3T10 project status summary was included in the X3T10 Information Packages and will be included in the mailing as usual.

8.2 X3T10.1 Task Group Report [Lamers]

Larry Lamers, the X3T10.1 chair, made an oral report to the committee and provided the following electronic report for the minutes:

X3T10.1 Report
Larry Lamers, Chair X3T10.1

X3T10.1 met in St. Petersburg Beach, FL on Wednesday, June 26, 1996 with 8 people present.

Membership is now at 13 voting organizations of which 6 were in attendance.

All of the first-generation SSA documents (PH1, TL1, and S2P) have completed public review without comment.

The editorial comments from the ANSI editor were reviewed and determined to be non-substantive. The technical editor prepared revisions of the dpANS with those changes incorporated.

SSA-PH1	X3.293-199n revision 9b
SSA-TL1	X3.295-199n revision 10a
SSA-S2P	X3.294-199n revision 7a

It is expected that SSA-PH2 and SSA-TL2 will have technical stability vote at the next plenary. A forwarding motion is planned for October 1996 for all three second generation drafts.

The next plenary meeting of X3T10.1 will be August 28, 1996, in Ithaca, NY at the Ramada Inn, hosted by Pathlight. Contact Fran Hopkins at Pathlight for reservations (607 266 4000). The meeting will begin at 3:00 p.m. on Wednesday

The long term meeting schedule is:

Week of August 26, 1996 in Ithaca, NY hosted by Pathlight.
 Week of October 28, 1996 in Hawaii, hosted by IBM.
 Week of February 24, 1997 in Austin, TX *.
 Week of June 23, 1997 in Monterey, CA *.
 Week of October 27, 1997 in Europe *.
 Week of February 23, 1998 in *.
 Week of June 22, 1998 in *.
 Week of October 26, 1998 *.

Larry Lamers moved and John Lohmeyer seconded that X3T10 accept the changes requested by the ANSI editor as reflected in: SSA-PH1 X3.293-199n revision 9b; SSA-TL1 X3.295-199n revision 10a; and SSA-S2P X3.294-199n revision 7a as non-substantive. The motion passed 34:0:0:17=51.

John Lohmeyer took an action item to inform the X3 Secretariat of X3T10's acceptance of the ANSI edits on the SSA documents as non-substantive changes.

8.3 SCSI Common Access Method (CAM) {Project 792-D} [Dallas]

John reported that CAM is at ANSI awaiting publication.

8.4 SCSI-3 Parallel Interface (SPI) Status {Project 855-D} [Lamers]

Larry Lamers reported that ANSI SPI document is in the process of publication by ANSI. At the urging of Gene Milligan, the SPI amendment was given top priority at the Friday document editing meeting. Work on the SPI amendment and SPI issues will start at 8:30 a.m. on Friday 19 July 1996.

Larry noted that the SPI ISO document will incorporate the SPI amendment during the next round of editing. This provides one key motivation for completing the SPI amendment quickly. Larry asked about document numbering on the SPI ISO document.

Larry moved that X3T10 approve payment the invoice in document 96-218 as partial payment of the SPI ISO professional editing work. Charles Monia seconded the motion. The motion passed 32:0:0:19=51. John took an action item to request the X3 Secretariat to pay the invoice in 96-218.

8.5 SPI Amendment (SPIAmnd) {Project 0855-D} [Johansson/Lamers]

As noted in the previous item, the SPI Amendment will be reviewed at the next document editing meeting.

8.6 SCSI-3 Interlocked Protocol (SIP) Status {Project 856-D} [Penokie]

After processing the clarification of sleep mode George Penokie moved that X3T10 forward SIP revision 10 to second public review. Paul Aloisi seconded the motion. Revision 10 also corrects the normative reference problem identified in public review comment #1 from IBM. The motion passed 29:0:0:22=51. George Penokie took an action item to prepare SIP revision 10. John Lohmeyer took an action item to forward SIP revision 10 to X3 for further processing toward second public review and to respond to the public review comment.

8.7 SCSI Common Access Method -3 (CAM-3) Status {Project 990-D} [Dallas]

Bill Dallas reported that formal CAM working group meetings are being suspended until January or March 1997. Further discussion of CAM will be conducted on a reflector. Bill noted that work on the address field size issues are being resolved and said that the reflector is providing a good forum for discussing the address concerns.

8.8 SCSI-3 Serial Bus Protocol (SBP) Status {Project 992-D} [Roberts]

John reported that SBP has passed second public review without comment. However, the X3 Secretariat is holding SBP pending resolution of the normative references issues.

John thanked Dal Allan for prodding ANSI to resolve the problems X3T10 has been having with normative references to draft documents. The description of the proposed new ANSI policy can be found in 96-199r0. The committee discussed the new ANSI policy. John took an action item to inform the X3 Secretariat of X3T10's enthusiastic agreement with ANSI's proposed normative references policy.

The committee directed Ron Roberts to modify SBP as described in the new ANSI references policy.

8.9 SCSI-3 Fiber Channel Protocol (FCP) Status {Project 993-D} [Snively]

Bob Snively reported that, to the best of his knowledge, FCP is published. He recommended that this agenda item be dropped for future committee meetings. John agreed to remove this agenda item when he determines that FCP has been published.

8.10 SCSI-3 Architecture Model (SAM) Status {Project 994-D} [Monia]

Charles reported he is unaware about the status of SAM. He noted that he has not been contacted by the ANSI editors.

8.11 SCSI-3 Primary Commands (SPC) Status {Project 995-D} [Weber]

Ralph reported that the SCSI working group approved acceptance of 96-148r3 as resolving the SPC letter ballot comments and that the working group recommended SPC revision 10 (revision 9b as amended by the working group) for forwarding to public review.

Ralph Weber moved and Charles Monia seconded that the comments resolution 96-149r3 be accepted as resolving the SPC letter ballot comments and that SPC revision 10 be forwarded to X3 for further processing toward first public review. The motion passed 29:0:0:22=51.

Ralph took an action item to prepare SPC revision 10. John took an action item to forward SPC revision 10 to X3 for further processing toward first public review.

8.12 SCSI-3 Block Commands (SBC) Status {Project 996-D} [Milligan]

Gene reported that SBC has been cleaned up by a professional editor. He noted that additional changes in SBC have been recommended by the working group and will be dealt with later in this meeting.

Larry Lamers moved that X3T10 approve the editing quotation in 96-216 and the invoice in 96-217. John Lohmeyer seconded the motion. The motion passed 34:0:0:17=51. John Lohmeyer took an action item to request the X3 Secretariat to pay the invoice in 96-217.

Gene Milligan moved that SBC be stabilized at revision 4 plus the changes approved at this meeting. Ed Gardner seconded the motion. The motion passed 26:0:0:25=51.

8.13 SCSI-3 Stream Commands (SSC) Status {Project 997-D} [Lappin]

Ted Lappin reported in the activities of the SSC/SMC working group (minutes in 96-219).

8.14 SCSI-3 Graphics Commands (SGC) Status {Project 998-D} [Tewell]

John reported no progress on SGC. He reminded the committee if no one has volunteered to edit SGC by the September plenary, he will introduce a motion to withdraw SGC from development.

8.15 SCSI-3 Medium Changer Commands (SMC) Status {Project 999-D} [Oetting]

Erich reported that revision 6 of SMC will be in the next mailing. He described the changes in revision 6 as being minor. Ralph asked Erich to expedite publication of SMC, since SMC is a normative reference in SPC.

8.16 SCSI-3 Controller Commands (SCC) Status {Project 1047-D} [Penokie]

George Penokie reported several editorial corrections for SCC have been reported since the last meeting. He described the normative references problems and resolutions handled since the last meeting. He said that revision 6a was in the last mailing and the next mailing will contain revision 6b.

Gene Milligan moved that X3T10 accept the changes in revision 6b of SCC as non-substantive and that the SCC technical editor be instructed to work with the ANSI editor to bring the normative references in SCC into conformance with the ANSI references policy. John Lohmeyer seconded the motion. It was noted that a draft of the ANSI references policy can be found in X3T10/96-199. The motion passed 31:0:0:20=51.

George Penokie took an action item to work with the ANSI editor to bring the normative references in SCC into conformance with the ANSI references policy. John Lohmeyer took an action item to inform the X3 Secretariat that X3T10 accepts the changes to SCC as non-substantive.

8.17 Multimedia Command Set (MMC) Status {Project 1048-D} [Roberts]

Ron Roberts reported that MMC working group unanimously recommended that X3T10 conduct a letter ballot to approve forwarding MMC revision 8 to first public review. In the absence of any objections, John Lohmeyer took an action item to conduct a letter ballot to approve forwarding of MMC revision 8 to first public review.

Ron requested that a two-day MMC working group meeting be scheduled for September.

8.18 SCSI-3 Fast-20 Parallel Interface (Fast-20) {Project 1071-D} [Lamers]

Larry Lamers reported that Fast-20 is in final publication and should be available in August.

8.19 SCSI Parallel Interface - 2 (SPI-2) {Project 1142-D} [Ham]

Bill Ham reported that revision 9 of SPI-2 was posted on the BBS last week. He described the inclusion of High-Voltage Differential in SPI-2 revision 9. He described the document as technically stable and noted that no substantive numbers were changed in the recent revision. He suggested that forwarding might be possible at the next meeting.

