Accredited Standards Committee* X3, Information Technology

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Date: November 17, 1995 Project: Ref. Doc.: Reply to: John Lohmeyer

To: Membership of X3T10

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

Subject: Minutes of X3T10 Plenary Meeting #12 Palm Springs, CA -- November 9, 1995

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^{*}Operating under the procedures of The American National Standards Institute. **X3 Secretariat, Information Technology Industry Council (ITI)** 1250 Eye Street NW, Suite 200, Washington, DC 20005-3922 Email: x3sec@itic.nw.dc.us Telephone: 202-737-8888 FAX: 202-638-4922 8.25 EPI Study Group [Ham]

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Results of Meeting

1. Opening Remarks

John Lohmeyer, the X3T10 Chair, called the meeting to order at 1:03 p.m., Thursday November 9, 1995. He thanked Jeff Stai of Western Digital Corp. for hosting the meeting.

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 and changes:

8.24 Boot Considerations Project [Penman]
8.25 EPI Study Group [Ham]
10.6 SAM-2 Project Proposal (95-333) [Monia]
11. ISO
11.1 ISO Report [Milligan]
11.2 ISO New Business

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 International Program Fee (\$300) is billed separately directly from ANSI.

The Chair said he had sent letters to 12 people from 6 organizations informing them that their membership was in jeopardy due to non-attendance (see 95-039r0) and that their membership would be terminated if they did not attend this meeting. All organizations were represented at this meeting except: Burr-Brown Corp.

This organization was 'terminated' (that is, the principal was changed to observer and the first alternate was dropped). No organizations joined X3T10 at the meeting.

John announced that the X3 Secretariat has instructed him to remove 22 people including the following 9 people that were in his attendance database from X3T10 based on failure to pay the international program fee:

| Dal Allan | ENDL |
|-------------------|-------------------------|
| Bill Galloway | Compaq |
| Ray Kaillio | Harbor Electronics |
| Gerald Marazas | IBM |
| Christian Mollard | Bull S.A. |
| Robbie Shergill | National Semiconductor |
| Scott Smyers | Sony |
| Dave Weber | Cirrus Logic |
| Mark Woithe | Adaptec (Future Domain) |

John announced that while several of these people are P or A members, someone from each of the affected organizations had paid the international program fee. Therefore, no organizations were removed entirely from the voting rolls.

The X3T10 membership is now at 52 (*) organizations down from 53 organizations last time. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current X3T10 membership list.

(*) No one was present from Thomas & Betts at this point in the meeting. A new representative was present later in the meeting (discovered from the sign-in sheet). This meant that for most of the meeting, the total membership was assumed to be 51 organizations.

Gary Stephens made the following motion:

The members of this committee demand that X3 investigate and respond to concerns expressed over the levying of the IPF (International Program Fee). Until such time as such action is taken, the members of this committee shall oppose the removal of the nine people listed above as members for a number of reasons:

Correspondence on this subject has been continuing for two years with no response from ANSI or X3.
 Only X3 levies the IPF on the basis of participation in American Standards activities and this is an international fee.

- X3T10, X3T11, X3T12 (and pending X3T13) committee members participate in only one international activity.

- Documentation indicating that other standards secretariats levy the fee on the basis of individual participation, not committee participation.

It was further moved that the removal of the nine people listed above as the members of X3T10 be suspended until the listed concerns are addressed.

Skip Jones seconded the motion.

The motion was discussed at length. Very little was said favoring the current fee structure. Claims were made that IEEE collects the fee only on a individual participation basis and then only using an honor system. This lead to charges that X3 is financing IEEE international activities. John suggested that such claims were speculative, at best. Ed Gardner suggested that very little benefit is derived from international participation. Skip Jones suggested that X3T10 end its international participation and thus end payment of the fee.

John noted that he will not honor the requirement of the motion to reinstate the members. He stated that the SD-2 (X3 rules) give him no leeway regarding terminations for non-payment of fees. Despite this, the demands for John to ignore the X3 Secretariat were repeated several times.

The motion passed 39:0:0:12=51.

4. Approval of Minutes - September Meeting Bedford, NH (X3T10/95-325r1)

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) or Dan Arnold (darnold@itic.nw.dc.us) at (202) 626-5741.

John announced that the 1996 Mailing Subscription Fees (for paper mailings) will go up \$60 to \$470 U.S. and \$900 international.

Larry Lamers requested that all documents for the next mailing be in his hands by 10:30 a.m. on Thursday November 16, 1995. 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 high-quality, single-sided originals with adequate margins and 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.

In keeping with the X3T10 committee's new efforts for electronic document filing and distribution, Larry requested that electronic copies of all documents, in their native format, be made available to him. The electronic copies can be emailed directly to Larry (at ljlamers@corp.adaptec.com), placed on the SCSI BBS (719-574-0424), 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 (719-574-0424) and will be distributed to the ATA and SCSI Reflectors. To be added to the ATA Reflector, send an email to majordomo@dt.wdc.com with the line 'subscribe ata' in the message body. To subscribe to the SCSI Reflector, send an electronic message to: scsi-request@symbios.com and include your mailing address 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.

John reported that Micropolis and Compaq have not responded to the letters he sent following the March and May meetings, respectively.

Gene Milligan reported that the Compaq attorney had provided a draft letter regarding the Compaq response to John Lohmeyer's patent policy letter. Since the fax cover sheet is marked attorney-client privileged Gene did not distribute a copy of the letter. But, he indicated that it was provided to ensure that the necessary ANSI requirements were addressed. Gene noted that he believed the letter was intended to offer ATA-3 relevant Compaq patents. However he had communicated two change requests regarding the Compaq correspondence. One item was the presumably inadvertent silence on security feature patents and the other was some detailed language that might be subject to misinterpretation regarding the ANSI policy.

A document is available from ANSI, "Procedures for the Development and Coordination of American National Standards", at no charge. Annex I contains the ANSI patent policy.

7. Review of Old Action Items

- 84) George Penokie will prepare a document (probably a technical report) describing the SPI fairness algorithm. *Dropped*
- 97) Alan Olsen will review the REPORT DENSITY proposal with QIC. Dropped
- 116) Rick Tewell will document the usage of the 0Dh mode page code in SBC as per the wishes of X3T10 expressed in item 10.6 of the meeting #10 minutes. *Carryover*
- 118) Charles Monia will draft a SAM-2 project proposal. Complete
- 119) John Lohmeyer will forward the SBP-2 project proposal to X3 for further consideration. *Complete*
- 120) John Lohmeyer will forward the revised PC Boot Considerations project proposal to X3 for further consideration. *Complete*
- 121) John Lohmeyer will add a working group agenda item to discuss how the SPC document can be brought expeditiously to public review. *Complete*
- 122) Peter Johansson will obtain an IEEE organizationally unique identifier for use in SBP conforming devices. *Complete*

8. Subgroup and/or Project Status Reports

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

John said that the current X3T10 project status summary was included on the backs of the meeting agendas and will be included in the mailing as usual. He noted that the status of several projects changed on Monday of this week and announced the new project numbers assigned.

The recommendation to establish a new Technical Committee for ATA passed 23:0:0:4. The organizational meeting for X3T13 will probably occur in January; a press release will be issued.

8.2 X3T10.1 Task Group Report [Hallam]

Ken Hallam reported that the following X3T10.1 meetings were held since the last X3T10 Plenary: September 25, 1995 Denver, CO - Electrical WG; Oct. 30 thru Nov. 1, 1995 Hampshire, UK - General WG; Nov. 1, 1995 Hampshire, UK - Plenary. X3T10.1 has 25 Principle Members, 14 of whom attended Plenary in UK.

X3T10.1 work has been devoted to PH1, TL1, S2P. X3T10.1 received 23 new proposals: 2 PH1 proposals, 14 TL1 proposals, and 7 S2P proposals. Seven proposals were deferred to second generation documents. Ken reported the following change activities: new designs, more initiator participation, incremental experience, and clarification. No votes were taken to forward drafts to letter ballot because of need to: update drafts with proposals for member review, incorporate changes and look for "ripple effect", and prepare updated drafts slated for 11/15 mailing.

Ken announced that planned draft reviews and votes are scheduled for the December meeting. Letter ballots could close in January 96. Letter ballot comments would then be processed at the February meeting. Ken announced that the following second generation (40 MB links, speed negotiation) work has begun: PH2 and TL2.

Ken announced the following long term meeting schedule:

| Week | Location | Host | | | |
|--------------------------|--------------------------|---------------|--|--|--|
| 12/11/95 | Milpitas, CA | VLSI | | | |
| 2/26/96 | Lake Tahoe, CA | Samsung | | | |
| 4/29/96 | Burlington, VT | IBM | | | |
| 6/24/96 | St. Petersburg Beach, FL | AMP | | | |
| 8/26/96 | Ft. Collins, CO | Symbios Logic | | | |
| 10/30/96 | San Jose, CA | Adaptec * | | | |
| 12/9/96 | Hawaii | IBM * | | | |
| * = Tentative locations. | | | | | |
| | | | | | |

Ken announced the following X3T10.1 approved WG Meetings:

X3T10.1 SSA Working Group - December 11-13, 1995 in Milpitas, CA. X3T10.1 SSA2 Working Group - January 17-18, 1996 in Havant, UK.

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

John reported that the letter ballot for approval of CAM closes November 17th. Bill Dallas reported that he has received no other communications on CAM.

8.4 ATA Extensions (ATA-2) Status {Project 948-D} [Finch]

Gene Milligan gave an oral report on the recent meetings of the ATA Working Group (see the ATA minutes in 95-328 and 95-328).

Gene Milligan moved that X3T10 accept the recommendations of the ATA Ad Hoc. Larry Lamers seconded the motion. The motion passed unanimously. Larry Lamers took an action item to conduct a letter ballot for forwarding ATA-3 to first public review.

Pete McLean moved that X3T10 authorize the expenditure of up to \$1,200 for inclusion of the ANSI edits for ATA-2 revision 3 (producing ATA-2 revision 3a). Steve Finch seconded the motion. The vote passed 26:0:0:25=51.

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

John reported that SPI is in the process of being published at ANSI. Since the last meeting, the Larry and John have been notified of three errors in SPI. John described the errors in general terms. John described the process by which an amendment correcting SPI will be developed and approved.

Gary Stephens moved that the SPI editor be authorized to prepare an amendment to SPI to correct the errors identified in document X3T10/95-356 to be distributed for letter ballot and that the corrections be forward to the SPI-2 technical editor for incorporation therein. Peter Johansson seconded the motion. The motion passed 26:0:0:25=51.

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

George Penokie moved that X3T10 authorize a letter ballot for forwarding of SIP revision 8 to first public review. Skip Jones seconded the motion. George stated that SIP has been relatively stable for a couple of revisions. There were no dissenting options expressed.

The motion passed 26:0:0:25=51.

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

Bill reported on the results of the CAM-3 Working Group meeting. Minutes of the meeting can be found in document 95-354.

8.8 SCSI-3 Generic Packetized Protocol (GPP) Status {Project 991-DT} [Stephens]

John reported that the first (and apparently only) public review on the GPP technical report will close on November 14th. It will be designated X3/TR-16-199x.

