

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 #9
Harrisburg, PA -- May 11, 1995

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Results of Meeting

1. Opening Remarks

John Lohmeyer, the X3T10 Chair, called the meeting to order at 1:00 p.m., Thursday May 11, 1995. He thanked Charles Brill of AMP, Inc. for arranging and 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 changes:

- 10.8 Initiator-controlled Write Protect (95-134) [Lappin]
- 10.9 Medium Partition Page (1-4) enhancements (95-152r3) [Lappin]
- 10.10 ATA+PI Project Proposal [Milligan]
- 10.11 New TC [Milligan]
- 10.12 Project Proposals (SPI-2, ESPC, SSA, ...)
- 10.13 New "Last n deferred error notifications page" (95-218r0) [Frazier/Penokie]
- 11.1 Approval of MOU
- 11.2 Instructions to the Delegation

The agenda was approved with the above additions and changes.

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 11 people from 7 organizations informing them that their membership was in jeopardy due to non-attendance (see 95-009r0) and that their membership would be terminated if they did not attend this meeting. (Somewhat unusually, 5 of the 7 had been in jeopardy last time.) All organizations were represented at this meeting except National Semiconductor. Their principal member will be changed to observer status.

The following organizations re-joined X3T10 at the meeting: Eastman Kodak and Panasonic.

The X3T10 membership is now at 59 organizations up from 58 organizations last time. 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 - March Meeting Newport Beach, CA (X3T10/95-171r1)

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.

Larry Lamers requested that all documents for the next mailing be in his hands by noon on Thursday May 25, 1995. Documents received after this date 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.

In keeping with the X3T10 committee's new efforts for electronic document filing and distribution, Larry requested that electronic copies of all documents be made available to him. The electronic copies can be sent directly to Larry. Or, the electronic document can be placed on the SCSI BBS.

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.

John announced the creation of the X3 WWW home page; <http://www.x3.org/>

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 has not responded to the letter he sent as a result of the March meeting.

Since the last meeting, the Chair received an email from Mr. Totani of Toshiba advising him that patent 5,375,243, "Hard Disk Password Security System" assigned to Compaq Computer Corporation, may relate to the secure mode discussions of the ATA working group. Mr. Totani's email says the claims are "completely the same as current IBM's password implementation. It has 2 level passwords and erase commands (WIPE DATA)." John Lohmeyer accepted an action item to send a letter to Compaq similar to the one Gene Milligan had drafted for him to send to Micropolis.

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

- 62) Larry Lamers will generate the SCSI-2 responses document for distribution to ISO via the IR. *Complete.*
- 63) Larry Lamers will prepare a final ISO version of SCSI-2. *Complete.*
- 71) John Lohmeyer will forward the revised GPP to X3 for further processing. *Complete.*
- 74) John Lohmeyer will write a letter to Micropolis regarding the XOR command set and possible patent issues. *Complete.*
- 75) Steve Finch will prepare ATA-2 revision 3 based on the approved responses to letter ballot comments. *Complete.*
- 76) John Lohmeyer will forward ATA-2 revision 3 to X3 for further processing in first public review. *Complete.*
- 77) Larry Lamers will prepare SPI revision 15a. *Complete.*
- 78) John Lohmeyer will forward SPI 15a to X3 for further processing in second public review. *Complete.*
- 79) Gene Milligan will prepare revision 2 of 94-198 (the X3T10 Policies and Procedures document) . *Complete.*
- 80) John Lohmeyer will forward 94-198r2 to X3 for review and additional processing. *Complete.*
- 81) Gene Milligan will submit project proposals for SC25 new work items to achieve ISO/IEC publication of the following X3T10 documents: SCSI-3 FCP, SCSI-3 SAM, SCSI-3 SBP, SCSI-3 SSC, SCSI-3 SPI, and FAST-20. *Complete*
- 82) Larry Lamers will include the X3T11 change control procedure in the next X3T10 mailing. *Carry over.*
- 83) John Lohmeyer took an action item to deal with IEEE regarding the lack of liaison from P1285 to X3T10 with respect to the formation of the ballot pool for P1285 (based on the Plenary discussion of this topic) . *Complete.*
- 84) George Penokie will prepare a document (probably a technical report) describing the SPI fairness algorithm. *Carry over*

85) John Lohmeyer will forward SCSI-3 Fast-20 Rev 6 to X3 for first public review. *Complete.*

8. Subgroup and/or Project Status Reports

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

John Lohmeyer said that he and the other X3T1x chairs had attended the OMC meeting the previous week. He also 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.

8.2 X3T10.1 Task Group Report

Ken noted that this is the last co-located meeting with X3T10.1 and X3T10. The working group met 4/24-4/26 Denver, CO. The X3T10.1 Plenary met 5/9/95 Harrisburg. There were 23 principle members and 13 people attending.

The Plenary approved recommendations of Denver WG:

Draft for SSA-TL1, (989D) to Rev. 5 (L. Lamers)

Draft for SSA-S2P, (1121TR) to Rev. 2 (J. Scheible)

X3T10.1 reviewed draft for PH1 (Rev. 4a) (W. Ham). Clarifications and corrections were approved resulting in (r 4b). All 3 updated drafts, (PH1, TL1, S2P) will be in the next mailing.