John described the debate over DIFFSENS numbers that occurred at the working group meeting (minutes in 96-201). Bill described the process by which Fast-80 was dropped from SPI-2. Bill and Larry Lamers discussed the need for more "clock like" REQ/ACK signals to make Fast-80 work on a Fast-40 cabling and transceiver plant.

8.20 SCSI Enhanced Parallel Interface (EPI) Technical Report {Project 1143-D} [Ham]

Bill Ham reported that EPI revision 6 contains important new details regarding expander circuits. He noted that the working group discussed EPI for about three hours (minutes in 96-201). He described the project as about 50%-60% complete with respect to technical content. John complemented Bill on the EPI work thus far and requested people to review the draft document.

8.21 SCSI Fibre Channel Protocol - 2 (FCP-2) {Project 1144-D} [Snively]

Bob Snively reported that the major work in FCP-2 is bringing it into alignment with protocol editorial policies. He noted that work on SES will take precedence over FCP-2.

8.22 Boot Considerations Technical Report {Project 1154-DT} [Penman]

The committee inspected portions of the draft and expressed concerns over the amount of additional editing necessary. Larry Lamers noted that he is not available to provide additional editing on the document. Bob Snively requested that X3T13 and the X3T10 members not attending this meeting be notified that this project may be dropped due to lack of active interest. Bob further suggested that X3T10 members be solicited for interested persons to become editors. Larry Lamers, John Lohmeyer and Gene Milligan took an action item to notify the membership of X3T10 and X3T13 that the Boot Considerations TR might be dropped.

Larry moved that X3T10 approve payment the invoice in document 96-215 for professional editing work on the Boot Considerations Technical Report. Charles Monia seconded the motion. The motion passed 25:0:0:26=51. John Lohmeyer took an action item to request the X3 Secretariat to pay the invoice in 96-215.

8.23 SCSI-3 Serial Bus Protocol 2 (SBP-2) {Project 1155-D} [Johansson]

John reported that Peter Johansson gave an overview of the SBP-2 in the working group. Peter requested approval of a SBP-2 working group meeting in Redmond, WA on 13 August. Peter further informed the committee that a "Disk Boys" meeting will be held in Redmond, WA on 14 and 15 August.

8.24 SCSI Architecture Model - 2 (SAM-2) {Project 1157-D} [Monia]

Charles Monia reported no progress on SAM-2. He stated that he is hoping to resolve some editorial issues before progressing much farther on SAM-2.

8.25 SCSI-3 Enclosure Commands (SES) {Project 1212-D} [Snively]

Bob Snively reported that the SES project has been assigned project number 1212. He further said that SES revision 5.0 was prepared for and discussed at the June meeting. Revision 6.0 was prepared as a partial integration of the technical and editorial modifications from meetings. He announced that revision 7.0 is scheduled for preparation for the next meeting and should contain all editorial and technical modifications. He stated a belief that revision 7.0 will be ready for letter ballot approval for first public review.

8.26 SCSI Controller Commands (SCC-2) {Project xxxx-D} [Penokie]

George Penokie reported on the results of the SCC working group meeting (minutes in 96-206). George requested a half-day meeting during the September meeting week.

8.27 High Availability Profile (HAP) Technical Report {Project xxxx-DT} [Hagerman]

No report.

9. Old Business

9.1 Results of SPC Letter Ballot (96-012)

The SPC letter ballot comments were processed during the SPC project report (see above).

9.2 Electronic Notification Procedure (95-146r2) [Lohmeyer]

John Lohmeyer moved that X3T10 forward 95-146r2 to X3 PPC as an additional definition of X3T10 procedures, specifically for electronic processing of committee actions. Zane Daggett seconded the motion. The motion passed 26:0:0:25=51. John took an action item to forward 95-146r2 to X3 PPC as an additional definition of X3T10 procedures, specifically for electronic processing of committee actions.

10. New Business

10.1 MMC-2 Command Set Project Proposal (96-185) [Roberts]

Ron Roberts moved that the MMC-2 project proposal be forward to X3 for further processing. Bob Snively seconded the motion. The motion passed 26:0:0:25=51. John Lohmeyer took an action item to forward the MMC-2 project proposal (96-185r0) to X3 for further processing.

10.2 Actions on Working Group Recommendations

10.2.1 Request for DEVICE INTERNAL RESET ASC/ASCQ (96-192r0) [Monia]

Jeff Williams moved that the recommendation of the working group to add ASC/ASCQ 29/04 defined as DEVICE INTERNAL RESET. George Penokie seconded the motion. The motion passed 26:0:0:25=51.

10.2.2 Clarification of sleep mode (96-140) [Penokie]

George Penokie described the history the sleep mode clarification proposal. George moved that the committee accept 96-140r4 for inclusion in the proper standards. Peter Johansson seconded the motion. The motion passed 27:0:1:23=51.

George moved that those portions of 96-140r4 that apply SIP be included in SIP revision 10. Ed Gardner seconded the motion. Gene Milligan moved to amend the motion to change SIP revision 10 to SIP-2 or project 1142 if that project's scope is amended. Gary Stephens seconded the motion to amend. The motion to amend did not pass 12:12:3:24=51. The original motion passed 27:4:0:20=51.

10.2.3 RESERVE(6) and RELEASE(6) (96-183) [Stephens]

In view of the fact that the current definition of RESERVE(6) and RELEASE(6) commands are broken with respect to several serial protocols, Gene Milligan moved that the third-party fields in RESERVE(6) and RELEASE(6) be made obsolete and that the status of the two commands be changed from mandatory to optional and that checking be required for the obsolete fields. Bill Dallas seconded the motion.

Jeff Williams moved to divide the field checking from the original question. George Penokie seconded the motion to divide. The motion to divide passed 17:0. The checking was divided from the original motion.

The motion minus the field checking passed 27:2:0:22=51

The committee turned to the issue of field checking (divided motion from the original motion). The second portion of the divided motion passed 21:3:1:26=51. Upon further consideration, the chair recognized that the second

portion of the divided motion did not pass because it affects SPC and thus requires a two-thirds vote. A second vote was held. The second portion of the divided question failed 24:2:0:25=51.

Gene Milligan moved that checking of the RESERVE(6) and RELEASE(6) obsolete fields be made mandatory in some future version of SPC. Bill Dallas seconded the motion. The motion passed 14:7:5:25=51. George Penokie requested that Gene be given an action item documenting the proposal just passed. Gene Milligan took an action item to document the action taken by this plenary meeting with respect to the checking of the RESERVE(6) and RELEASE(6) obsolete fields be made mandatory in some future version of SPC.

10.2.4 READ(6) (96-183) [Stephens]

In view of the favorable vote in the working group, Gene Milligan moved that READ(6) be made optional in SBC. Skip Jones seconded the motion. The motion passed 26:2:0:23=51.

10.2.5 Change to Device Identification VPD Page (96-214) [DeKoning]

The committee could not find a written copy of the proposal and action was deferred to the September working group meeting.

10.2.6 Several SSC Proposals [Lappin/Stephens]

Ted Lappin described three proposals for changes in SSC: Write Protect for Sequential Devices (96-179r1), Read Reverse Option for Sequential Devices (96-180r1), and Progress Indication Clarification for Sequential Devices (96-181r1). Ted moved that working group recommendation to accept those portions of all three proposals that apply to SSC for inclusion SSC be approved by X3T10. Bill Dallas seconded the motion. The motion passed 21:0:0:30=51.

Ted noted that the proposal Write Protect for Sequential Devices (96-179r1) includes new ASC/ASCQ assignments. Ted moved that the ASC/ASCQ assignments in 96-179r1 be approved for inclusion in a future version SPC. Bill Dallas seconded the motion. The motion passed 22:0:0:29=51.

10.3 Project Proposal for SCSI Unified Parallel Requirements (SUPR) (96-188) [Lamers/Lohmeyer/Ham]

George Penokie presented recommendations on SPI-2 documentation strategy on behalf of himself and the SCSI Trade Association. Specifics of the recommendations were as follows:

- 1) Stabilize SPI-2 proposal ASAP
 - Take a stabilization vote
 - No intention to forward
- 2) Start a new project called SUPR that includes:
 - SPI-2 proposal
 - FAST-20 standard
 - SPI standard
 - SIP standard ???
 - other stuff like:
 - Fairness
 - FAST-80
 - Reduced overhead
- 3) Drop SPI-2 project proposal

George Penokie moved that the committee reconsider the motions defining the scope the 1142 project passed at meeting number 15 (approved minutes in 96-186r1). Gene Milligan seconded the motion to reconsider. The motion passed 20:2:2:27=51.

Gene Milligan moved that the sense X3T10 be that the document presently known as 1142 be stabilized as quickly as practical, and that the motion to stabilize it include its acceptance for inclusion in project 1142 with the addition of SPI, Fast-20, and other applicable items. Skip Jones seconded the motion. The motion was discussed at length. The scope of the project proposal for 1142 (95-207r1) were reviewed. The motion passed 17:8:1:25=51.

Larry Lamers took an action item to assign a X3T10 document number to the document presently known as 1142.