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

Ron Roberts reported that no one attended the SBP comments review meeting, so he assumes that there are no comments on the proposed resolutions for the SBP public review comments.

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

John reported that the second public review on FCP closes on November 28th. John is not aware of any comments received against FCP. Gary Stephens stated that he plans to submit a public review comment.

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

John reported that the second public review on SAM closes on December 12th. John is not aware of any comments received against SAM.

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

Ralph reported that revision 8 was distributed in the last mailing.

Charles Monia moved that the status of SPC be changed from Working Draft to draft standard by entering the "Stabilized State" in accordance with Clause 2.5 of the **X3T10 Proposed Standards Development Policies and Procedures** with the specific proviso that the technical editor include on his list of Accepted Items X3T10/95-229 Persistent Reservations as amended by the working group, X3T10/95-344-345 ASC/ASCQs as amended by the working group, and X3T10/95-240 Device ID VPD when accepted, along with the minutes recording that the proposals X3T10/95-324 Cabinet Services and X3T10/95-349 SCSI Version Proposal are not on the list of Accepted Items. Skip Jones seconded the motion.

Peter Johansson moved that the motion be amended to move Persistent Reservations out of the list of Accepted Items for inclusion in SPC. Gary Stephens seconded the motion to amend. After a brief discussion, the motion to amend failed 2:24:0:25=51.

The original motion passed 27:1:0:24=51.

Speaking to his negative vote, Gene Milligan moved that, in light of the absence of plans for version reporting in the stabilized SPC, clause 1.2 be removed from the **X3T10 Proposed Standards Development Policies and Procedures**. The motion passed 26:2:0:24=51.

Speaking to their negative votes, Gene Milligan and Gary Stephens stated their support for the concept of version reporting.

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

John Lohmeyer reported that no progress has been made on SBC. He described the situation with the current technical editor and called for interested parties to volunteer for this position.

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

Ted Lappin reported that the SSC/SMC working group met earlier (held in the absence of the SMC editor). He noted that the location of the soft write-protect bit was discussed and the bit was left in its current mode page (see SSC revision 5). Several requests for clarifications were also discussed. Ted reported that his next task is SAMinizing the SSC. The minutes of the SSC/SMC meeting can be found in document 95-359.

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

John Lohmeyer reported that the status of SGC is much the same as SBC. He will entertain volunteers to pick up this work.

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

No report was available for the SMC.

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

George Penokie reported that SCC second public review will close on December 12th. George reported that a special joint SCC/RAB meeting will be held Tuesday morning of January X3T10 week to review proposed enhancements to SCC. These proposed enhancements are the outcome of work done in the High Availability Study Group. He encouraged attendance at that meeting by all interested parties.

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

Ron Roberts reported that working group reviewed all the HP write-process commands. The results of that review have been accepted for MMC revision 4.0. MMC revision 4.0 will be ready in December (not in time for the next X3T10 mailing).

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

John Lohmeyer reported that the management review for Fast-20 was held at the OMC meeting this week.

8.20 AT Attachment-3 Interface (ATA-3) Status {Project 2008-D} [Milligan]

Gene Milligan reported on this subject earlier in the meeting (see 8.4).

8.21 ATA Packet Interface (ATAPI) Status {Project 1120-D} [Milligan]

Gene Milligan reported on this subject earlier in the meeting (see 8.4).

8.22 SPI-2 Study Group [Ham/Aloisi]

Paul Aloisi reported on several SPI-2 study group meetings. Minutes of the meetings are available in documents 95-337 and 95-340. The slides used in the status presentation can be found in document 95-362. SPI-2 will have a new draft in the next mailing.

8.23 High Availability Study Group [Sicola]

Charles Monia reported that the high availability study group meeting was held earlier this week.

8.24 Boot Considerations Project [Penman]

Duncan Penman reported that the document is nearly complete and that all known technical comments have been processed. Duncan plans to have a document ready for consideration at the next meeting.

8.25 EPI Study Group [Ham]

Bill Ham reported that the EPI study group held its first real meeting on Tuesday. Many useful details were discussed. He expressed the belief that the document will be ready for review in about six months.

9. Old Business

9.1 Clarification of international program fee [Allan]

John noted that the issue was discussed extensively under the membership topic.

9.2 Addressability of TARGET RESET task management function (94-236r2) [Snively]

Bob Snively moved that X3T10 accept the working group's recommendation to accept 94-236r2. Charles Monia seconded the motion. The motion passed 24:0:0:27=51.

9.3 Resolution of SCSI-3 SBP (0992-D) Public Review Comments and Forwarding to 2PR

Ron Roberts and Peter Johansson reported on the OUI changes needed in SBP revision 21. Dick Scheel moved that SBP revision 22 be accepted as the resolution to comments received from first public review and be forward to X3 for further processing to second public review. Peter Johansson seconded the motion. The motion passed 29:0:0:22=51. John Lohmeyer took an action item to forward SBP revision 22 to X3 for processing toward second public review.

10. New Business

10.1 Resolution of 2PR comments (if any) on FCP

John Lohmeyer reported that no comments have been received from the FCP public review.

10.2 Resolution of 2PR comments (if any) on SAM

John Lohmeyer reported that no comments have been received from the SAM public review.

10.3 Resolution of 2PR comments (if any) on SCC

John Lohmeyer reported that no comments have been received from the SCC public review.

10.4 Actions on Working Group Recommendations

Charles Monia moved that X3T10 accept the working group's recommendation to approve 95-351r1, Aborting Untagged Tasks, for inclusion in SIP. Peter Johansson seconded the motion. The motion passed 29:0:0:22=51.

George Penokie moved that X3T10 accept the working group's recommendation to approve 95-344, Change to SCSI-3 ASC, and 95-345, Additional SCSI Qualifiers, for inclusion in SPC. Charles Monia seconded the motion. The motion passed 31:0:0:20=51.

Bob Snively moved that X3T10 approve 95-229r3 (95-229r2, Proposal for Persistent Reserve, as revised based on working group comments) for inclusion in the SPC. Charles Monia seconded the motion. Bob presented a review of the changes made as a result of the working group discussion. The motion passed 29:0:0:22=51.

10.5 Recommendation to X3 regarding management of an IEEE Organizational Unique Identifier [Johansson]

John Lohmeyer described the events leading to the need for an OUI for SBP and the IEEE RAC's assignment of one to X3. He had developed a proposal for X3 management of the 24-bit extension identifiers. John moved that X3T10 forward 95-360, OUI Management Proposal, to X3. Charles Monia seconded the motion. The motion passed 28:0:0:23=51. John took an action item to forward 95-360 to X3.

10.6 SAM-2 Project Proposal (95-333) [Monia]

John Lohmeyer moved that X3T10 forward 95-333r1 (95-333r0 as revised) to X3 for further processing. Charles Monia seconded the motion. The motion passed 31:0:0:20=51. John took an action item to forward 95-333r1 (the SAM-2 Project Proposal as revised) to X3.

11. ISO

11.1 ISO Report [Milligan]

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

ISO Report 11/95

JTC 1 has issued twenty one NWI letter ballots concerning X3T10, 11, and 12. The ballots close 19 January. The ballots are:

ISO/IEC JTC 1 N 3693 Pathways & Space for Customer Premises Cabling and Equipment ISO/IEC JTC 1 N 3694 FDDI SMT-2 ISO/IEC JTC 1 N 3695 FDDI TP-PMD ISO/IEC JTC 1 N 3696 SPI ISO/IEC JTC 1 N 3697 SBP ISO/IEC JTC 1 N 3698 SAM ISO/IEC JTC 1 N 3699 Fast-20 ISO/IEC JTC 1 N 3701 SCC ISO/IEC JTC 1 N 3702 FCP ISO/IEC JTC 1 N 3703 HPPI-SE ISO/IEC JTC 1 N 3704 HPPI-ATM ISO/IEC JTC 1 N 3705 FC-SW ISO/IEC JTC 1 N 3706 FC-LE ISO/IEC JTC 1 N 3707 FC-FG ISO/IEC JTC 1 N 3708 FC-PH-2 ISO/IEC JTC 1 N 3709 FC-SB ISO/IEC JTC 1 N 3710 FC-FP ISO/IEC JTC 1 N 3711 FC-ATM ISO/IEC JTC 1 N 3712 FC-PH-3 ISO/IEC JTC 1 N 3713 FC-GS ISO/IEC JTC 1 N 3714 FC-AL

11.2 ISO New Business

On behalf of the United States of America and the country for which they stand, Gene Milligan moved that X3T10 recommend that the U.S. Member body vote affirmatively on the following six questions:

1) Do you accept the proposal in documents ISO/IEC JTC 1 N 3696 (SPI NWI); N 3697 (SBP NWI); N 3698 (SAM NWI); N 3699 (Fast-20 NWI); N 3701 (SCC NWI); and N3702 (FCP NWI)?

2) Do you support the addition to the new work item to the programme of work of the joint technical committee?

3) Do you commit yourself to participate in the development of this new work item?

4) Are you able to offer a project editor who will dedicate his efforts to the advancement and maintenance of this project?

5) Do you have a major contribution or a reference document ready for submittal?

6) Will you have such a contribution within ninety days?

Charles Monia seconded the motion. Larry Lamers reminded the committee that only representatives for U.S. domiciled organizations could vote on this and other international standards motions. The motion passed 31:0:0:20=51.

Gene Milligan (the IR) moved that X3T10 action members with operations in foreign countries to lobby France, United Kingdom, Brazil, Italy, Sweden, Denmark, and other JTC 1 countries for support of the new work item projects, in particular, that they will contribute to the development by answering "yes" to question 3. Peter Johansson seconded the motion. The motion passed 31:0:0:20=51.

12. Liaison Reports

12.1 X3T11 Liaison Report [Cummings]

Roger Cummings provided the following written report:

X3T11 met on October 4, 1995 with 78 people in attendance. Panasonic Technologies and TV/Com International were deleted for failure to attend meetings and/or return letter ballots. Texas Instruments was added as a new member organization. One X3T11 member reported receiving a notice from the Secretariat that he had lost membership because of non-payment of the International Program Fee, but as the Chair had not been informed of this the only action taken was to approve a motion demanding that the Secretariat investigate the situation. The membership of X3T11 is now 61 organizations.

The results of two X3T11 LBs were announced. The Letter Ballot on HIPPI Serial (Rev 1.5) for an OMC compliance review and a first Public Review passed with F45-O02-DNV15, however a new version of the draft will be produced to respond to the comments submitted with the Opposed ballots. The Letter Ballot on the FC Private Loop Direct Attach passed with F45-O00-DNV17 (1 For ballot included comments).

It was reported that the first Public Review of Project 979-D, HIPPI-FC (X3.283-199x), had closed with no comments, but that a few editorial comments had been received from the ANSI editor.

A number of motions were adopted which will change the definition of the optical physical variants in FC-PH-2. The result will be to remove variants which are duplicates of those in FC-PH, and those based on 980 nm VCSEL technology. Informative annexes will be included which contain recommendations of the physical variants to be used in future implementations, and which requests that transceiver manufacturers indicate if their parts are capable of acting as receivers for multiple variant definitions.