X3T10.1 reviewed 6 new/revised project requests, approved & fwd to X3T10

X3T10.1

DocNo.	Name	Proj. #
95-134	SSA-PH1 Physical Desc. of 20 MB/s simplex xfr rate	
95-135	SSA-PH2 Physical Desc. of 40 MB/s simplex xfr rate	
95-136	SSA-TL1 Transport Layer, 20 MB/s simplex xfr rate	(989D)
95-137	SSA-TL2 Transport Layer, 40 MB/s simplex xfr rate	
95-138	SSA-S2P ULP, SCSI-2 Mapping	(1121TR)
95-139	SSA-S3P ULP, SCSI-3 Mapping	(1051D)

X3T10.1 authorized working group meetings June 26,27 (Monterey) and study group meeting June 30 (Monterey). X3T10.1 also approved special exception from \$125 limit for Monterey meeting.

X3T10.1 approved the following 12 month meeting schedule, (SSA-Week):

Date	Location	Host	Hotel
June 26	Monterey, CA	Conner	Doubletree
August 28	Ithica, NY	Pathlight	TBA
October 30	Havant, UK	IBM/Xyratex	TBA
December 11	San Jose, CA	VLSI Technology	TBA
February 26	San Jose, CA	Samsung	TBA
April 29	Burlington, VT	IBM	TBA

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

Bill Dallas reported that CAM-1 had finished second public review with one set of comments received (see agenda item 10.1).

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

John reported that the first public review on ATA-2 will run from June 7, 1995 to August 8, 1995.

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

John reported that SPI has passed second public review with no comments received. The X3 approval letter ballot closes June 19, 1995.

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

George reported that there has been no change in the SIP status. He hopes to have a new revision ready for the July meeting.

8.7 Directly-Addressable Device Interface (DADI) Status {Project 964-D} [open]

John Lohmeyer reported that the X3 Letter Ballot to drop this project had closed last week and the project is now closed. It will be removed from subsequent agendas.

Gene Milligan noted that an OMC member suggested that IEEE 1285 should be substituted for DADI.

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

Bill Dallas reported that no one attended the CAM working group meeting. Instead coordination between CAM and the Systems Issues groups were discussed with Duncan Penman. Bill provided some details of how the two efforts might be related.

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

John reported that the X3 approval letter ballot on this technical report closes June 29, 1995.

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

Ron Roberts reported that public review comments have been received from Sony and Digital. Pre-edit comments were also received from the ANSI editor. Ron described plans to have an editors meeting the week of May 15th at Sony. Ron said that a revised document will be ready for the July meetings.

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

Bob Snively noted that substantial discussion about the FCP public review comments and responses occurred at the working group (minutes 95-210). Bob reviewed the highlights of the public review comments and proposed responses.

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

Charles reported that the SAM public review comments and proposed responses were reviewed and revised in the SCSI working group (minutes 95-210). Charles described the SAM comments and responses document (95-202).

Charles reported that a revised copy of SAM will be mailed at least two weeks prior to the July meetings. The intent is to take a forwarding vote (for second public review) at the July meeting.

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

Ralph reported that SPC revision 6 was in the last mailing. That revision was almost ready for a forwarding letter ballot. Then, the working group meeting identified at least three new work items for SPC. Ralph noted that, unless X3T10 decides on a cutoff for forwarding of SPC, the document will never be forwarded.

Ralph described two mode page notices (95-221 and 95-222) that have been distributed on the SCSI Reflector and will be in the next mailing. The mode page problems are too many vendor-specific codes assigned for stream devices and a desire to incorporate the Power Condition mode page in all device types.

Ralph reported that the following changes will be added to the SPC in revision 7. Remove references to SCSI-1 and CCS. Make code values that represent them Reserved for historical uses. Change SCSI-2 and SCSI-3 references to include the words, "the architecture defined by ..." Search for bogus uses of the PORT STATUS command. The table listing commands is known to be wrong. Add a command document column to table 21.

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

Rick reported that SBC revision 1 was somehow omitted from the mailing. However, SBC will be in the next mailing. Rick noted the locations where electronic copies of SBC revision 1 can be obtained. Rick said that SBC revision 2 will be finished soon. Rick described the changes planned for revision 2. Rick asked those present to review the density code tables in SBC and verify that they are correct.

Rick announced that he will be conducting discussions of SBC topics on the SCSI Reflector.

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

Ted Lappin reported that a sparsely attended, but productive joint SSC/SMC meeting was held earlier this week. A proposal to change the way density codes are handled was discussed. The same method may also be applicable to SBC removable media devices. The QIC request for a block of density codes was put on hold. Partition mode pages and soft write protect proposals were approved by the working group.

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

Rick reported that SGC revision 0 will be in the next mailing. He described some desired enhancements to SGC that were discussed in the working group and will be considered for future SGC revisions.

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

Erich reported that, in the joint meeting with SSC earlier this week, extensions to the SMC model to handle groups of devices were discussed. Minor corrections to the SMC document were also discussed. Revision 4 of SMC should be available by the next meeting.