Bill Ham moved that the SUPR project proposal (96-188r0) be forward to X3 for further processing. Roger Cummings seconded the motion. After a lengthy discussion, Bill and Roger agreed to withdraw their motion.

Gary Stephens moved that X3T10 prepare a revision to the scope of project 1142 to include SIP. Jeff Williams seconded the motion. The motion passed 13:6:12:20=51. Gary Stephens took an action item to draft a letter to X3 OMC requesting a revision in the project proposal for project 1142. [Chair's note: A 2/3rds motion is still needed to forward the proposed revision to the 1142 project scope.]

10.4 Terminator Issue [Milligan]

Gene described problems with the unreliability of the SCSI-3 terminator, with respect to the SCSI-2 terminator. Gene explained that the SPI rules do not appear to permit the terminator to source as much current as the figure in SCSI-2 would source. Further discussion of the problem presented by Gene was remanded to the working group. It was suggested that Gene obtain a document number for the slide he presented.

10.5 RESERVE ELEMENT(6) and RESERVE ELEMENT(6) [Oetting]

Based on the lack of clarity in the RESERVE(6) and RELEASE(6) votes, Erich decided to defer action on this item to the September meetings.

11. ISO

11.1 ISO Report [Milligan]

Gene Milligan, the X3T10 International Representative, gave an oral report and provided the following electronic report:

July ISO Report

The 6th meeting of Working Group 4 of SC 25 had the following highlights:

Eighty four resolutions were passed: thirty-two on X3T10; forty-two on X3T11; eight on X3T12; one on X3T13; and one on the patent statement. In addition SC 25 also passed a resolution relative to X3T1X. In addition to the resolutions nine action points were assigned: two relative to X3T10; one relative to X3T11; four relative to X3T12; and two germane only to WG 4.

The delegations provided seventeen London documents. Among them London WG4/03 is Japan Contribution for a Technical Corrigendum for ISO/IEC 9316:1995 and London WG4/14 is the NWI proposal results for the Optical Memory Card Reader/Writer.

The discussion points relative to X3T10 include:

The contribution from Japan on SCSI-2 noted an error with metric conversion, a error in the command list, and an inconsistent description. The first comment may have been addressed but all the comments need review to see how they compare to the published document.

The numbering scheme for SCSI-3 standards documents was revised to that shown in the following table:

Project No.	Name	General	Physical I/O	Protocol	Command s	Old Number
25.13.XX.XX	ISO/IEC SCSI XXX	14776-4XX	14776-1XX	14776-2XX	14776-3XX	Various
25.13.11.02 Reserved	SCSI CAM	9316-421				9316-2 Expected
25.13.11.03 Reserved	SCSI-3 SPC				14776-311	New-7
25.13.11.04 Reserved	SCSI-3 SIP			14776-211		New-8
25.13.11.05	SCSI-3 SPI		14776-111			14776
25.13.11.06	Cancel					New-12
25.13.11.07	SCSI-3 SBP			14776-231		14777
25.13.11.08	SCSI-3 SAM	14776-411				15281
25.13.11.09	SCSI-3 CAM-3	14776-423				New-2
25.13.11.10	SCSI-3 SBC				14776-321	New-3
25.13.11.11	SCSI-3 SSC				14776-331	New-4
25.13.11.12	SCSI-3 SGC				14776-391	New-5
25.13.11.13	SCSI-3 SMC				14776-351	New-6
25.13.11.14	SCSI-3 Fast 20		14776-121			14777
25.13.11.15	SCSI-3 SCC				14776-341	TBD
25.13.11.16 Reserved	SCSI OP MC RD/WR				14776-381	TBD
25.13.13.02	SCSI-3 FCP			14776-221		14780
25.13.11.XX Reserved	SCSI-3 MMC				14776-361	TBD
25.13.11.XX Reserved	SCSI-3 FCP-2			14776-222		TBD
25.13.11.XX	SCSI-3 SAM-2	14776-412				TBD
25.13.11.XX	SCSI-3 SBP-2			14776-232		TBD
25.13.11.XX	SCSI-3 SPI-2		14776-112			TBD

The SCSI-3 Parallel Interface (SPI) New Work Item was approved the CD Letter Ballot was approved with comments from France, Germany, Japan and the USA. With respect to the comments on the dimensioning in figures 4 through 7, it was our position that the dimensioning technique is defined by the drafting standard, and that it is not intended to completely specify the connector in this standard. The German Comments 14 and 16 seem incomplete and the nomenclature is unclear. We expected corrected text to be available by the end of August, and that technical comments should be allowed in response to the DIS Letter Ballot.

A contribution was received from ISO/IEC JTC 1/SC 25 N279 as a liaison report from TC 46C. This liaison will be treated as a CD comment concerning the SPI need for conversion from EIA specifications to IEC specifications.

It was agreed to remove Project 25.13.11.06 SCSI-3 GPP from the JTC 1/SC 25 Programme of Work.

The SCSI-3 Serial Bus Protocol (SBP) New Work Item was approved, and the CD Letter Ballot was approved, with comments from Germany, Japan and the USA. The physical interface (IEEE 1394) for SBP is a project within IEC TC 100.

The SCSI-3 Architecture Model (SAM) New Work Item, and the CD Letter Ballot were approved with comments from Germany and Japan. We expected that Germany Comment 11 could not be agreed to because the SCSI terminology is always Logical Unit Number, not Logic Unit Number as requested.

The SCSI-3 Fast - 20 New Work Item, and the CD Letter Ballot was approved with comments from Germany and Japan.

The SCSI-3 Controller Commands (SCC) New Work Items, and the CD Letter Ballot were approved, and comments were received from Germany and Japan.

With SCSI-2 CAM now published in the US as X3.232-1996, and a project is underway in the US for SCSI-3 CAM-3 Mr. Milligan solicited interest in this area of standardization from the other National Bodies. Mr. Maergner commented that there is interest in this area of standardization, and he suggested that the Fast Track procedure be used for SCSI-2 CAM-2. Mr. Milligan noted that a number of other American National Standards are referenced, and therefore negative votes from several National Bodies could be anticipated. No comments were made by the other National Bodies present, other than the fact that SCSI-2 CAM might be an ideal "trial balloon" for fast tracking. It was therefore agreed to request that the US National Member Body submit X3.232-1996 for the fast track procedure.

It was agreed to authorize a New Work Items ballot, a CD ballot, and a DIS ballot for each of SPC, SIP, SBC, SSC and SMC respectively.

The New Work Item within ISO/IEC JTC 1 SC 17 SCSI Specifications for Optical Memory Card Reader/Writer results are contained in JTC 1 N 4106 which indicates "Although this New Work Item proposal has met the criteria for acceptance into the JTC 1 Programme of Work, two Principal Members have questioned the assignment of the work to SC 17. This New Work Item is accepted into the JTC 1 Programme of Work and assigned to a Subcommittee for development, SC 17, in conjunction/liaison with SC 25, is instructed to address the comments submitted by the National Bodies of Germany and the USA concerning proper assignment of the work." It had been recommended that SC 17 and WG 9 of a committee in Japan develop this specification (an information copy was referenced in the ballot). The proposal also included using an addendum to SCSI-1 (9316-1) since it was the only published SCSI standard at that time.

Noting the comments (JTC 1 N 4106) from the NWI ballot JTC 1 N 3862 SCSI Specifications for Optical Memory Card Reader/Writer, SC 25 instructed its Secretariat to advise the JTC 1 Secretariat that this is definitely within the scope of SC 25 and not within the scope of SC 17 and therefore should be assigned to SC 25/WG 4 with liaison to SC 17/WG 9.

Mr. Milligan was appointed to be the liaison for SC 25/WG 4 to IEC/TC 100.

Rather than accepting the CD comment to eliminate the patent statement, in recognition of the risks of infringing patents with complex interface standards, SC 25 instructed its Secretariat to consult with the ITTF to determine if it would be acceptable to include one of the two warning statements below depending upon the specific circumstance:

In the event no patents have yet been identified:

"PATENT STATEMENT

CAUTION: The developers of this standard have requested that holders of patents that may be required for the implementation of the standard, disclose such patents to the publisher. However, neither the developers nor the publisher have undertaken a patent search in order to identify which, if any, patents may apply to this standard.

As of the date of publication of this standard and following calls for the identification of patents that may be required for the implementation of the standard, no such claims have been made. No further patent search is conducted by the developer or the publisher in respect to any standard it processes. No representation is made or implied that licenses are not required to avoid infringement in the use of this standard."

In the event patents have been Identified:

"PATENT STATEMENT

CAUTION: The developers of this standard have requested that holders of patents that may be required for the implementation of the standard, disclose such patents to the publisher. However, neither the developers nor the publisher have undertaken a patent search in order to identify which, if any, patents may apply to this standard.

As of the date of publication of this standard and following calls for the identification of patents that may be required for the implementation of the standard, claims have been made. No further patent search is conducted by the developer or the publisher in respect to any standard it processes. Contact the publisher for information concerning these claims and for information on patent licensing. No representation is made or implied that licenses not known to the publisher are not required to avoid infringement in the use of this standard."

The next WG 4 meeting will be with SC 25 in Brazil during the week of 23 June 1997.