A motion to rescind the decision of the August X3T11 Plenary to delay a decision on a connector for FC-PH-3 Copper physical variants beyond October was defeated. It was also decided by consensus to have a single definition of link length, and to include test methods in a Normative Annex, in FC-PH-3.

Technical Editors were solicited for the FC-PH-3 and FC-ATM projects.

The following X3T11 Letter Ballots were authorized:

- 1) Forwarding a Project Proposal for HIPPI Autoconfiguration (HIPPI-AC) to OMC for further processing.
- 2) Forwarding a working dpANS, for the Revised IPI-3 Disk project, for further processing including an OMC review and a first Public Review.
- 3) Forwarding a working dpANS, for the Revised IPI-3 Tape project, for further processing including an OMC review and a first Public Review.
- 4) Forwarding a working dpANS, for the FC-PH-2 project, for further processing including an OMC review and a first Public Review.
- 5) Increasing the minimum launch amplitude for the electrical physical variants in FC-PH-3 to 800 millivolts peak-to peak (from the 600 millivolts peak-to-peak level specified in FC-PH).
- 6) Including in FC-PH-2 that ac coupling shall be required as part of the receiver electrical cable interface specification.
- 7) Forwarding a working dpANS, for the FC-LE project, for further processing including an OMC review and a first Public Review.
- 8) Forwarding a working dpX3TR, for the 10 bit Interface project, for further processing including an OMC review and a first Public Review.

The next meeting of X3T11 is on December 6, 1995 at the Clarion Bay View Hotel, 660 K Street, San Diego, CA 92101. The phone number for the hotel is (800) 766-0234. The cutoff date for reservations is November 3. Note that a meeting fee of \$25 per day will be levied for attendance at the December X3T11 meetings on those not registered in the ANSI/ENDL block at the Clarion Hotel. The fee is necessary because of the exceptional circumstances involved in holding a co-located meeting with a major trade show (Supercomputing '95).

12.2 SFF Industry Group [Allan]

Dal Allan provided the following written report on SFF activities:

The VHDCI (Very High Density Cable Interconnects) selected the AMP-proposed design and met to discuss the backend configurations for which AMP had supplied an initial EIA draft. More configurations were added to the list and a number of editorial errors identified. The SCA-2 connector backend has also been documented in initial EIA draft form. A number of additions were made for both the device and host side.

Several suggestions were discussed on how to improve the cable plant for ATA systems, and new cable alternatives will be provided for testing by drive vendors. In another activity, a request for information is being made to all vendors for unitized connectors being developed and in use for the ATA and SCSI markets.

The SFF-8047 and SFF-8048 specifications which provided enhanced ESI capabilities over SFF-8045 and SFF-8046 for FC-AL and SCSI respectively have been withdrawn. The expanded functionality will be provided by SCSI agents as described in the SAF-TE specification and the X3T10 working group recommendations on direction.

Means to provide future attachment of high rpm drives which require higher than 12V for operation will be documented in two SFF Specifications as companions to SFF-8045 and SFF-8046. A mechanical interlock for hot plugging will prevent smoking 12V drives in 36V enclosures. An electrical interlock will prevent providing 36V to an enclosure which contains any 12V drives. Clear labeling on drives and enclosures will also be recommended.

12.3 IEEE P1394 [Marazas]

Peter Johansson reported that P1394 approval work is almost complete. He also gave a brief description of the 1394 follow-on project (a.k.a. P1394.1).

12.4 IEEE P1285 Status [Pak]

No report was received from P1285. Gene Milligan reported receipt of email from Martin Freeman requesting an electronic comments of Gene's comments for consideration by the ballot resolution committee. Larry Lamers stated that he had received no correspondence regarding his P1285 comments.

12.5 PCMCIA Report [McLean]

Pete said that no noteworthy activities had occurred at PCMCIA.

12.6 Report on SCSI Industry Association Meeting

John Lohmeyer reported that the minutes of the 16 October meeting were sent to the SCSI Reflector. A meeting is planned for December 14th hosted by Quantum in Milpitas, CA at the Holiday Inn. A co-located meeting is planned for January 1996. In a straw poll, the committee favored a Thursday morning meeting over a Friday morning meeting: 8:4.

13. Review of Action Items

- 116) Rick Tewell will document the usage of the 0Dh mode page code in SBC as per the wishes of X3T10 expressed in item 10.6 of the meeting #10 minutes.
- 123) Larry Lamers will conduct a letter ballot for forwarding ATA-3 toward first public review.
- 124) John Lohmeyer will forward SBP revision 22 to X3 for processing toward second public review.
- 125) John Lohmeyer will forward 95-360 (the OUI management proposal) to X3.
- 126) John Lohmeyer will forward 95-333r1 (the SAM-2 Project Proposal as amended) to X3.
- 127) Larry Lamers will prepare an amendment for SPI for review by X3T10.
- 128) Larry Lamers will conduct a letter ballot for forwarding SIP revision 8 toward first public review.
- 129) John Lohmeyer will forward the revised X3T10 Policies and Procedures to X3.

14. Meeting Schedule

The next plenary meeting of X3T10 will be January 11, 1996, in Dallas, TX, at the Doubletree Hotel at Park West (214-869-4300), hosted by Quantum Corp. The meeting will begin at 1:00 p.m. on Thursday.

The meeting list for the next plenary week is:

| | (| 11/9/95 Version |) | | | | | | |
|----------------|--|--|-------------|-------|----------------|---------|--|--|--|
| Monday 1/8 | 9 10 11 12 | | 5 6 | 7 | 8 9 | | | | |
| | +===================================== | | | | =+ | (35) | | | |
| | +====+===+++++++++++++++++++++++++++++ | | | | | | | | |
| | + IEEE P1394 | | I | | + | (20) | | | |
| Tuesday 1/9 | + 9 10 11 12 | 1 2 3 4 | 56 | 7 | 8 | | | | |
| J | +===================================== | | | ===== | =+ | (40) | | | |
| | +===================================== | , +==================================== | =====+= | | - -+ | (15) | | | |
| | +===================================== | | -+===+ | | | (20) | | | |
| | SCC/RAB WG | RAB | 1 | | | (20) | | | |
| Wednesday 1/10 | + 9 10 11 12 +==================================== | 1 2 3 4 | 5 6 | 7 | 8 =+ | | | | |
| | SCSI-3 WG +==================================== | +====================================== | ====+= | | =+ | (40) | | | |
| | MMC Working Gr +==================================== | oup | | | | (20) | | | |
| | SFF Form Factor + | SFF/VHDCI WG | | | | (40) | | | |
| | RAB | | | | | (??) | | | |
| Thursday 1/11 | | 1 2 3 4 | | 7 | 89 | | | | |
| | • | X3T10 Plenary | | | | (40/70) | | | |
| | +===================================== | +====================================== | | | ====+ | (10) | | | |
| | +===================================== | ??? | | | | (40) | | | |
| Friday 1/12 8 | 9 10 11 12 | | 5 | | | | | | |
| | SCSI IA | ??? | | | | (40) | | | |
| Maatings marks | d with == are X3T | 10. authorized m | optinge | | | | | | |

January '96 Meeting Map (11/9/95 Version)

Meetings marked with == are X3T10-authorized meetings. Meetings marked with -- are authorized by other groups and may change without notice. ??? The SCSI IA meeting day is to be determined by that group.

| Meeting Map Abbre | eviation Key: | | |
|-------------------|---|--|--|
| 1394TA: | 1394 Trade Association | | |
| ATA: | AT Attachment (a.k.a. IDE) | | |
| ATA- 2: | ATA Extensions | | |
| ATA- 3: | Third Generation ATA | | |
| ATAPI : | ATA Packet Interface | | |
| CAM: | Common Access Method | | |
| CAM- 3: | Next generation CAM for SCSI-3 (was called CAM-2) | | |
| EPI: | SCSI Enhanced Parallel Interface (Technical Report) | | |
| Fast-20: | Synchronous Data Transfer at 20 Megatransfers/second | | |
| FC-AL: | Fibre Channel - Arbitrated Loop (an X3T11 project) | | |
| FCLC: | 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) | | |
| P1394: | IEEE Project on High Performance Serial Bus (not an X3 | | |
| | activity) | | |
| PH: | Physical (Connectors, Cables, Transceivers, etc.) | | |
| Pl enary: | Full Committee Meeting | | |
| RAB: | RAID Advisory Board (not an X3 activity) | | |
| RAID: | Redundant Array of Independent Devices | | |
| SBP: | SCSI-3 Serial Bus Protocol | | |
| SCC: | SCSI-3 Controller Commands (RAID) | | |
| SCSI: | Small Computer System Interface | | |
| SCSI IA: | SCSI Industry Association (or whatever it will be called) | | |
| 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) | | |
| Stor: | Storage | | |
| UIG: | User Interest Group (not an X3 activity) | | |
| VHDCI | Very High Density Cabled Interconnect | | |
| WG: | Working Group (same as Ad Hoc Group) | | |
| X3T10: | Lower Level Interfaces Technical Committee (was X3T9.2) | | |
| X3T10. 1: | SSA Task Group of X3T10 (was X3T9.7) | | |
| | | | |

Several other X3T10 events are also planned:

| Event | Day/Date | Time | Location/contact |
|---|--------------------------------|------|---|
| SPI-2 LVDS WG SPI-2 LVDS WG ATA Working Group ATA WG / X3T13 | Tu 11/28-12/1 Tu 1/23-26/96 | 9 am | Milpitas, CA / McGrath Denver, CO / Lohmeyer WD in Irvine, CA / Hanan San Jose, CA / McGrath |
| MMC Working Group | Tu/We 12/5-7 | 9 am | Sunnyvale, CA / Philips (*) |

(*) Two days starting on either 12/5 or 12/6, to be determined and announced to the MMC Reflector.

For more information about X3T10 activities, please contact the following people:

| Activity | Contact | Telephone/Email |
|-----------------------|----------------|---|
| АТА-2 | Steve Finch | (714) 573-6808 steve.finch@tus.ssil.com |
| ATA-3 & ATAPI | Gene Milligan | (405) 324-3070 Gene_Milligan@notes.seagate.com |
| CAM & CAM-3 | Bill Dallas | (603) 881-2508 dallas@wasted.enet.dec.com |
| FCP | Robert Snively | (415) 336-5332 Bob.Snively@eng.sun.com |
| GPP | Gary Stephens | (602) 321-1725 6363897@mcimail.com |
| SAM | Charles Monia | (508) 841-6757 monia@starch.enet.dec.com |
| SBC and SGC | Thomas Tewell | (415) 459-7978 thomas.tewell@segadvtech.com |
| SBP and MMC | Ron Roberts | (916) 677-5714 rkroberts@aol.com |
| SIP, SCC | George Penokie | (507) 253-5208 gop@rchvmp3.vnet.ibm.com |
| SMC | Erich Oetting | (303) 673-2178 Erich_Oetting@Stortek.com |
| SPC | Ralph Weber | (603) 881-1497 roweber@acm.org |
| SPI,Fast-20,& SSA-xxx | Larry Lamers | (408) 957-7817 ljlamers@aol.com |
| SSA-S2P & -S3P | John Scheible | (512) 823-8208 Scheible@vnet.ibm.com |
| SSC | Edward Lappin | (303) 447-7718 tedl@exabyte.com |
| System Issues | Duncan Penman | (408) 730-2565 penman@netcom.com |
| Other Activities | John Lohmeyer | (719) 573-3362 john.lohmeyer@symbios.com |

The long-term X3T10 meeting week schedule is:

| Date | Location | Host/Comments |
|-----------------------------------|---|------------------------------|
| Mar 11-15, 1996 May 6-10, 1996 | Dallas, TX Newport Beach, CA Ft. Lauderdale, FL | Quantum QLogic 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 | Western Digital |
| Jan 6-10, 1997 | Dallas, TX | Quantum |
| Mar 10-14, 1997 | San Diego, CA | QLogi c |
| May 5-9, 1997 | Natick, MA (near Boston) | Di gi tal |
| Jul 14-18, 1997 | Colorado Springs, CO | Symbios Logic |
| Sep 8-12, 1997 | Nashua, NH | Unitrode |
| Nov 3-7, 1997 | Palm Springs, CA | Western Digital |

Skip Jones moved and Paul Aloisi seconded that the 1997 meeting sites and hosts be approved as listed above. (The 1996 meetings and 1997 dates were previously approved.) The motion passed 24:4:1:22=51.