Gene Milligan moved that CAM be approved for fast track ISO processing. Bill Dallas seconded the motion. Gene requested a roll-call vote.

Organization	Stat	Name	Yes	No	Abs	NP
Adaptec, Inc.	A	Mr. Lawrence J. Lamers	1			
Amdahl Corp.						1
AMP, Inc.	P	Mr. Charles Brill	1			
Amphenol Interconnect						1
Ancot Corp.						1 *
Apple Computer	A	Mr. Ron Roberts	1			
BusLogic						1
Ciprico Inc.	A	Mr. Raymond Gilson	1			
Circuit Assembly Corp.						1 *
Cirrus Logic Inc.						1 *
CMD Technology						1
Congruent Software, Inc.						1 *
Dallas Semiconductor	P	Mr. Louis Grantham	1			
Digital Equipment Corp.	A#	Mr. William Dallas	1			
Distributed Processing Tech.	P	Mr. Roger Cummings		1		
Eastman Kodak Co.	P	Mr. Robert Reisch	1			
ENDL						1
Exabyte Corp.	P	Mr. Edward Lappin	1			
FSI Consulting Services						1 *
Fujitsu Computer Products,Am						1 *
Hewlett Packard Co.	A	Mr. J. R. Sims	1			
Hitachi Micro Systems, Inc.						1 *
Hitachi Cable Manchester, Inc						1 *
Honda Connectors						1 *
IBM Corp.	P	Mr. George Penokie	1			
Iomega Corp.						1

KnowledgeTek, Inc.				1
Linfinity Micro	P	Mr. Dean Wallace	1	
Madison Cable Corp.				1 *
Maxtor Corp.	P	Mr. Pete McLean	1	
Methode Electronics, Inc.				1
Molex Inc.				1 *
Oak Technology, Inc.				1 *
Ophidian Designs				1 *
Panasonic Technologies, Inc	P	Mr. Stephen F. Heil	1	
Philips KMG	P	Mr. Bill McFerrin	1	
QLogic Corp.	P	Mr. Skip Jones	1	
Quantum Corp.				1
Seagate Technology	P	Mr. Gene Milligan	1	
Silicon Systems, Inc.	P	Mr. Dave Guss	1	
Sony Electronics, Inc.				1 *
Storage Technology Corp.	P	Mr. Erich Oetting	1	
Sun Microsystems Computer Co				1 *
Symbios Logic Inc.	P	Mr. John Lohmeyer	1	
SyQuest Technology, Inc.				1 *
Tandem Computers	P	Mr. John Moy	1	
Toshiba America	P	Mr. Tokuyuki Totani	1	
UNISYS Corporation				1 *
Unitrode Integrated Circuits	P	Mr. Paul D. Aloisi	1	
Western Digital Corporation	P	Mr. Jeffrey L. Williams	1	
Woven Electronics				1

23 1 0 27 = 51

The motion failed 23:1:0:27=51. The motion failed late in the meeting because less than 50% of the membership voted in favor; 17 organizations (shown with *) were not present for the roll call vote that had signed the attendance sheet. Roger Cummings declined to state a reason for his no vote.

12. Liaison Reports

12.1 X3T11 Liaison Report [Cummings]

Roger Cummings, X3T11 Chair, provided the following electronic report:

X3T11 LIAISON REPORT to X3T10 & X3T12

X3T11 met on Thursday April 11, 1996 with 92 people in attendance. No organizations lost membership. The membership of Madison Cable was reinstated on the instructions of the Secretariat due to their fulfillment of the requirements for a separate organization after their acquisition by AMP. The membership of Computing Devices International was reinstated as a result of payment of the appropriate fees. Optivision was added as a new member organization. The membership of X3T11 is now 67 organizations.

Public Reviews ended on May 14, 1996 for the 10 Bit Interface (TR-18), FC-LE (X3.287), FC-GS (X3.288), FC-FG (X3.289), IPI-3TR (X3.290) and IPI-3DR (X3.291) projects. One comment was received from TI on the 10 Bit Interface TR. Comments were also received from the ANSI editor on all drafts.

X3T11 accepted the dpANS used for the Public Review, with the addition of the accepted changes resulting from the ANSI editor comments, as the final version for the following projects by the rollcall votes shown below:

- Project 496-R, Revised IPI-3 Disk, F47-O00-DNV20
- Project 505-R, Revised IPI-3 Tape, F47-O00-DNV20
- Project 955-D, FC-LE, Revision 1.1, F46-O00-DNV21
- Project 958-D, FC-FG, Revision 3.4, F46-O00-DNV21

Project 1118-DT, 10 Bit Interface TR, Revision 2.3, F46-O00-DNV21

It was reported that first Public Reviews for the SBCON and FC-PH-2 projects will close on July 9, 1996, and that the numbers X3.296 and X3.297 had been assigned, respectively.

A dpANS for the HIPPI-ATM project (Revision 1.7) was forwarded for an OMC Compliance Review and a first Public Review by F42-O00-DNV25, meeting the two-thirds rule.

A dpANS for the HIPPI Serial project (Revision 2.6) was forwarded for an OMC Compliance Review and a first Public Review by F41-O00-DNV26, meeting the two-thirds rule.

A dpANS for the Revised HIPPI-SC project (Revision 3.1) was forwarded for an OMC Compliance Review and a first Public Review by F42-O00-DNV25, meeting the two-thirds rule.

It was reported that the HIPPI Autoconfiguration Project Proposal had been approved, and assigned number 1163-D.

There had been an extensive discussion in an Ad Hoc preceding the Plenary about possible misinterpretations of the Bit Error Rate of 10^{*-12} which is identified in X3.230. Action Items were assigned to create a Project Proposal for an amendment to X3.230, to submit a comment against the Public Review of X3.297-199x, FC-PH-2, and to include some modified text in FC-PH-3.

A motion to delete all references to FC-SL (Slotted Loop) from the draft for the FC-AL-2 project was postponed to the August X3T11 Plenary.

An X3T11 Letter Ballot on FC-PH-3, Revision 8.8, was authorized.

The next meeting of X3T11 is being hosted by Hitachi Computer Products America on Wednesday August 7, 1996 at the Ala Moana Hotel, 410 Atkinson Drive, Honolulu, Hawaii 96814. The central reservation fax is (808) 944-2974. The rates are \$110 "City View", \$132 "Mountain View", \$142 "Ocean View", plus 10.7% state tax. The cutoff date is 7/4/96. A fee of \$100 will be assessed for those attendees who are not staying at the hotel as part of the X3T11 room block.

12.2 X3T13 Liaison Report [Milligan]

Gene Milligan, chairman of X3T13, informed the committee that Larry Lamers had been appointed Secretary for X3T13 and that his appointment as chairman became effective since the last meeting. Gene then noted that he was unable to attend the most recent X3T13 meeting and that Pete McLean, X3T13 vicechair, had chaired the meeting and will provide the report. Due to the late hour, the committee accepted Pete's offer to provide only an electronic report. Pete's electronic report is as follows:

X3T13 June Report

X3T13 held an ad hoc meeting June 19-21, 1996. The following documents were distributed:

- Proposal for X3T13 1153D ATA/ATAPI-4 [McLean]
- Feature status reporting [McLean] (D96103r0)
- ATA overlap proposal [McLean] (D96104r50)
- Cache flush proposal [Roberts] (D96106r1)
- Vendor specific/optional proposal [Evans] (D96125r4)
- Connector proposal [Evans] (D96126r0)
- SMART command set modifications [Evans] (D96131r2)
- Core command set proposal [Stevens] (D96135r0)
- Enhanced BIOS Disk Drive technical report draft [Stevens] (D96139r0)
- Reset proposal [Evans] (D96142r2)

ATA-2 (X3T13/0948D) is out for X3 letter ballot for approval. Closing date July 31, 1996. ATA-3 (X3T13/2008D) will be in public review, July 19, 1996 to September 17, 1996.

The 1153D draft document change bars were reviewed and minor changes made. The Vendor specific/optional proposal was reviewed. The group voted 17:1:0 to incorporate rev5 of D96125 into the 1153D document. The protected area proposal (D96137r0) was reviewed. The group voted 11:4:1 to incorporate rev0 of D96137 into the 1153D document.

The first draft of the Enhanced BIOS Disk Drive technical report was presented. This document will have a page by page review at the next meeting.

The first draft of the Features status reporting proposal was presented. This document will be completed for review at the next meeting.

The overlap proposal was reviewed. The UIRQ bit and its associated PDIAG- handshake were eliminated. A IRQP (Interrupt pending bit) was added.

The cache flush proposal was reviewed. The group decided to remove the subcommand options.

It was agreed that the Mode X analog issues item and non-512 byte transfers blocks item would be removed from future agendas.

Samples of a Berg connector adapted to a SCSI terminator were passed out.

The SMART modifications proposal (D96131r2) was discussed. The group voted 16:1:1 to incorporate rev2 of D96131 into the 1153D document.

The core command set proposal was presented. The Reset proposal was presented. It was requested that reflector discussion be held on this proposal. The proposed unified connector proposal was presented. Discussion resulted in the following prioritized goals:

- Legacy ATA compatibility
- 40-pin host interface
- Molex power
- Standard user jumper locations
- Standard connector
- Cost savings
- Power integrated into IDC cable/connector
- Direct connect

The open issues list is as follows:

- 33 megaword transfers
- shielding
- termination
- grounding
- IORDY open collector/tristate
- behavior of device executing reset if another reset received
- power management mandatory

The next ad hoc will be July 31 - August 1, 1996 at Seagate facility, Zanker Road, San Jose.

The next plenary will be August 2, 1996 at Seagate facility, Zanker Road, San Jose.

The subsequent plenary will be held October 25, 1996 in Honolulu, Hawaii hosted by Quantum.

12.3 SFF Industry Group [Allan]

Dal Allan provided the following written report, which was read to the committee.

SFF Committee Report

The major concern expressed by Unisys in May that SCA-2 connector dimensions failed to guarantee acceptable wipe length in the worst case scenario occupied a significant amount of time. AMP's proposed changes were reviewed and the modifications appear acceptable to all parties. All critical dimensions are now related to datum Z, rather than being interdependent. It is expected that the dimensions and new drawings will be distributed and agreed to by month end i.e. after factory review.

- The 3" form factor was submitted as an Information Specification by Compaq, JTS and Western Digital. Copies were distributed at the meeting.
- A companion proposal being made to X3T13 for extensions to ATA for removable drives was also submitted as an Information Specification. Copies were distributed at the meeting.
- The GbIC (Gigabit Connector Interface) was submitted as an Information Specification by Sun Microsystems. Copies were distributed at the meeting.
- ATAPI CD-R (CD-Recordable) was submitted as an Information Specification. No copies were distributed at the meeting but will be included in the mailing.

Bill Ham's SSWG on VHDCI and SCA-2 has agreed that the next revision of VHDCI will incorporate a stacked configuration and a few technical corrections. It is expected to be ready for a Publication ballot at month end after extensive editorial changes are incorporated which improve the quality of the drawings. SCA-2 needs more input and an issue related to press-fit connectors is to be letter-balloted to the members.

Jay Neer's SSWG on form factors also produced a balloting item on the Unitized Connector proposals for ATA from Quantum and Western Digital. The results of the ballot will indicate whether there is wide interest in doing both, or if one is preferred.

Many improvements to the ATA Cable plant have been pursued, and the tests to date have consistently resulted in the 80-conductor/40-pin solution providing improvements. Results with other alternatives have been mixed. A specification will be prepared by Berg to define the cable construction.

The form factor standards at EIA passed the latest letter ballot with no technical comments but the power connector has minor dimensional changes to the shroud. Harvey Waltersdorf will pursue having these included before publication. Now that this cycle is complete, the 2 1/2", 3 1/2" and 5 1/4" specifications will be prepared for EIA submission (EIA requires that there be a sponsor for each specification).

Gene Milligan provided the following comments:

- 1) Gene stated his belief that the Sun Microsystems proposal was for review only, with formal adoption to occur at the next SFF meeting.
- 2) Gene noted that he requested that the SFF EIA process include submitting proposals to IEC (in addition to EIA), so that SFF standards have international references to simplify referencing them in X3T10 standards.

12.4 IEEE 1394 [Johansson]

No report.

12.5 IEEE P1285 Status

Gene Milligan noted that, in view of the earlier discussion, one of the candidate protocols for the "Disk Boys" protocol is 1285. No other report was available.

12.6 PCMCIA Report []

No report.

12.7 SCSI Trade Association (STA) [Jones]

Louis Grantham made an oral report to the committee and provided the following electronic report:

STA Liaison Report 7/18/96 to X3T10 (Louis Grantham, Dallas Semiconductor)

There was STA meeting today, 7/18/96 and planned each month during the week of X3T10 and X3T11.

SCSI Trade Association Members as of May 1996: Adaptec, Ancot, BusLogic, Circuit Assembly Corp., Dallas Semiconductor, Digital Equipment Corp., Fujitsu Personal Systems, I-TECH Corp., Linfinity Microelectronics, Molex, Paralan Corp., Qlogic, Quantum, Seagate Technology, Silicon Systems, Symbios Logic, Technology Forums, Temp-Flex Cable Inc., Unitrode, Western Digital, and Xyratex.

The website is www.scsita.com.

Ultra-SCSI-on-the-road US Seminars complete with participation from over 250 people from over 50 companies. STA plans to take to Asia in October. STA will have a SCSI Parallel Interface Technology Center at Comdex in the Las Vegas convention center.

Articles are written for each Computer Technology Review issue on SCSI technologies and applications.

STA recommends the icons in document 96-220 (Proposed LVD icons) for use in SPI-2. Louis Grantham moved that X3T10 accept the LVD icons in 96-220 for inclusion in the appropriate document. Skip Jones seconded the motion. The motion passed 23:0:0:28=51.

There will be continued effort to increase communications between X3T10 and STA. The next joint meeting is Wednesday during September plenary week from 5 to 7 PM , an agenda will be in the mailing.

13. Review of Action Items

- 152) John Lohmeyer will communicate to the X3 Secretariat X3T10's acceptance of the ANSI edits on the SSA documents as non-substantive changes.
- 153) John Lohmeyer will request the X3 Secretariat to pay the invoice in 96-218.
- 154) George Penokie will prepare SIP revision 10.
- 155) John Lohmeyer will forward SIP revision 10 to X3 for further processing toward second public review and will respond to the public review comment.
- 156) Ron Roberts will modify SBP to conform to the new ANSI references policy.
- 157) Ralph Weber will prepare SPC revision 10.
- 158) John Lohmeyer will forward SPC revision 10 to X3 for further processing toward first public review.
- 159) John Lohmeyer will request the X3 Secretariat to pay the invoice in 96-217.
- 160) George Penokie will work with the ANSI editor to bring the normative references in SCC into conformance with the ANSI references policy.
- 161) John Lohmeyer will inform the X3 Secretariat that X3T10 accepts the changes to SCC as non-substantive.
- 162) John Lohmeyer will conduct a letter ballot to approve forwarding of MMC revision 8 to first public review.
- 163) Larry Lamers, John Lohmeyer and Gene Milligan will notify the membership of X3T10 and X3T13 that the Boot Considerations TR might be dropped.
- 164) John Lohmeyer will request the X3 Secretariat to pay the invoice in 96-215.
- 165) John Lohmeyer will forward the MMC-2 project proposal (96-185r0) to X3 for further processing.
- 166) Gene Milligan will document the action taken by this plenary meeting with respect to the checking of the RESERVE(6) and RELEASE(6) obsolete fields be made mandatory in some future version of SPC.
- 167) Larry Lamers will assign a X3T10 document number to the document presently known as 1142.
- 168) Gary Stephens will draft a letter to X3 OMC for consideration at the September X3T10 meeting requesting a revision in the project proposal for project 1142.

- 169) John Lohmeyer will resend the CD letter ballot comments (Fast-20, SBP, SCC, SAM, SPI) to the technical editors.
- 169) The technical editors for the recently completed CD ballots will come to the next working group meetings prepared to respond to any substantive changes required by the CD ballot comments.
- 170) John will inform the X3 Secretariat of X3T10's enthusiastic agreement with ANSI's proposed normative references policy.
- 171) John will forward 95-146r2 to X3 PPC as an additional definition of X3T10 procedures, specifically for electronic processing of committee actions.

14. Meeting Schedule

The next plenary meeting of X3T10 will be September 12, 1996, in Natick, MA at the Holiday Inn Crowne Plaza (508-653-8800), hosted by Digital Equipment Corp. The meeting will begin at 1:00 p.m. on Thursday.

The meeting list for the next plenary week is:

**September '96 Meeting Map
(7/18/96 Version)**

Monday 9/9	8	9	10	11	12	1	2	3	4	5	6	7	8	9
		+=====+												
		SPI-2 Working Group					EPI WG							(35)
		+=====+												
		SBP-2 Working Group					Serial Issues SG							(20)
		+=====+												
Tuesday 9/10		9	10	11	12	1	2	3	4	5	6	7	8	
		+=====+												
		SCSI-3 WG								:*protocol				(40)
		+=====+												
		MMC WG												(20)
		+-----+=====+												
		SCC/RAB WG					RAB							(25)
		+=====+												
Wednesday 9/11		9	10	11	12	1	2	3	4	5	6	7	8	
		+=====+.....+												
		SCSI-3 WG								STATech				(40)
		+=====+.....+												
		MMC Working Group												(20)
		+=====+												
		SFF SSWGs												(40)
		+-----+-----+-----+												
		RAB												(25)
		+-----+-----+-----+												
Thursday 9/12	8	9	10	11	12	1	2	3	4	5	6	7	8	
		+-----+												
		SFF												(40)
		+-----+=====+												
							X3T10 Plenary Meeting							(70)
		+=====+												
		SSC/SMC WG												(15)
		+=====+												
		STA												(30)
		+-----+-----+-----+												
Friday 9/13	8	9	10	11	12	1	2	3	4	5				
		+=====+												
		Document Review												(15)
		+=====+												
		X3T11 Jitter Study Group												(35)
		+-----+-----+-----+												

Meetings marked with == are X3T10-authorized meetings.
 Meetings marked with -- are authorized by other groups and may change without notice.
 *protocol - Time allocated for discussion of protocol document's compliance with SAM and service interface issues.