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

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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.

Paul Aloisi moved that X3T10 authorize the X3T10-related meetings and events in the list above. Skip Jones seconded the motion. The motion passed unanimously.

15. Adjournment

The meeting was adjourned at 6:04 p.m. on Thursday November 9, 1995.

Meeting Attendees -- Enclosure (1)

| | Name | S | Organi zati on | Electronic Mail Address |
|---------------|--------------------|------------|---------------------------------|-------------------------------------|
| Mir | Rick Heidick | A | 3M Company | rdhei di ck@mm. com |
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| | Lawrence J. Lamers | | | ljlamers@aol.com |
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| | Geoff Zech | 0 | AMP, Inc. | ghzech@amp. com |
| Mar. | Michael Wingard | Р | Amphenol Interconnect | mi kwi ngard@aol . com |
| | Ron Roberts | Α | Apple Computer | rkroberts@aol.com |
| Mar. | Clifford E. Strang | | BusLogi c | ski p@busl ogi c. com |
| Jr. | C | | C | |
| Mar. | Joe Chen | Р | Cirrus Logic Inc. | chen@cirrus.com |
| Mar. | Edward Haske | Р | CMD Technology | |
| Mar. | Peter Johansson | Р | Congruent Software, Inc. | pj ohansson@aol . com |
| Mar. | Marc A. Noblitt | A# | Conner Peripherals | marc.noblitt@conner.com |
| Mar. | Louis Grantham | Р | Dallas Semiconductor | grantham@dal semi . com |
| Mar. | Greg McSorley | V | Data General Corp. | greg_mcsorley@dgc.ceo.dg. com |
| Mr | Charles Monia | Р | Digital Equipment Corp. | moni a@shr. dec. com |
| | William Dallas | | Digital Equipment Corp. | dallas@wasted.enet.dec.com |
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| | Gary R. Stephens | | FSI Consulting Services | 6363897@mci mail.com |
| Mar. | Andy Chen | | Fujitsu Computer Prods | achen@fcpa. fujitsu. com |
| | | | Amer | |
| Mar. | Stephen Holmstead | Р | Hewlett Packard Co. | stephen@mail.boi.hp.com |
| | Wanli Tseng | V | Hewlett Packard Co. | wtseng@ppg01. sc. hp. com |
| | Anthony Yang | | Hitachi America Ltd. | yang_a@hal sp. hi tachi . com |
| Mar. | Zane Daggett | A# | Hitachi Cable | 74354.2576@compuserve.com |
| | | | Manchester, Inc | |
| | Thomas J. Kulesza | | Honda Connectors | |
| Mar. | | | IBM Corp. | gop@rchvmp3.vnet.ibm.com |
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| Mr. | Duncan Penman | P A # | IIX Consulting | penman@netcom.com |
| | Pat LaVarre | | Iomega Corp. | p. lavarre@ieee. org |
| 1 VIII | Lansi ng Sloan | V | Lawrence Livermore Nat'l Lab | 1) 51 041191 1 111 . 801 |
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| Mar. | Edward A. Gardner | V | Ophidian Designs | gardner@acm.org |
| Mar. | Skip Jones | P | QLogic Corp. | sk_j ones@ql c. com |
| Mar. | Mark Evans | Α | Quantum Corp. | mevans@qntm.com |
| Mr. | Gene Milligan | Р | Seagate Technology | Gene_Milligan@notes. seagate.com |
| Mr | Stephen G. Finch | Р | Silicon Systems, Inc. | steve. finch@tus. ssi1. com |
| Mar. | Dick Scheel | | Sony | di cks@l si . sel . sony. com |
| | Robert N. Snively | P | Sun Microsystems Computer | • |
| | | - | Co | |
| | | | | |

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| Mar. | John Lohmeyer | Р | Symbios Logic Inc. | john.lohmeyer@symbios.com |
|------|-------------------|------------|--------------------------|-------------------------------|
| Mar. | Patrick Mercer | Р | SyQuest Technology, Inc. | patrick.mercer@syquest.com |
| Mar. | Steven Walker | Р | Thomas & Betts | wal kertnb@aol.com |
| Mar. | Tokayuki Totani | 0 | Toshiba America | ttotani Atai sdpd. gei s. com |
| Mar. | Kenneth J. Hallam | Р | UNISYS Corporation | ken. hallam@mv. unisys. com |
| Mar. | Paul D. Aloisi | Р | Unitrode Integrated | Al oi si @ui cc. com |
| | | | Circuits | |
| Mar. | Francesco Liburdi | 0 | Wearnsi Hollingsworth | |
| Mar. | Jeff Stai | Р | Western Digital | stai@dt.wdc.com |
| | | | Corporation | |
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| | | | Corporation | |
| Mar. | Doug Piper | Р | Woven Electronics | 549.9900@mcimail.com |
| Mar. | Arnold Limjoco | 0 | Yamaichi Electronics | 6371175@mcimail.com |
| Mar. | Don Johnson | V | Zitel Corporation | dj ohnson@zi tel . com |
| | | | - | - |

57 People Present

| Status | Key: | Р | - | Pri nci pal |
|--------|------|-------|---|-----------------|
| | | A, A# | - | Alternate |
| | | 0 | - | Observer |
| | | L | - | Li ai son |
| | | V | - | Visitor |

Nov 12, 1995 - X3T10 Attendance Database - Enclosure (2)

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Mr. Raymond Gilson (A)

Mr. Rick Heidick (A) Mr. KICK Heidlek (A) 3M Company 6801 River Place Blvd. Austin, TX 78726-9000 Phone: (512) 984-6832 FAX: (512) 984-2184 Email: rdheidick@mmm.com Mr. Lawrence J. Lamers (A#) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035 Phone: (408) 957-7817 FAX: (408) 957-7193 Email: ljlamers@aol.com Mr. Ron Apt (P) Mr. Ron Apt (P) Advanced Micro Devices One AMD Place MS 59 P.O. Box 3453 Sunnyvale, CA 94088-3453 Phone: (408) 749-2578 FAX: (408) 774-8449 Email: Ronald.Apt@amd.com Mr. Edward Fong (P) Mr. Edward Fong (P) Amdahl Corp. 1250 E. Arques Ave. MS 193 Sunnyvale, CA 94088-3470 Phone: (408) 944-3780 FAX: (408) 943-6620 Email: esf10@amail.amdahl.com Mr. Charles Brill (P) AMP, Inc. Mail Stop 210-20 P. O. Box 3608 Harrisburg, PA 17105 Phone: (717) 558-6198 FAX: (717) 558-6179 Email: cebrill@amp.com Mr. Geoff Zech (O) AMP, Inc. 449 Eisenhower Blvd. Harrisburg, PA 17111 Phone: (717) 780-6572 FAX: (717) 780-4508 Email: ghzech@amp.com Mr. Carl Booth (0) Amphenol/Spectra-Strip 720 Sherman Ave. Hamden, CT 06514 Phone: (203) 287-7455 FAX: (203) 281-5872 Email: 7480559@mcimail.com Mr. Dennis Pak (P) Apple Computer 3535 Monroe St., MS 69-G Santa Clara, CA 95051 Phone: (408) 974-4874 FAX: (408) 974-2898 Email: dennis.pak@applelink.apple.com Apple Computer Mr. Joe Lawlor (0) AT&T 1100 E. Warrenville Rd. Rm 2A-429 Naperville, IL 60566 Phone: (708) 979-0133 FAX: (708) 979-0291 Email: Mr. Clifford E. Strang Jr. (P) BusLogic 4151 Burton Dr. Alli Burlon Dr. Santa Clara, CA 95054 Phone: (408) 565-6940 FAX: (408) 970-0941 Email: skip@buslogic.com Mr. Richard Wagner (O) Cable Design Technologies Cable Design Technolog 28 Sword Street Auburn, MA 01501 Phone: (508) 791-3161 FAX: (508) 798-8353 Email:

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Nov 12, 1995 - X3T10 Document Register - Enclosure (3) X3T10/95-001R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01] Desc: X3T10 Project Summary X3T10/95-001R1 Date: 3/20/95 Author: J. Lohmever [SY-95-02] Desc: X3T10 Project Summary X3T10/95-002R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01] Desc: X3T10 Draft Agenda for Meeting #8 X3T10/95-003R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01] Desc: Jeopardy Letter for Mar '95 Meeting X3T10/95-004R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01] Desc: Letter Ballot on Forwarding ATA-2 to 1PR X3T10/95-005R0 Date: 1/26/95 Author: J. Lohmeyer [SY-95-01] Desc: Letter requesting that Project 964-D (DADI) be withdrawn Date: 1/27/95 Author: J. Lohmeyer [SY-95-01] X3T10/95-006R0 Desc: Transmittal letter on SCC Rev 4 to first public review X3T10/95-007R0 Date: 2/2/95 Author: J. Lohmeyer [SY-95-02] Desc: Transmittal letter on SCSI-2 TIBs #1 and #2 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02] X3T10/95-008R0 Desc: X3T10 Draft Agenda for Meeting #9 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02] X3T10/95-009R0 Desc: Jeopardy Letter for May '95 Meeting Date: 3/20/95 Author: J. Lohmeyer [SY-95-02] X3T10/95-010R0 Desc: I/O Interface Related Reflectors (mailing lists) X3T10/95-011R0 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02] Desc: ltr to Stuart Mabon, Micropolis, re patent 5,191,584 X3T10/95-012R0 Date: 3/21/95 Author: J. Lohmeyer [SY-95-02] Desc: X3T10 Annual Report (April 1994 -- March 1995) X3T10/95-013R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Cover Letter on May/June '95 Letter Ballots Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-014R0 Desc: Letter Ballot on Recommending that an ATA TC be formed Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-015R0 Desc: Letter Ballot on Forwarding ATA+PI Project Proposal X3T10/95-016R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Forwarding SPI-2 Project Proposal X3T10/95-017R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Forwarding ESPC Technical Report Project Proposal Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-018R0 Letter Ballot on Forwarding FCP-2 Project Proposal X3T10/95-019R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Forwarding SSA-PH1 Project Proposal Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-020R0 Desc: Letter Ballot on Forwarding SSA-PH2 Project Proposal X3T10/95-021R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Recommending Revised Scope and Name for Project 0989-D X3T10/95-022R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Forwarding SSA-TL2 Project Proposal X3T10/95-023R0 Date: 5/13/95 Author: J. Lohmever [SY-95-03] Letter Ballot on Changing Project 1121-DT to a Standards Project X3T10/95-024R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03] Desc: Letter Ballot on Changing Name for Project 1051-D X3T10/95-025R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03] Desc: ltr to Ray Freeman re QIC request for Density Codes (ref 95-201) X3T10/95-026R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03] Desc: Draft Agenda for July '95 X3T10 Meeting Date: 5/16/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-027R0 Desc: X3T10 Project Summary (May '95) X3T10/95-028R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03] Desc: Jeopardy Letter for Jul '95 Meeting X3T10/95-029R0 Date: 5/19/95 Author: J. Lohmeyer [SY-95-03] Desc: ltr to Bill Galloway, Compaq Computer Corp., re patent 5,375,243 X3T10/95-030R0 Date: 7/20/95 Author: J. Lohmever [SY-95-04] Desc: Agenda for X3T10 Meeting #11 (Sep '95) X3T10/95-031R0 Date: 7/20/95 Author: J. Lohmeyer [SY-95-04] Desc: X3T10 Project Summary - July '95 X3T10/95-032R0 Date: 7/20/95 Author: J. Lohmeyer [SY-95-04] Desc: Jeopardy letter for Sep '95 meeting