Meeting Map Abbreviation Key:

CAM: Common Access Method
 CAM-3: Next generation CAM for SCSI-3
 EPI: SCSI Enhanced Parallel Interface (Technical Report)
 DMTF Desktop Management Task Force (not an X3 activity)
 Fast-20: Synchronous Data Transfer at 20 Megatransfers/second
 FC-AL: Fibre Channel - Arbitrated Loop (an X3T11 project)
 FCLG: Fibre Channel Loop Community (not an X3 activity)
 I/F: Interface
 High Avail.: High Availability
 LB: Letter Ballot
 MMC: SCSI-3 Multimedia Commands (CD-ROM)
 PH: Physical (Connectors, Cables, Transceivers, etc.)
 Plenary: Full Committee Meeting
 RAB: RAID Advisory Board (not an X3 activity)
 RAID: Redundant Array of Independent Devices
 SBC: SCSI-3 Block Commands
 SBP: SCSI-3 Serial Bus Protocol
 SCC: SCSI-3 Controller Commands (RAID)
 SCSI: Small Computer System Interface
 SPC: SCSI-3 Primary Commands
 STA: SCSI Trade Association (not an X3 activity)
 STATech: STA Technical Meeting (joint meeting with X3T10)
 SFF: SFF Industry Group (not an X3 activity)
 SG: Study Group
 SMC: SCSI-3 Medium Changer Commands
 SPI-2: Second Generation SCSI-3 Parallel Interface
 SSA: Serial Storage Interface
 SSC: SCSI-3 Stream Commands (includes Tape)
 SSWGs: Specific-Subject Working Groups
 VHDCI Very High Density Cabled Interconnect
 WG: Working Group (same as Ad Hoc Group)
 X3T10: Lower Level Interfaces Technical Committee
 X3T10.1: SSA Task Group of X3T10

Several other X3T10 events are also planned:

Event	Day/Date	Location/contact
SPI-2 Working Group	Tue-Wed 8/13-14/96	Milpitas, CA / Molina
SPI-2 Working Group	Thur 10/10/96	St Petersburg Beach, FL / Brill
SPI-2 Working Group	Thur 12/5/96	Bloomington, MN / Truestedt
SBP-2 Working Group	Tue 8/13/96	Redmond, WA / Johansson

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Other Activities	John Lohmeyer	(719) 533-7560 john.lohmeyer@symbios.com

The long-term X3T10 meeting week schedule is:

Date	Location	Host/Comments
Jan 8-12, 1996	Dallas, TX	Quantum
Mar 11-15, 1996	Newport Beach, CA	QLogic
May 6-10, 1996	Ft. Lauderdale, FL	Adaptec
Jul 15-19, 1996	Colorado Springs, CO	Symbios Logic
Sep 9-13, 1996	Natick, MA (near Boston)	Digital
Nov 4- 8, 1996	Palm Springs, CA	Adaptec
Jan 6-10, 1997	Dallas, TX	Quantum
Mar 10-14, 1997	San Diego, CA	QLogic
May 5-9, 1997	Natick, MA (near Boston)	Digital
Jul 14-18, 1997	Colorado Springs, CO	Symbios Logic
Sep 8-12, 1997	Nashua, NH	Unitrode
Nov 3-7, 1997	Palm Springs, CA	Adaptec
1998 dates are firm; locations and hosts are accepted, but tentative		
Jan 5-9, 1998	Dallas, TX	Quantum
Mar 9-13, 1998	San Diego, CA	QLogic
May 4-8, 1998	Colorado Springs, CO	Symbios Logic
Jul 13-17, 1998	Portland, ME	Digital
Sep 14-18, 1998	St. Petersburg Beach, FL	AMP
Nov 9-13, 1998	Palm Springs, CA	Adaptec

14.1 Authorization of Working Group Meetings

John noted that the working group meetings are required to operate under the same voting procedures as does X3T10 (that is, one vote per organization) and the results of a working group are not binding on the parent committee. This later requirement is why we have traditionally only used non-binding straw polls in working group meetings. Any issue where the voting rules would make a difference should be deferred to the plenary group. Nonetheless, task groups and ad hoc groups should strive to achieve consensus prior to bringing issues to X3T10.

Charles Monia moved that X3T10 authorize the X3T10-related meetings and events in the list above. Erich Oetting seconded the motion. The motion passed unanimously.

There were seven volunteers to host meetings in 1998; those shown above plus Hitachi Cable (volunteered for any month, but preferred July). A straw poll was taken and those present preferred the Portland location to the Manchester location. John suggested that Hitachi Cable be given priority if they choose to volunteer to host in 1999. Charles Monia moved that X3T10 accept the 1998 locations and hosts shown above. Skip Jones seconded the motion. The motion passed 22:0.

15. Adjournment

The meeting was adjourned at 7:22 p.m. on Thursday July 18, 1996.

Meeting Attendees -- Enclosure (1)

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51 People Present

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

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Jul 23, 1996 - X3T10 Document Register - Enclosure (3)

X3T10/96-001R0 Date: 11/20/95 Author: J. Lohmeyer [SY-96-01]
Agenda for X3T10 Meeting #14 (Mar '96)

X3T10/96-002R0 Date: 11/20/95 Author: J. Lohmeyer [SY-96-01]
X3T10 Project Summary - January '96

X3T10/96-003R0 Date: 11/20/95 Author: J. Lohmeyer [SY-96-01]
Jeopardy letter for Mar '96 meeting

X3T10/96-004R1 Date: 1/4/96 Author: J. Lohmeyer [SY-96-01]
Summary of Letter Ballot Results on ATA-3 (95-044) and SIP (95-045)

X3T10/96-005R0 Date: 11/20/95 Author: J. Lohmeyer [SY-96-01]
Response to Public Review Comment #1 on SBP

X3T10/96-006R0 Date: 11/20/95 Author: J. Lohmeyer [SY-96-01]
Response to Public Review Comment #2 on SBP

X3T10/96-007R0 Date: 11/29/95 Author: J. David Cabello [SY-96-01]
ltr to John Lohmeyer re Compaq patent position on SMART proposed standard

X3T10/96-008R0 Date: 1/5/96 Author: L. Lamers [SY-96-01]
Letter Ballot forwarding SSA-PH1 to 1PR

X3T10/96-009R0 Date: 1/5/96 Author: L. Lamers [SY-96-01]
Letter Ballot forwarding SSA-TL1 to 1PR

X3T10/96-010R0 Date: 1/5/96 Author: L. Lamers [SY-96-01]
Letter Ballot forwarding SSA-S2P to 1PR

X3T10/96-011R0 Date: 1/10/96 Author: J. Lohmeyer [SY-96-01]
Jeopardy Letter - Letter Ballots

X3T10/96-012R0 Date: 1/17/96 Author: J. Lohmeyer [SY-96-01]
Letter Ballot forwarding SPC to 1PR

X3T10/96-013R0 Date: 1/17/96 Author: J. Lohmeyer [SY-96-01]
ltr to Richard Gibson, Chair ITCC, re IPF

X3T10/96-014R0 Date: 2/2/96 Author: Gene Milligan [SY-96-01]
Letter Ballot on recommended response to NWI N 3862

X3T10/96-015R0 Date: 2/6/96 Author: J. Lohmeyer [SY-96-02]
Agenda for X3T10 Meeting #15 (May '96)

X3T10/96-016R0 Date: 2/6/96 Author: J. Lohmeyer [SY-96-02]
X3T10 Project Summary - March '96

X3T10/96-017R0 Date: 2/6/96 Author: J. Lohmeyer [SY-96-02]
Jeopardy letter for May '96 meeting

X3T10/96-018R1 Date: 2/13/96 Author: J. Lohmeyer [SY-96-02]
Letter Ballot Results on forwarding SSA-PH1 (96-008) & SSA-TL1 (96-009)

X3T10/96-019R0 Date: 2/16/96 Author: J. Lohmeyer [SY-96-02]
Letter Ballot Results on forwarding SSA-S2P (96-010)

X3T10/96-020R1 Date: 3/12/96 Author: J. Lohmeyer [SY-96-02]
Letter Ballot Results on forwarding SPC (96-012)

X3T10/96-021R0 Date: 2/29/96 Author: J. Lohmeyer [SY-96-02]
Letter from R. Gibson, Chair ITCC, re IPF

X3T10/96-022R0 Date: 4/3/96 Author: J. Lohmeyer [SY-96-03]
Agenda for X3T10 Meeting #15 (July '96)

X3T10/96-023R0 Date: 4/3/96 Author: J. Lohmeyer [SY-96-03]
X3T10 Project Summary - May '96

X3T10/96-024R0 Date: 4/3/96 Author: J. Lohmeyer [SY-96-03]
Jeopardy letter for July '96 meeting

X3T10/96-025R0 Date: 4/3/96 Author: J. Lohmeyer [SY-96-03]
X3T10 Annual Report (April 1995 -- March 1996)

X3T10/96-026R0 Date: 5/31/96 Author: J. Lohmeyer [SY-96-04]
Agenda for X3T10 Meeting #16 (Sept '96)

X3T10/96-027R0 Date: 5/31/96 Author: J. Lohmeyer [SY-96-04]
X3T10 Project Summary - July '96

X3T10/96-028R0 Date: 5/31/96 Author: J. Lohmeyer [SY-96-04]
Jeopardy letter for Sept '96 meeting

X3T10/96-029R0 Date: 5/31/96 Author: J. Lohmeyer [SY-96-04]
ltr to Gene Milligan, X3T13 Chair, re X3T13/96-009

X3T10/96-101R0 Date: 12/14/95 Author: R. Roberts [SY-96-01]
Minutes of MMC Working Group - 12/95

X3T10/96-102R0 Date: 12/16/95 Author: J. Lohmeyer [SY-96-01]
Minutes of SPI-2 Working Group - 12/95

X3T10/96-103R0 Date: 12/16/95 Author: W. Bridgewater [SY-96-01]
Proposed Change for Setup Time Budget

X3T10/96-104R0 Date: 12/16/95 Author: J. McGrath [SY-96-01]
Request for full SCSI support with LVDS

X3T10/96-105R0 Date: 12/16/95 Author: J. McGrath [SY-96-01]
Request for SPI (Fast-40/LVDS) Stabilization

X3T10/96-106R0 Date: 1/4/96 Author: J. Lohmeyer [SY-96-01]
Minutes of SPI-2 Working Group - 1/96

X3T10/96-107R0 Date: 1/4/96 Author: J. Lohmeyer [SY-96-01]
Minutes of EPI Working Group - 1/96

X3T10/96-108R0 Date: 1/4/96 Author: J. Lohmeyer [SY-96-01]
Minutes of SCSI-3 Working Group - 1/96

X3T10/96-109R0 Date: 1/4/96 Author: R. Roberts [SY-96-01]
Minutes of MMC Working Group - 1/96

X3T10/96-110R0 Date: 1/4/96 Author: Weber/Lohmeyer [SY-96-01]
Minutes of X3T10 Plenary Meeting #13

X3T10/96-111R0 Date: 1/5/96 Author: J. Emard [SY-96-01]
X3T10 Actions Regarding ANSI/ITCC IPF Payments and X3 TC Membership

X3T10/96-112R0 Date: 1/9/96 Author: J. McGrath [SY-96-01]
SIP and Command Queuing

X3T10/96-113R0 Date: 1/9/96 Author: G. Penokie [SY-96-01]
Minutes of SCC working group - 1/96

X3T10/96-114R1 Date: 1/10/96 Author: T. Lappin [SY-96-01]
Granularity of Block Size for Tape

X3T10/96-115R0 Date: 1/10/96 Author: T. Lappin [SY-96-01]
Minutes of SMC/SSC Working Group - 1/95

X3T10/96-116R0 Date: 1/10/96 Author: K. Hallam [SY-96-01]
Clarification of WRITE BUFFER

X3T10/96-117R0 Date: 1/11/96 Author: P. Kornitski [SY-96-01]
Invoice for ATA-2 Pre-edit

X3T10/96-118R1 Date: 1/11/96 Author: Johansson/Lamers/Lohmeyer
[SY-96-01]
Project Proposal for SPI Amendment

X3T10/96-119R0 Date: 1/11/96 Author: D. Allan [SY-96-01]
ANSI International Participation Fee Levy

X3T10/96-120R0 Date: 1/11/96 Author: G. Penokie [SY-96-01]
Resolution of Comments on SIP

X3T10/96-121R0 Date: 1/23/96 Author: G. Houlder [SY-96-01]
Addition of software write protect to Mode Page Ah

X3T10/96-121R2 Date: 3/15/96 Author: G. Houlder [SY-96-02]
Addition of software write protect to Mode Page Ah

X3T10/96-122R0 Date: 1/23/96 Author: Lohmeyer/Ham [SY-96-01]
Minutes of SPI-2 Working Group - 2/96

X3T10/96-123R0 Date: 1/30/96 Author: K. Gingerich [SY-96-01]
LVD SCSI Models

X3T10/96-124R0 Date: 1/30/96 Author: K. Gingerich [SY-96-01]
LVD SCSI Driver/Receiver Specifications

X3T10/96-125R0 Date: 1/30/96 Author: Paul Aloisi [SY-96-01]
Additional Termination Issue

X3T10/96-126R0 Date: 1/30/96 Author: D. Uber [SY-96-01]
Active Negation to Release Issues

X3T10/96-127R0 Date: 2/1/96 Author: B. Ham [SY-96-01]
LVD SCSI Signals

X3T10/96-128R0 Date: 2/2/96 Author: X3 Secretariat [SY-96-01]

Proposa for NWI-SCSI Specifications for Optical Memory Card Reader/Writer

X3T10/96-129R0 Date: 1/9/96 Author: W. Bridgewater [SY-96-01]
Voltage Driven Outputs

X3T10/96-130R0 Date: 2/6/96 Author: Johansson/Lamers [SY-96-01]
Ammendment to SPI

X3T10/96-131R0 Date: 2/15/96 Author: J. Scheible [SY-96-02]
SSA-PH1 Letter Ballot Comment Resolution

X3T10/96-132R0 Date: 2/15/96 Author: J. Scheible [SY-96-02]
SSA-TL1 Letter Ballot Comment Resolution

X3T10/96-133R0 Date: 2/15/96 Author: J. Scheible [SY-96-02]
SSA-S2P Letter Ballot Comment Resolution

X3T10/96-134R0 Date: 3/7/96 Author: Weber/Ham/Lohmeyer [SY-96-02]
Minutes of SPI-2 Working Group - 3/96

X3T10/96-135R0 Date: 3/7/96 Author: Weber/Ham/Lohmeyer [SY-96-02]
Minutes of EPI Working Group - 3/96

X3T10/96-136R1 Date: 3/7/96 Author: Weber/Lamers/Lohmeyer [SY-96-02]
Minutes of SCSI-3 Working Group - 3/96

X3T10/96-137R0 Date: 4/16/96 Author: P. Kornitsky [sy-96-03]
Quotation on Technical Report for > 8GB

X3T10/96-138R0 Date: 4/16/96 Author: T. Heinzmann [SY-96-03]
Quotation on SPI ISO Version

X3T10/96-139R1 Date: 3/7/96 Author: Weber/Lohmeyer [SY-96-02]
Minutes of X3T10 Plenary Meeting #14

X3T10/96-140R0 Date: 3/8/96 Author: G. Penokie [SY-96-02]
Clarification of sleep mode

X3T10/96-140R1 Date: 4/23/96 Author: G. Penokie []
Clarification of sleep mode

X3T10/96-140R2 Date: 5/8/96 Author: G. Penokie [sy-96-03]
Clarification of sleep mode

X3T10/96-140R3 Date: 7/15/96 Author: G. Penokie [sy-96-04]
Clarification of sleep mode

X3T10/96-141R0 Date: 3/11/96 Author: []
not used

X3T10/96-142R0 Date: 3/12/96 Author: G. Penokie [SY-96-02]
Minutes of SCC Working Group - 3/96

X3T10/96-143R0 Date: 3/12/96 Author: G. Houlder [SY-96-02]
Clarification of Set Capacity Feature

X3T10/96-144R0 Date: 3/12/96 Author: G. Houlder [SY-96-02]
Comment on SPI Error

X3T10/96-145R0 Date: 3/12/96 Author: R. Moore [SY-96-02]
LVD SCSI Assertion and Negation Currents

X3T10/96-146R1 Date: 3/13/96 Author: R. Snively [SY-96-02]
Project Proposal for Enclosure Services Interface (ESI) Standard

X3T10/96-147R0 Date: 3/13/96 Author: C. Burns [SY-96-02]
Question on use of SEL during SCAM

X3T10/96-148R0 Date: 3/13/96 Author: R. Weber [SY-96-02]
Comment Resolution on SPC X3T10 Letter Ballot

X3T10/96-148R3 Date: 7/15/96 Author: R. Weber [SY-96-04]
Comment Resolution on SPC X3T10 Letter Ballot

X3T10/96-149R0 Date: 3/14/96 Author: E. Oetting [SY-96-02]
Minutes of SMC/SSC Working Group - 2/96

X3T10/96-150R1 Date: 3/14/96 Author: B. Ham [SY-96-02]
LVD Test Results

X3T10/96-151R1 Date: 3/14/96 Author: D. Hagerman [SY-96-02]
Project Proposal for High Availability Profile Technical Report

X3T10/96-152R0 Date: 3/21/96 Author: Lohmeyer/Penokie [SY-96-03]
Project Proposal for SCC-2 Standard

X3T10/96-153R0 Date: 3/21/96 Author: R. Roberts [SY-96-02]
Minutes of MMC Working Group - 3/96

X3T10/96-154R0 Date: 3/25/96 Author: K. Gingerich [SY-96-02]
SCSI LVD Model

X3T10/96-155R0 Date: 4/9/96 Author: K. Hallam [SY-96-03]
Log Page 0Ch

X3T10/96-156R0 Date: 4/22/96 Author: D. Hagerman [SY-96-03]
Tape Support on FC-AL

X3T10/96-157R0 Date: 4/22/96 Author: Lamers/Lohmeyer [SY-96-03]
Minutes of SPI-2 Working Group - 4/96

X3T10/96-158R0 Date: 4/22/96 Author: J. Lohmeyer [SY-96-03]
Release Glitches

X3T10/96-159R0 Date: 4/22/96 Author: B. Ham [SY-96-03]
LVD Fast 40 REQ/ACK Test Results with Symmetrical Drivers and Terminators

X3T10/96-160R0 Date: 4/22/96 Author: S. Krakirian [SY-96-03]
Presentation on LVD glitch windows

X3T10/96-161R0 Date: 4/22/96 Author: R. Moore [SY-96-03]
LVD Driver Proposal

X3T10/96-162R0 Date: 4/24/96 Author: G. Penokie []
Clarification of when parity is valid (SPI-2).