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Date: 9/20/95 Author: J. Lohmeyer [SY-95-05] X3T10/95-033R0 Desc: Agenda for X3T10 Meeting #12 (Nov '95) Date: 6/17/95 Author: J. Lohmeyer [SY-95-04] X3T10/95-034R0 Desc: Results of X3T10 Letter Ballots 95-014 through 95-024 X3T10/95-035R0 Date: 7/21/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #1 on SCC X3T10/95-036R0 Date: 7/21/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #2 on SCC X3T10/95-037R0 Date: 7/21/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #3 on SCC X3T10/95-038R0 Date: 9/20/95 Author: J. Lohmeyer [SY-95-05] Desc: X3T10 Project Summary - July '95 X3T10/95-039R0 Date: 9/20/95 Author: J. Lohmeyer [SY-95-05] Desc: Jeopardy letter for Nov '95 meeting X3T10/95-040R0 Date: 10/4/95 Author: J. Lohmeyer [SY-96-01] Desc: Agenda for X3T10 Meeting #13 (Jan '96) X3T10/95-041R0 Date: 10/4/95 Author: J. Lohmeyer [SY-96-01] Desc: X3T10 Project Summary - November '95 Date: 10/4/95 Author: J. Lohmeyer [SY-96-01] X3T10/95-042R0 Desc: Jeopardy letter for Jan '96 meeting Date: 10/4/95 Author: J. Lohmeyer [SY-96-01] X3T10/95-043R0 Desc: Letter to Gassan Salman (IEEE) requesting OUID for X3T10 X3T10/95-101R0 Date: 1/1/95 Author: Milligan/Lamers [SY-95-01] Desc: Minutes of ATA-3 Working Group - 11/30/94 X3T10/95-102R0 Date: 1/11/95 Author: D. Worrell [SY-95-01] Desc: Proposal for Enhanced IDE 95 Features X3T10/95-103R0 Date: 1/16/95 Author: R. Weber [sy-95-01] Desc: Attached Medium Changer Operation Codes X3T10/95-103R2 Date: 1/16/95 Author: R. Weber [sy-95-02] Desc: Attached Medium Changer Operation Codes X3T10/95-104R0 Date: 1/16/95 Author: S. Smyers [SY-95-01] Desc: CDR Command Proposal X3T10/95-105R0 Date: 1/16/95 Author: G. Penokie [SY-95-01] Desc: Fast-20 Letter ballot comments X3T10/95-106R0 Date: 1/16/95 Author: G. Penokie [SY-95-01] Desc: SPC comments X3T10/95-107R0 Date: 1/16/95 Author: G. Penokie [SY-95-02] Desc: Public Review Comment #1 on SAM (X3.270) X3T10/95-108R0 Date: 1/16/95 Author: G. Penokie [SY-95-01] Desc: XOR Commands comments X3T10/95-109R1 Date: 1/16/95 Author: T. Asami [SY-95-01] Desc: Fast-20 Definition X3T10/95-110R0 Date: 1/16/95 Author: C. Monia [SY-95-01] Desc: Comparison of CA & ACA X3T10/95-111R0 Date: 1/16/95 Author: D. Colegrove [SY-95-01] Desc: PFA for ATA X3T10/95-111R0 Date: 1/16/95 Author: D. Colegrove [SY-95-02] Desc: PFA for ATA X3T10/95-111R1 Date: 1/16/95 Author: D. Colegrove [SY-95-02] Desc: PFA for ATA X3T10/95-112R1 Date: 1/16/95 Author: L. Sloan [SY-95-01] Desc: Presentation on 3rd Party Operations X3T10/95-113R0 Date: 1/16/95 Author: L. Sloan [SY-95-02] Desc: Technical details on 3rd Party Proposal X3T10/95-114R0 Date: 1/16/95 Author: J. Elrod [SY-95-01] Desc: Minutes of XOR Study Group - Jan '95 Date: 1/16/95 Author: J. Molina [SY-95-01] X3T10/95-115R0 Desc: Letter on hotel locations Date: 1/16/95 Author: G. Stephens [SY-95-01] X3T10/95-116R0 Desc: Response for GPP Letter Ballot X3T10/95-117R0 Date: 1/16/95 Author: E. Lappin [SY-95-01] Desc: Space past EOD X3T10/95-118R0 Desc: READ POSITION Date: 1/16/95 Author: E. Lappin [SY-95-01] X3T10/95-118R1 Date: 1/16/95 Author: E. Lappin [SY-95-02] Desc: READ POSITION X3T10/95-119R0 Date: 1/16/95 Author: R. Roberts [SY-95-01] Desc: Minutes of MMC Working Group - Jan '95

X3T10/95-120R0 Date: 1/16/95 Author: Lamers/Milligan [SY-95-01] Desc: Minutes of ATA-3 Working Group - 1/11-12/95 X3T10/95-121R0 Date: 1/16/95 Author: S. Finch [SY-95-01] Desc: ATA-2 Annex F Issues X3T10/95-122R0 Date: 1/16/95 Author: J. Chen [SY-95-01] Desc: ATA 22MB/sec Timing Proposal Date: 1/16/95 Author: J. Lohmeyer [SY-95-01] X3T10/95-123R0 Desc: Letter ballot results from mailing SY-9406 X3T10/95-124R0 Date: 1/16/95 Author: G. Penokie [SY-95-02] Desc: Public Review Comment #1 on FCP (X3.269) X3T10/95-125R0 Date: 1/16/95 Author: M. Chow [SY-95-01] Desc: Dynamic Power Selection in ATA X3T10/95-125R2 Date: 1/16/95 Author: M. Chow [SY-95-03] Desc: Dynamic Power Selection in ATA X3T10/95-126R0 Date: 1/16/95 Author: L. Leach [SY-95-01] Desc: Cable Error Detection Proposal X3T10/95-127R0 Date: 1/16/95 Author: D. Penman [SY-95-01] Desc: Additional ATA-3 Topics X3T10/95-128R0 Date: 1/16/95 Author: D. Pak [SY-95-01] Desc: Liaison Report from 1285 X3T10/95-129R0 Date: 1/16/95 Author: R. Weber [SY-95-01] Desc: Minutes of SCSI Working Group - Jan '95 X3T10/95-130R0 Date: 1/16/95 Author: R. Weber [SY-95-01] Desc: Minutes of X3T10 Plenary Meeting #7 Date: 1/16/95 Author: D. Penman [SY-95-01] X3T10/95-131R0 Desc: ATA Systems Issues X3T10/95-132R0 Date: 1/16/95 Author: T. Lappin [SY-95-01] Desc: Write without readd block mode control Date: 1/16/95 Author: T. Lappin [SY-95-02] X3T10/95-132R1 Desc: Write without reaad block mode control X3T10/95-133R0 Date: 1/16/95 Author: T. Lappin [SY-95-01] Desc: Clearing ASC/ASCQ X3T10/95-133R1 Date: 1/16/95 Author: T. Lappin [SY-95-02] Desc: Clearing ASC/ASCQ X3T10/95-134R0 Date: 1/16/95 Author: T. Lappin [SY-95-01] Desc: Write protect control X3T10/95-135R0 Date: 1/16/95 Author: R. Weber [SY-95-01] Desc: Status of AIIM C21 M559 Standard at X3T10 X3T10/95-136R0 Date: 1/24/95 Author: B. Dallas [SY-95-01] Desc: Minutes of CAM WG - 1/'95 X3T10/95-137R0 Date: 1/18/95 Author: K. Calvert [SY-95-01] Desc: Letter re: Copyright Release for ATASPI X3T10/95-138R0 Date: 1/26/95 Author: M. Alexenko [SY-95-01] Desc: SCAM issues in SPI rev 15 Date: 1/26/95 Author: J. Lohmeyer [SY-95-01] X3T10/95-139R0 Desc: Minimum Active Negation Current Issue X3T10/95-139R1 Date: 2/1/95 Author: J. Lohmeyer [] Desc: Minimum Active Negation Current Issue X3T10/95-139R2 Date: 2/8/95 Author: J. Lohmeyer [sy-95-02] Desc: Minimum Active Negation Current Issue X3T10/95-140R0 Date: 1/27/95 Author: F. Podia [SY-95-01] Desc: Use of Log Pages Assigned by X3T10 to AIIM B21 X3T10/95-141R0 Date: 1/27/95 Author: K. Calvert [SY-95-01] Desc: ATASPI Presentation X3T10/95-142R0 Date: 1/27/95 Author: K. Calvert [SY-95-01] Desc: ATASPI Specification X3T10/95-143R0 Date: 1/27/95 Author: D. Worrell [SY-95-01] Desc: ATA-3 Features Proposal X3T10/95-144R0 Date: 2/8/95 Author: H. Landis [SY-95-02] Desc: Identify DMA proposal X3T10/95-145R0 Date: 2/8/95 Author: H. Landis [SY-95-02] Desc: Device 1 Only proposal X3T10/95-146R0 Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02] Desc: Electronic Notification Procedure X3T10/95-147R0 Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02] Desc: Preparing Documents for Committee Mailings Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02] X3T10/95-148R0