X3T10/96-162R1 Date: 4/24/96 Author: G. Penokie [SY-96-03]
Clarification of when parity is valid (SPI-2).

X3T10/96-163R0 Date: 6/4/96 Author: J. Lohmeyer [sy-96-04]
Proposed Outline for SPI-2

X3T10/96-164R0 Date: 5/6/96 Author: G. Penokie [SY-96-03]
SCC-2 Proposals

X3T10/96-165R1 Date: 5/6/96 Author: G. Penokie [SY-96-03]
Minutes of SCC Working Group - 5/96

X3T10/96-166R1 Date: 5/6/96 Author: Lohmeyer/Ham [SY-96-03]
Minutes of SPI-2 Working Group - 5/96

X3T10/96-167R1 Date: 5/7/96 Author: Weber/Lohmeyer [SY-96-03]
Minutes of SCSI-3 Working Group - 5/96

X3T10/96-168R0 Date: 5/7/96 Author: Weber/Lohmeyer [SY-96-03]
Minutes of X3T10 Plenary Meeting #15

X3T10/96-169R0 Date: 5/7/96 Author: C. Monia [SY-96-03]
Proposed Changes for SAM-2

X3T10/96-170R0 Date: 5/7/96 Author: P. Johanson [SY-96-03]
Simple Task Management

X3T10/96-171R0 Date: 5/7/96 Author: G. Houlder [SY-96-03]
Change Action for Zero in programmable Capacity Feature

X3T10/96-172R0 Date: 5/7/96 Author: G. Penokie [SY-96-03]
Fairness Algorithm

X3T10/96-173R0 Date: 5/8/96 Author: C. Monia [SY-96-03]
Expanding the ACA Mechanism to All Command Exceptions

X3T10/96-174R0 Date: 5/9/96 Author: T. Lappin [SY-96-03]
Minutes of SMC/SSC Working Group - 5/96

X3T10/96-175R0 Date: 5/9/96 Author: B. Ham [SY-96-04]
Proposal for LVD SCSI Physical Interface

X3T10/96-176R0 Date: 5/9/96 Author: B. Ham [SY-96-04]
Proposal ofr VHDCI and SCA Connectors

X3T10/96-177R0 Date: 5/9/96 Author: B. Dallas [SY-96-03]
Minutes of CAM-3 Working Group - 5/96

X3T10/96-178R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]
SSC - SET CAPACITY Command

X3T10/96-179R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]
Additional Write Protect functions for SCC

X3T10/96-180R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]
SSC READ REVERSE command byte order selection

X3T10/96-181R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]

SSC Progress Indication Using REQUEST SENSE Polling

X3T10/96-182R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]
SPC Test Unit Ready and Defferred Error Reporting

X3T10/96-183R0 Date: 5/9/96 Author: G. Stephens [SY-96-03]
SBC Mandatory Commands and the PLDA Profile

X3T10/96-184R0 Date: 5/9/96 Author: R. Roberts [SY-96-03]
Minutes of MMC Working Group - 5/96

X3T10/96-185R0 Date: 5/9/96 Author: R. Roberts [SY-96-04]
Project Proposal for MMC-2 Standard

X3T10/96-186R0 Date: 5/9/96 Author: Weber/Lohmeyer [SY-96-03]
Security Initialization Proposal for SBC

X3T10/96-187R0 Date: 6/4/96 Author: B. Ham [SY-96-04]
Voltage Mode and Slew Rate Test Data

X3T10/96-188R0 Date: 6/4/96 Author: J. Lohmeyer [SY-96-04]
Project Proposal for a SUPR standard

X3T10/96-189R0 Date: 6/6/96 Author: Lamers/Lohmeyer [SY-96-04]
MInutes of SPI-2 Working Group - 6/96

X3T10/96-190R0 Date: 6/6/96 Author: K. Gingerich [SY-96-04]
Changes to SPI-2 draft for HVD

X3T10/96-191R0 Date: 6/22/96 Author: C. Monia [SY-96-04]
Proposed Notational Conventions for SCSI Layered Protocol Documents

X3T10/96-192R0 Date: 6/22/96 Author: C. Monia [SY-96-04]
Request for Firmware Boot/restart ASC/ASCQ

X3T10/96-193R0 Date: 6/25/96 Author: R. Roberts [SY-96-04]
Minutes of MMC Working Group - 6/96

X3T10/96-194R0 Date: 7/8/96 Author: G. Houlder [SY-96-04]
Add Immediate bit to XPWRITE and XDWRITE Extended commands

X3T10/96-195R0 Date: 7/8/96 Author: G. Houlder [SY-96-04]
Add mode page for Fibre Channel features

X3T10/96-196R0 Date: 7/10/96 Author: G. Penokie [SY-96-04]
Simplification of SACL configration

X3T10/96-197R0 Date: 7/12/96 Author: G. Frazier [SY-96-04]
proposal for a new set of SES elements to support parallel SCSI bus extenders

X3T10/96-198R0 Date: 7/15/96 Author: P. Johansson [SY-96-04]
New Task Management Models for SAM

X3T10/96-199R0 Date: 7/15/96 Author: B. Hager [SY-96-04]
Proposed Normative Reference Structure (clause 2) and Guidelines for Use

X3T10/96-200R0 Date: 7/15/96 Author: B. Ham [SY-96-04]
LVD SCSI Current Mode Dirver Data Fast 80

X3T10/96-201R0 Date: 7/15/96 Author: Weber/Lohmeyer [SY-96-04]
Minutes of the SPI-2/EPI Working Group - 7/96

X3T10/96-202R0 Date: 7/15/96 Author: Weber/Lohmeyer [SY-96-04]
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X3T10/96-203R0 Date: 7/15/96 Author: Weber/Lohmeyer [SY-96-04]
Minutes of Plenary Meeting #16 - 7/96

X3T10/96-204R0 Date: 7/15/96 Author: Weber/Dallas [SY-96-04]
Minutes of the Serial Issues Study Group - 7/96

X3T10/96-205R0 Date: 7/16/96 Author: A. Stone [SY-96-04]
Proposal for SCSI Tape Devices clauses of FC-PLDA

X3T10/96-206R0 Date: 7/16/96 Author: G. Penokie [SY-96-04]
Minutes of SCC-2 Study Group - 7/96

X3T10/96-207R0 Date: 5/3/96 Author: SC 25 Secretariat [SY-96-04]
CD Comments on SPI

X3T10/96-208R0 Date: 5/3/96 Author: SC 25 Secretariat [SY-96-04]
CD Comments on SBP

X3T10/96-209R0 Date: 5/3/96 Author: SC 25 Secretariat [SY-96-04]
CD Comments on Fast-20

X3T10/96-210R0 Date: 5/3/96 Author: SC 25 Secretariat [SY-96-04]
CD Comments on SAM

X3T10/96-211R0 Date: 5/3/96 Author: SC 25 Secretariat [SY-96-04]
CD Comments on SCC

X3T10/96-212R0 Date: 7/11/96 Author: C. Monia [SY-96-04]
SCSI-2 Questions

X3T10/96-213R0 Date: 7/17/96 Author: P. Johannson [SY-96-04]
Presentation on SBP-2

X3T10/96-213R1 Date: 7/17/96 Author: P. Johannson [SY-96-04]
Presentation on SBP-2

X3T10/96-214R0 Date: 7/17/96 Author: R. DeKonig [SY-96-04]
Extensions to Identifier Descriptor

X3T10/96-215R0 Date: 7/18/96 Author: P. Kornitsky [SY-96-04]
Invoice for 8GB Technical Report

X3T10/96-216R0 Date: 7/18/96 Author: P. Kornitsky [SY-96-04]
Quote on SBP table conversion

X3T10/96-217R0 Date: 7/18/96 Author: P. Kornitsky [SY-96-04]
Invoice on SBP table conversion

X3T10/96-218R0 Date: 7/18/96 Author: T. Heinzman [SY-96-04]
Partial Invoice on SPI ISO

X3T10/96-219R0 Date: 7/18/96 Author: E. Oetting [SY-96-04]
Minutes of SSC/SMC Working Group - 7/96

X3T10/96-220R0 Date: 7/18/96 Author: L. Grantham [SY-96-04]
Proposed LVD Icons

X3T10/96-221R0 Date: 7/18/96 Author: G. Stephens [SY-96-04]
Proposal for ammended project proposal for 1142

X3T10/96-222R0 Date: 7/18/96 Author: G. Milligan [SY-96-04]
Terminator Issues