Desc: Procedure for Funding X3T10 Technical Editors X3T10/95-149R0 Date: 2/12/95 Author: R. Roberts [SY-95-02] Desc: Minutes of MMC Working Group - Feb 95 X3T10/95-150R0 Date: 2/15/95 Author: Lamers/Milligan [SY-95-02] Desc: Minutes of ATA-3 Working Group - 1/26/95 X3T10/95-151R1 Date: 2/15/95 Author: Lamers/Milligan [SY-95-02] Desc: Minutes of ATA-3 Working Group - 2/15-16/95 X3T10/95-152R0 Date: 2/15/95 Author: J. McGrath [SY-95-02] Desc: Problems with System Implementation of Dual Ports X3T10/95-153R0 Date: 2/15/95 Author: C. Stevens [SY-95-02] Desc: Enhanced Disk Drive Specification Date: 2/15/95 Author: H. Landis [SY-95-02] X3T10/95-154R0 Desc: Version Identification in ATA Date: 2/15/95 Author: G. Milligan [SY-95-03] X3T10/95-154R1 Desc: Version Identification in ATA X3T10/95-155R0 Date: 2/15/95 Author: H. Landis [SY-95-02] Desc: Comment on clause 10.5 of ATA-2 Date: 2/15/95 Author: H. Landis [SY-95-02] X3T10/95-156R0 Desc: BIOS Types, CHS Translation, LBA and other Good Stuff X3T10/95-157R0 Date: 2/28/95 Author: J. Lohmeyer [SY-95-02] Desc: Flowchart on X3T10 procedures X3T10/95-158R0 Date: 3/2/95 Author: G. Penokie [SY-95-02] Desc: IBM Patent Policy for SCC Date: 3/8/95 Author: L. Sloan [SY-95-02] X3T10/95-159R0 Desc: Distributed SCSI I/O: Status and New Issues X3T10/95-160R0 Date: 3/8/95 Author: L. Sloan [SY-95-02] Desc: Public Review Comment #2 on SAM (X3.270) X3T10/95-161R0 Date: 3/8/95 Author: G. Houlder [SY-95-02] Desc: Minutes of XOR Study Group X3T10/95-162R1 Date: 3/8/95 Author: Lamers/Milligan [SY-95-02] Desc: Minutes of ATA Working Group - 3/8-9/95 X3T10/95-163R0 Date: 3/9/95 Author: J. Chen [SY-95-02] Desc: Comments on ATA-2 X3T10/95-164R0 Date: 3/9/95 Author: T. Pione [SY-95-02] Desc: Worldwide Industry Hardware Support X3T10/95-165R0 Date: 3/9/95 Author: T. Pione [SY-95-02] Desc: ATAPI Test Program X3T10/95-166R0 Date: 3/9/95 Author: J. Lohmeyer [SY-95-02] Desc: ATA-2 Forwarding Letter Ballot Results X3T10/95-167R0 Date: 3/9/95 Author: C. Patton [SY-95-02] Desc: ATA Electrical Simulation Plots X3T10/95-168R0 Date: 3/9/95 Author: J. McGrath [SY-95-02] Desc: ATA Electrical Issues with 2 Ports X3T10/95-168R1 Date: 3/9/95 Author: J. McGrath [SY-95-03] Desc: ATA LIne Termination Issues X3T10/95-168R2 Date: 7/10/95 Author: J. McGrath [SY-95-04] Desc: ATA Signal Integrity Issues X3T10/95-169R0 Date: 3/9/95 Author: R. Roberts [SY-95-02] Desc: Minutes of MMC Working Group - 3/8/95 X3T10/95-170R0 Date: 3/9/95 Author: Weber/Lohmeyer [SY-95-02] Desc: SCSI Working Group Minutes - 3/95 X3T10/95-171R0 Date: 3/9/95 Author: Weber/Lohmever [SY-95-02] Desc: Minutes of X3T10 Plenary Meeting #8 Date: 3/9/95 Author: Weber/Lohmeyer [SY-95-02] X3T10/95-172R0 Desc: SPI Futures Working Group Minutes - 3/95 X3T10/95-173R0 Date: 3/9/95 Author: D. Pak [SY-95-02] Desc: P1285 Liaison Report - 3/95 X3T10/95-174R0 Date: 3/9/95 Author: B. Dallas [SY-95-02] Desc: Minutes of the CAM-3 Working Group - 3/95 X3T10/95-175R0 Date: 3/17/95 Author: P. Johansson [SY-95-02] Desc: Editorial Correction to SPI rev 15 X3T10/95-176R0 Date: 3/17/95 Author: L. Barra [SY-95-02] Desc: Public Review Comment on FCP (X3.269) X3T10/95-177R0 Date: 3/17/95 Author: L. Barra [SY-95-02] Desc: Public Review Comment on SAM (X3.270) X3T10/95-178R0 Date: 3/17/95 Author: K. Gingerich [SY-95-02] Desc: Comments on Fast-20

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X3T10/95-179R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: 3.3 Volt SCSI Termpower X3T10/95-180R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: SCSI-3 SPI Low Voltage X3T10/95-181R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: Low Power SCSI X3T10/95-182R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: proposed working draft SPI-LP X3T10/95-183R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: Project Proposal for SPI-LV Standard X3T10/95-184R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02] Desc: SPI Hot Swapping/Plugging Date: 3/20/95 Author: T. Lappin [SY-95-02] X3T10/95-185R0 Desc: Minutes of the SSC Meeting - 03/95 X3T10/95-186R0 Date: 3/25/95 Author: C. Monia [SY-95-02] Desc: Public Review Comment #1 on SBP (X3.268) X3T10/95-187R0 Date: 3/25/95 Author: T. Wickland [SY-95-02] Desc: Public Review Comment #3 on SAM (X3.270) X3T10/95-188R0 Date: 3/25/95 Author: G. Witalka [SY-95-02] Desc: Public Review Comment #2 on FCP (X3.269) X3T10/95-189R0 Date: 3/25/95 Author: C. Monia [SY-95-02] Desc: Public Review Comment #3 on FCP (X3.269) X3T10/95-190R0 Date: 3/25/95 Author: L. Sloan [SY-95-02] Desc: Public Review Comment #4 on FCP (X3.269) X3T10/95-191R0 Date: 3/25/95 Author: G. Stephens [SY-95-02] Desc: Public Review Comment #5 on FCP (X3.269) X3T10/95-192R0 Date: 3/25/95 Author: S. Smyers [SY-95-02] Desc: Public Review Comment #2 on SBP (X3.268) X3T10/95-193R0 Date: 3/30/95 Author: L. Sloan [SY-95-03] Desc: Public Review Comment #n on CAM (X.232) X3T10/95-194R0 Date: 4/4/95 Author: P. McLean [] Desc: Overlap Proposal X3T10/95-194R1 Date: 4/20/95 Author: P. McLean [SY-95-03] Desc: Overlap Proposal X3T10/95-195R0 Date: 4/8/95 Author: R. Roberts [SY-95-03] Desc: Minutes of MMC Working Group - 3/29-30/95 Date: 4/11/95 Author: Lamers/Lohmeyer [SY-95-03] X3T10/95-196R0 Desc: Minutes of Server SCSI Working Group - 4/10/95 X3T10/95-197R0 Date: 4/11/95 Author: K. Gingerich [SY-95-03] Desc: Power Dissipation Analysis X3T10/95-198R0 Date: 4/12/95 Author: Lamers/Milligan [] Desc: Minutes of ATA Working Group - 4/11-13/95 Date: 4/18/95 Author: Lamers/Milligan [SY-95-03] X3T10/95-198R1 Desc: Minutes of ATA Working Group - 4/11-13/95 X3T10/95-199R0 Date: 4/12/95 Author: T. Hanan [SY-95-03] Desc: Driver Current for ATA-3 X3T10/95-200R0 Date: 4/13/95 Author: H. Landis [SY-95-04] Desc: Default Set Multiple Value X3T10/95-201R0 Date: 3/21/95 Author: Freeman [SY-95-03] Desc: Request for denisty codes and medium type codes for QIC Date: 4/25/95 Author: C. Monia [SY-95-03] X3T10/95-202R1 Desc: Proposed Responses to SAM Public Review Comments X3T10/95-203R0 Date: 4/26/95 Author: C. Binford [SY-95-03] Desc: Proposal to handle unconfirmed FCP_RSP X3T10/95-204R0 Date: 4/27/95 Author: R. Snively [SY-95-03] Desc: Response to Public Review Comments on FCP X3T10/95-204R2 Date: 4/27/95 Author: R. Snively [SY-95-04] Desc: Response to Public Review Comments on FCP Date: 5/3/95 Author: P. McLean [SY-95-03] X3T10/95-205R0 Desc: ATA-3 issues with ATAPI X3T10/95-206R0 Date: 5/3/95 Author: B. Dallas [SY-95-03] Desc: Response to Public Review Comments on CAM X3T10/95-207R0 Date: 5/8/95 Author: J. Lohmeyer [SY-95-03] Desc: Project Proposal for SPI-2 Standard X3T10/95-207R1 Date: 5/8/95 Author: J. Lohmeyer [SY-95-04] Desc: Project Proposal for SPI-2 Standard X3T10/95-208R0 Date: 5/8/95 Author: E. Gardner [SY-95-03] Desc: FCP or DDA Profile use of Disconnect-Reconnect Mode Page

Date: 5/8/95 Author: E. Gardner [SY-95-04]

X3T10/95-208R1

Desc: FCP or DDA Profile use of Disconnect-Reconnect Mode Page X3T10/95-208R2 Date: 5/8/95 Author: E. Gardner [SY-95-05] Desc: FCP or DDA Profile use of Disconnect-Reconnect Mode Page X3T10/95-209R0 Date: 5/8/95 Author: R. Weber [SY-95-03] Desc: Minutes of SPI Futures Study Group - 5/95 X3T10/95-210R0 Date: 5/8/95 Author: R. Weber [SY-95-03] Desc: Minutes of SCSI Working Group - 5/95 X3T10/95-210R0 Date: 5/8/95 Author: R. Weber [SY-95-03] Desc: Minutes of SCSI Working Group - 5/95 X3T10/95-211R0 Date: 5/8/95 Author: Weber/Lohmeyer [SY-95-03] Desc: Minutes of X3T10 Plenary Meeting #9 X3T10/95-212R0 Date: 5/9/95 Author: C. Binford [SY-95-03] Desc: Public Review Comment on SCC X3T10/95-213R0 Date: 5/9/95 Author: B. Ham [SY-95-03] Desc: Project Proposal for Expanded System Physical Configuration (ESPC) Technical Report Y3T10/95-213R1 Date: 5/9/95 Author: B. Ham [SY-95-04] Desc: Project Proposal for Expanded System Physical Configuration (ESPC) Technical Report Normal Section Date: 5/10/95 Author: Lamers/Milligan [SY-95-03] Desc: Minutes of ATA Working Group - 5/10-11/95 X3T10/95-215R0 Date: 5/11/95 Author: R. Roberts [SY-95-03] Desc: Minutes of MMC Working Group - 5/10/95 X3T10/95-216R0 Date: 5/11/95 Author: D. Allan [SY-95-03] Desc: Report on SFF-8020 Ballot X3T10/95-217R0 Date: 5/11/95 Author: S. Sicola [SY-95-03] Desc: Fault tolerant configurations for SCSI X3T10/95-218R0 Date: 5/11/95 Author: G. Frazier [SY-95-03] Desc: New Error Notification Log Page Date: 5/11/95 Author: J. McGrath [] X3T10/95-219R0 Desc: Project Proposal for ATA+PI Standard X3T10/95-219R1 Date: 5/11/95 Author: J. McGrath [SY-95-03] Desc: Project Proposal for ATA+PI Standard X3T10/95-219R2 Date: 5/11/95 Author: J. McGrath [sy-95-04] Desc: Project Proposal for ATA+PI Standard X3T10/95-220R0 Date: 5/13/95 Author: G. Penokie [SY-95-03] Desc: Response to public review comments on SCC Date: 5/13/95 Author: R. Weber [SY-95-03] X3T10/95-221R0 Desc: Vendor specific mode page codes for tape X3T10/95-221R1 Date: 5/13/95 Author: R. Weber [SY-95-04] Desc: Vendor specific mode page codes for tape X3T10/95-222R0 Date: 5/13/95 Author: R. Weber [SY-95-03] Desc: Power condition mode page code X3T10/95-222R2 Date: 5/13/95 Author: R. Weber [SY-95-04] Desc: Power condition mode page code X3T10/95-223R0 Date: 5/13/95 Author: R. Roberts [SY-95-03] Desc: MMC Functional Requirements X3T10/95-224R0 Date: 5/13/95 Author: T. Lappin [SY-95-03] Desc: Report Density Support X3T10/95-224R5 Date: 7/25/95 Author: T. Lappin [SY-95-04] Desc: Report Density Support X3T10/95-225R0 Date: 5/13/95 Author: R. Cummings [SY-95-03] Desc: X3T11 Change Control Procedure X3T10/95-226R0 Date: 5/13/95 Author: E. Oetting [SY-95-03] Desc: Minutes of SMC/SCC Working Group - 5/95 Date: 5/13/95 Author: D. Penman [SY-95-04] X3T10/95-227R0 Desc: Minutes of System Issues Study Group - 5/95 Date: 5/13/95 Author: R. Snively [SY-95-03] X3T10/95-228R0 Desc: Project Proposal for FCP-2 Standard X3T10/95-228R1 Date: 5/13/95 Author: R. Snively [SY-95-04] Desc: Project Proposal for FCP-2 Standard X3T10/95-229R0 Date: 5/13/95 Author: R. Snively [SY-95-03] Desc: Proposal for Persistent Reserve X3T10/95-229R2 Date: 5/13/95 Author: R. Snively [SY-95-05] Desc: Proposal for Persistent Reserve X3T10/95-230R0 Date: 5/13/95 Author: G. Milligan [SY-95-03] Desc: Memorandum of Understanding X3T10/95-231R0 Date: 5/13/95 Author: G. Milligan [SY-95-03]

X3T10/95-343r2

Minutes of X3T10 Plenary Meeting #12 in Palm Springs, CA

Desc: TAG Annual Report X3T10/95-232R0 Date: 5/13/95 Author: J. Elrod [SY-95-03] Desc: Minutes of XOR Study Group - 5/95 X3T10/95-233R0 Date: 5/13/95 Author: G. Scherer [SY-95-03] Desc: Public Review Comment # on FCP (from Emulex) X3T10/95-234R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-PH1 Standard X3T10/95-234R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-PH1 Standard X3T10/95-235R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-PH2 Standard X3T10/95-235R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-PH2 Standard X3T10/95-236R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-TL1 Standard X3T10/95-236R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-TL1 Standard X3T10/95-237R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-TL2 Standard X3T10/95-237R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-TL2 Standard X3T10/95-238R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-S2P Standard X3T10/95-238R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-S2P Standard X3T10/95-239R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03] Desc: Project Proposal for SSA-S3P Standard X3T10/95-239R1 Date: 5/13/95 Author: Scheible/Lamers [SY-95-04] Desc: Project Proposal for SSA-S3P Standard Date: 5/22/95 Author: J. Lohmeyer [SY-95-03] X3T10/95-240R0 Desc: SCAM Mode Page Proposal X3T10/95-241R0 Date: 5/22/95 Author: J. Urban [SY-95-03] Desc: Public Review Comment #1 on SCC X3T10/95-242R0 Date: 7/27/95 Author: T. Wicklund [SY-95-03] Desc: Public Review Comment #3 on SCC Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] X3T10/95-243R0 Desc: Response to Public Review Comment #1 on CAM X3T10/95-244R0 Date: 6/2/95 Author: J. Lohmever [SY-95-04] Desc: Response to Public Review Comment #1 on SAM X3T10/95-245R0 Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #2 on SAM X3T10/95-246R0 Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #3 on SAM Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] X3T10/95-247R0 Desc: Response to Public Review Comment #1 on FCP X3T10/95-248R0 Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #2 on FCP X3T10/95-249R0 Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #3 on FCP X3T10/95-250R0 Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to Public Review Comment #4 on FCP Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] X3T10/95-251R0 Desc: Response to Public Review Comment #5 on FCP Date: 6/2/95 Author: J. Lohmeyer [SY-95-04] X3T10/95-252R0 Desc: Response to Public Review Comment #6 on FCE X3T10/95-253R1 Date: 6/2/95 Author: R. Weber [SY-95-04] Desc: Proposed REPORT LUNS command X3T10/95-253R3 Date: 6/2/95 Author: R. Weber [SY-95-05] Desc: Proposed REPORT LUNS command X3T10/95-254R0 Date: 6/2/95 Author: P. McLean [SY-95-04] Desc: Proposal for ATA+PI document X3T10/95-255R0 Date: 6/16/95 Author: R. Roberts [SY-95-04] Desc: Minutes of MMC meeting X3T10/95-256R0 Date: 6/22/95 Author: Lamers/Milligan [SY-95-04] Desc: Minutes of ATA Working Group - 6/22-23/95 X3T10/95-257R0 Date: 6/22/95 Author: J. McGrath [SY-95-04] Desc: Comments on WD Overlap Proposal

Date: 6/22/95 Author: D. Worrell []

X3T10/95-258R0

Desc: Overlap Features X3T10/95-258R1 Date: 7/7/95 Author: P. McLean [SY-95-04] Desc: Overlap Features X3T10/95-258R3 Date: 7/7/95 Author: P. McLean [SY-95-05] Desc: ATA Overlap Proposal X3T10/95-259R0 Date: 6/22/95 Author: D. Worrell [SY-95-04] Desc: ATA Project Schedule X3T10/95-260R0 Date: 6/26/95 Author: G. Houlder [SY-95-04] Desc: Inadequacy of Number of Blocks in Mode Select/Sense Date: 6/26/95 Author: G. Houlder [SY-95-05] X3T10/95-260R1 Desc: Set Capacity Proposal X3T10/95-261R0 Date: 6/26/95 Author: [] Desc: not used Date: 7/8/95 Author: L. Sloan [SY-95-04] X3T10/95-262R0 Desc: An Update on Distributed I/O at LLNL X3T10/95-263R0 Date: 7/10/95 Author: Weber/Lohmeyer [SY-95-04] Desc: Minutes of the SPI-2 & ESPC Study Group - 07/95 X3T10/95-264R1 Date: 7/10/95 Author: Weber/Lohmeyer [SY-95-04] Desc: Minutes of SCSI Working Group - 07/95 X3T10/95-265R1 Date: 7/10/95 Author: Weber/Lohmeyer [SY-95-04] Desc: Minutes of X3T10 Plenary #10 X3T10/95-266R0 Date: 7/10/95 Author: B. Ham [SY-95-04] Desc: Low Voltage Low Power Differential Interface X3T10/95-267R0 Date: 7/10/95 Author: B. Ham [SY-95-04] Desc: SPI-2 Framework X3T10/95-268R0 Date: 7/10/95 Author: EIA/TIA-644 [SY-95-04] Desc: Electrical Characteristics of LVDS Signalling Date: 7/10/95 Author: P. Aloisi [] X3T10/95-269R0 Desc: SCSI SPI-2 Low Voltage Differential X3T10/95-269R1 Date: 7/10/95 Author: P. Aloisi [SY-95-04] Desc: SCSI SPI-2 Low Voltage Differential Date: 7/10/95 Author: P. Aloisi [SY-95-05] X3T10/95-269R5 Desc: SCSI SPI-2 Low Voltage Differential X3T10/95-270R0 Date: 7/10/95 Author: P. Aloisi [SY-95-04] Desc: Presentation on SPI-2 LVDS Bus X3T10/95-271R0 Date: 7/10/95 Author: P. Aloisi [SY-95-04] Desc: Presentation on Skew and Margin for SPI-2 X3T10/95-272R0 Date: 7/13/95 Author: P. Aloisi [SY-95-04] Desc: Power Distribution X3T10/95-273R0 Date: 7/13/95 Author: S. Sicola [SY-95-05] Desc: Presentation on Fault Tolerant Controller X3T10/95-274R0 Date: 7/13/95 Author: S. Sicola [SY-95-04] Desc: Minutes of the High Availability Study Group X3T10/95-275R1 Date: 7/13/95 Author: R. Weber [SY-95-04] Desc: Minutes of the CAM Working Group - 7/95 Date: 7/13/95 Author: P. Walford [SY-95-04] X3T10/95-276R0 Desc: Fibre Channel Use of the IEEE Global Identifier X3T10/95-277R0 Date: 7/13/95 Author: R. Roberts [SY-95-04] Desc: Response to Public Review #1 comments on SBP Date: 7/13/95 Author: R. Snively [SY-95-04] X3T10/95-278R0 Desc: Response to Letter Ballot comments on FCP-2 project proposal X3T10/95-279R0 Date: 7/13/95 Author: D. Pak [SY-95-04] Desc: Liaison Report from P1285 - 7/95 X3T10/95-280R0 Date: 7/13/95 Author: J. Lohmeyer [SY-95-04] Desc: Response to letter ballot comments on EPI and SPI-2 project proposals Date: 7/13/95 Author: G. Milligan [SY-95-04] X3T10/95-281R0 Desc: Response to letter ballot comments on ATA+PI project proposa X3T10/95-282R0 Date: 7/13/95 Author: G. Milligan [SY-95-04] Desc: Response to letter ballot comments on formation of a new TC for ATA X3T10/95-283R0 Date: 7/13/95 Author: K. Hallam [SY-95-04] Desc: Response to letter ballot comments on the SSA project proposals X3T10/95-284R0 Date: 7/13/95 Author: E. Oetting [SY-95-04] Desc: Minutes of SMC/SCC Working Group Meeting - 7/95 X3T10/95-285R0 Date: 7/13/95 Author: [] Desc: not used X3T10/95-286R0 Date: 7/13/95 Author: R. Roberts [SY-95-04]

Desc: Minutes of MMC Working Group Meeting - 7/95 X3T10/95-287R0 Date: 7/13/95 Author: P. Entzel [SY-95-04] Desc: SSC Table 26 Density Codes X3T10/95-288R0 Date: 7/13/95 Author: P. Entzel [SY-95-04] Desc: Comments on SSC draft X3T10/95-289R0 Date: 7/13/95 Author: R. Cummings [SY-95-04] Desc: X3B5 Media Standards X3T10/95-290R0 Date: 7/13/95 Author: G. Milligan [SY-95-04] Desc: Letter regarding Seagate Patent Position Date: 7/13/95 Author: D. Penman [SY-95-04] X3T10/95-291R0 Desc: Minutes of Systems Issues Study Group - 7/95 Date: 7/13/95 Author: D. Allan [SY-95-04] X3T10/95-292R0 Desc: Liaison Report from SFF - 7/95 X3T10/95-293R0 Date: 7/18/95 Author: Lamers/Milligan [SY-95-04] Desc: Minutes of ATA Working Group - 7/18-20/95 X3T10/95-294R0 Date: 7/18/95 Author: J. Masiewicz [SY-95-04] Desc: Proposed Set Feature Command Change X3T10/95-295R0 Date: 7/20/95 Author: B. Ham [SY-95-04] Desc: Active Negation Table Date: 7/20/95 Author: T. Hanan [SY-95-04] X3T10/95-296R0 Desc: Mode 3 Synchronous DMA Proposal X3T10/95-297R0 Date: 7/24/95 Author: C. Stevens [SY-95-04] Desc: Presentation on BIOS Boot Specification Date: 7/24/95 Author: D. Penman [SY-95-04] X3T10/95-298R0 Desc: Project Proposal for Boot Considerations for Devices Greater Than 8GB Date: 7/24/95 Author: P. Johansson [SY-95-04] X3T10/95-299R0 Desc: Comment on ATA-3 Project Proposal X3T10/95-300R0 Date: 7/24/95 Author: D. Penman [SY-95-04] Desc: Minutes of System Issues Study Group - 7/21/95 Date: 7/27/95 Author: Hanan/Worrell [SY-95-04] X3T10/95-301R0 Desc: Presentation on Overlap Operations in ATA Date: 7/27/95 Author: J. McGrath [SY-95-04] X3T10/95-302R0 Desc: Presentation on Overlap Operations in IDE X3T10/95-303R0 Date: 7/27/95 Author: D. Penman [SY-95-04] Desc: Minutes of System Issues Study Group - 3/95 Date: 8/3/95 Author: A. Stone [SY-95-05] X3T10/95-304R0 Desc: Log page and parameters for SCSI-3 SSC X3T10/95-305R0 Date: 8/7/95 Author: R. Roberts [SY-95-05] Desc: Minutes of MMC Working Group - 8/2-3/95 Date: 8/8/95 Author: P. McLean [SY-95-05] X3T10/95-306R0 Desc: Propossed modifications to Security Mode X3T10/95-307R0 Date: 8/15/95 Author: B. Ham [SY-95-05] Desc: Proposal for SPI-2 Electrical Interface X3T10/95-308R0 Date: 8/15/95 Author: D. McCall [SY-95-06] Desc: Fast 40 Proposal X3T10/95-309R0 Date: 8/15/95 Author: J. Lohmeyer [SY-95-05] Desc: Minutes of SPI-2 LVDS Study Group Meeting - 8/14/95 X3T10/95-310R0 Date: 8/25/95 Author: Lamers/Milligan [SY-95-05] Desc: Minutes of ATA Working Group - 8/22-25/95 X3T10/95-311R0 Date: 9/6/95 Author: P. Johansson [SY-95-05] Desc: Project Proposal for a New X3 Standard-SCSI-3 Serial Bus Protocol 2 (SBP-2) X3T10/95-312R0 Date: 9/7/95 Author: S. Sicola [SY-95-05] Desc: Proposed Controller Failover Profile Date: 9/7/95 Author: S. Sicola [SY-95-05] X3T10/95-313R0 Desc: High Availability Study Group Report for September, 1995 X3T10/95-314R0 Date: 9/8/95 Author: D. Hagerman [SY-95-05] Desc: SCSI-3 High Availability Device Profile X3T10/95-315R0 Date: 9/11/95 Author: B. Ham [SY-95-05] Desc: Presentation on LVDS preliminary testing X3T10/95-316R0 Date: 9/11/95 Author: Lamers/Lohmeyer [SY-95-05] Desc: Minutes of SPI-2 Working Group X3T10/95-317R0 Date: 9/11/95 Author: D. McCall [SY-95-05] Desc: Fast-40 Proposal to Reduce Cable Impedance X3T10/95-318R0 Date: 9/11/95 Author: A. Stone [SY-95-05] Desc: Proposal for Software Write Protect X3T10/95-319R1 Date: 9/12/95 Author: Weber/Lohmeyer [SY-95-05] Desc: Minutes of SCSI Working Group - September '95

X3T10/95-343r2

Minutes of X3T10 Plenary Meeting #12 in Palm Springs, CA

X3T10/95-320R0 Date: 9/12/95 Author: B. Ham [SY-95-06] Desc: Proposed working draft Enhanced Physical Interface Technical Report (EPI) Date: 9/13/95 Author: D. Penman [SY-95-05] X3T10/95-321R1 Desc: PC Boot Considerations > 8 GB Date: 9/13/95 Author: R. Snively [SY-95-06] X3T10/95-322R0 Desc: Persistant Reserve Presentation X3T10/95-323R0 Date: 9/13/95 Author: G. Milligan [SY-95-05] Desc: Comments on Information Exceptions Control Page X3T10/95-324R1 Date: 9/19/95 Author: R. Snively [SY-95-05] Desc: Enclosure Services X3T10/95-325R1 Date: 9/20/95 Author: Weber/Lohmeyer [SY-95-05] Desc: Minutes of X3T10 Plenary # X3T10/95-326R0 Date: 9/20/95 Author: E. Oetting [SY-95-05] Desc: Minutes of SSC/SMC Working Group - 9/95 X3T10/95-327R0 Date: 9/20/95 Author: R. Roberts [SY-95-05] Desc: Minutes of MMC Working Group - 9/95 X3T10/95-328R1 Date: 9/20/95 Author: Lamers/Milligan [SY-95-05] Desc: Minutes of ATA Working Group - 9/19-22/95 Date: 9/20/95 Author: D. Colegrove [SY-95-05] X3T10/95-329R0 Desc: ATA Security Command Implementation Date: 9/20/95 Author: P. McLean [SY-95-05] X3T10/95-330R0 Desc: Flowcharts for ATA-3 X3T10/95-331R0 Date: 9/20/95 Author: P. Mercer [SY-95-05] Desc: MC & MCR Error Bit Descriptions in ATA-3 Date: 9/21/95 Author: M. Yokoyama [SY-95-05] X3T10/95-332R0 Desc: Device Capability Page for CD devices X3T10/95-333R0 Date: 9/28/95 Author: C. Monia [SY-95-05] Desc: Project Proposal for SCSI-3 Archtecture Model - 2 (SAM-2) X3T10/95-333R1 Date: 9/28/95 Author: C. Monia [SY-95-06] Desc: Project Proposal for SCSI-3 Archtecture Model - 2 (SAM-2) Date: 9/29/95 Author: P. Aloisi [SY-95-05] X3T10/95-334R0 Desc: SPI-2 LVDS Driver Tests X3T10/95-335R0 Date: 9/29/95 Author: B. Ham [SY-95-05] Desc: Fast 40/80 LVDS Performance Using SCSI Interconnect X3T10/95-336R0 Date: 10/5/95 Author: T. Spitler [SY-95-06] Desc: Cross-talk testing X3T10/95-337R0 Date: 10/14/95 Author: J. Lohmeyer [SY-95-06] Desc: Minutes of SPI-2 Working Group - 10/13/95 X3T10/95-338R0 Date: 10/17/95 Author: Lamers/Milligan [SY-95-06] Desc: Minutes of ATA Working Group - 10/17-19/95 X3T10/95-339R0 Date: 10/19/95 Author: Z. Daggett [SY-95-06] Desc: Annex D SPI errors X3T10/95-340R0 Date: 11/7/95 Author: Weber/Lohmever [SY-95-06] Desc: Minutes of SPI-2 Study Group - 11/95 X3T10/95-341R0 Date: 11/7/95 Author: Weber/Lohmeyer [SY-95-06] Desc: Minutes of EPI Study Group - 11/95 X3T10/95-342R0 Date: 11/7/95 Author: Weber/Lohmeyer [SY-95-06] Desc: Minutes of SCSI Working Group - 11/95 X3T10/95-343R0 Date: 11/7/95 Author: Weber/Lohmeyer [SY-95-06] Desc: Minutes of X3T10 Plenary Meeting #12 X3T10/95-344R0 Date: 11/7/95 Author: G. Penokie [SY-95-06] Desc: Change to SCSI-3 ASC X3T10/95-345R0 Date: 11/7/95 Author: G. Penokie [SY-95-06] Desc: Additional SCSI Qualifiers Date: 11/7/95 Author: F. Gasparik [SY-95-06] X3T10/95-346R0 Desc: LVDS Common Mode Specifications X3T10/95-347R0 Date: 11/7/95 Author: D. Wallace [SY-95-06] Desc: Differential IV Curve X3T10/95-348R0 Date: 11/7/95 Author: E. Gardner [SY-95-06] Desc: FCP-2 Disconnect-Reconnect Page X3T10/95-349R0 Date: 11/7/95 Author: G. Milligan [SY-95-06] Desc: Version Control in SCSI X3T10/95-350R0 Date: 11/8/95 Author: R. Roberts [SY-95-06] Desc: Minutes of MMC Working Group - 11/95 X3T10/95-351R0 Date: 11/8/95 Author: C. Monia [SY-95-06] Desc: Aborting Untagged Tasks Date: 11/8/95 Author: C. Monia [SY-95-06] X3T10/95-352R0 Desc: Out of Order Command Execution

X3T10/95-353R0 Date: 11/8/95 Author: L. Sloan [SY-95-06] Desc: Protected Persistent Reservation X3T10/95-354R0 Date: 11/8/95 Author: B. Dallas [SY-95-06] Desc: Minutes of CAM Working Group - 11/95 Date: 11/8/95 Author: G. Houlder [SY-95-06] X3T10/95-355R0 Desc: Immediate Bit validation with FOV X3T10/95-356R0 Date: 11/8/95 Author: L. Lamers [SY-95-06] Desc: SPI Defects and Clarifications X3T10/95-357R0 Date: 11/8/95 Author: S. Sicola [SY-95-06] Desc: SCSI-3 Fault Tolerant Controller Confguration X3T10/95-358R0 Date: 11/8/95 Author: S. Sicola [SY-95-06] Desc: Presentation on Controller Failover Profile X3T10/95-359R0 Date: 11/8/95 Author: T. Lappin [SY-95-06] Desc: Minutes of SCC Working Group - 11/95 X3T10/95-360R0 Date: 11/8/95 Author: J. Lohmeyer [SY-95-06] Desc: OUI Management Proposal X3T10/95-361R0 Date: 11/9/95 Author: L. Lamers [SY-95-06] Desc: Submitting Documents Electronically X3T10/95-362R0 Date: 11/9/95 Author: P. Aloisi [SY-95-06] Desc: SPI-2 Status Report X3T10/95-363R0 Date: 11/10/95 Author: D. Uber [SY-95-06] Desc: Terminator Mismatch Problem X3T10/95-364R0 Date: 11/14/95 Author: C. Monia [SY-95-06] Desc: Proposal to Change SPC Status From Working Draft to Draft Standard

X3T10/95-365R0 Date: 11/15/95 Author: D. Allan [SY-95-06] Desc: IPF Fees