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

George reported the public review period closes May 16th. He anticipated a revision 5a of SCC. He noted that a significant technical hole was resolved in the working group (minutes 95-210).

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

Ron reported that the MMC working group has developed architectural flows for CD-R. The group also is working on a functional requirements document.

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

John reported that the first public review period for Fast-20 is June 7, 1995 to August 8, 1995.

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

Gene Milligan reported that the ATA ad hoc met two times since the last X3T10 meeting.

At the Longmont meeting the group reviewed SFF 8020 revision 2.2 and agreed on which sections of that document should be included in the initial ATAPI draft. A plan was agreed to which included an assembled document for the June working group meeting leading to a target for the X3T10 letter ballot of November 1995 which is also the target for ATA-3.

The group voted that 95-125r2 Dynamic Power Selection be accepted for incorporation into ATA-3. They also voted to accept X3T10/95-199r0 which reduces the minimum drive current from 12 mA to 4 mA for incorporation into ATA-3. In addition they voted to reduce the 2 minute time-out for DRDY to 30 sec. after the BSY bit goes away. Another agreement was to delete the DASP Timing Diagram in favor of the text which did not cause the interpretation problems.

In a liaison role the group voted that the ATA working group requests that the SFF ATAPI not incorporate features for strong overlap and command queuing into SFF-8020 because these will be defined within the ATA project.

The ad hoc recommended that drives be allowed to enable its default optimum set multiple value at power on without the issuance of a SET MULTIPLE command in ATA-3.

At the Harrisburg meeting:

Tom Hanan reported that the ATAPI document is being converted to Word. This will be completed by June 21, 1995. The working group recommend that the ATA-3 and ATAPI projects be combined into a single document and the revised project proposal be subject to a letter ballot at X3T10.

In order to focus on coverage of the ATA arena the ad hoc requested that a new technical committee be formed to address projects in the ATA marketplace.

Dan Colegrove withdrew the proposal for Informational Exception Condition Reporting in favor of SFF-8035. At the moment the content of SFF 8035 has not been proposed by anyone for the ATA standard. Jim McGrath reviewed SFF 8035i Self-monitoring, Analysis and Reporting Technology SFF-8035 is in the public domain and is being distributed for industry awareness.

The ad hoc voted that 95-154r1 the version indication proposal be accepted for incorporation into ATA-3.

The ad hoc recommends that ATA-3 revision 1 be accepted as the current working draft and that a version number be assigned.

Pete McLean reviewed proposal (95-194r1) for command overlap and queuing. Several items were identified for follow up. A principal goal is to minimize the cost of any hardware changes.

The ad hoc recommended that 95-219r0 Project Proposal for ATA+PI be forwarded by X3T10.

For planning purposes the group recommended the following meeting schedule subject to periodic approval by the parent committee:

June 21-22, 1995 at the Crown Sterling Suites in Milpitas, CA hosted by Quantum.
July 18-20, 1995 at the Crown Sterling Suites in Milpitas, CA hosted by Quantum.
August 23-25, 1995 at the Crown Sterling Suites in Milpitas, CA hosted by Quantum.
September 20-22, 1995 at the Crown Sterling Suites in Milpitas, CA hosted by Quantum.
October 18-20, 1995 at the ?? in Irvine, CA hosted by Phoenix Technologies.
November 29-December 1, 1995 - at the ?? in Irvine, CA hosted by Western Digital.

Gene moved that revision 1 of ATA-3 (project 2008) be accepted as the current working document. Steve Finch seconded the motion. The motion was approved unanimously.

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

(Covered in the above agenda item.)

8.23 XOR Commands Study Group [Houlder]

Gene Milligan reported that 94-111r8, the XOR command document, was discussed at the meeting earlier this week. Gene described some specific technical changes in the XOR proposal. One change revised error status delivery from a BUFFER FULL status to a CHECK CONDITION status with a new ASC/ASCQ assignment.

Gene offered to conduct a second XOR tutorial at the July meeting. However, the offer was withdrawn after the motion (below) passed.

Gene moved that 94-111r9 (r8 as amended) be accepted for inclusion in SBC, as recommended by the XOR study group. Ed Gardner seconded the motion. The issues of possibly related patents was discussed briefly. The motion passed 43:0:16.

8.24 Systems Issues Study Group [Penman]

Duncan reported on the recent System Issues study group meeting. Minutes of the meeting are available in 95-227r0.

8.25 SPI Futures Study Group [Aloisi]

Paul Aloisi reported on the activities of the SPI Futures Study Group. Minutes of the meeting are available in 95-209r0.

9. Old Business

9.1 Clarification of international program fee [Allan]

Dal reported that no response has been received to his letter. John noted that the question is on his list for a visit to ITI the next day. [Chair's note: Jean-Paul Emard suggested that the chairs of X3T10, X3T11, and X3T12 send a joint letter to ITI requesting that there only be one IPF for members of one or more of these Technical Committees. He said he would support our request. Roger Cummings, Chair X3T11, is drafting the letter.]

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

Bob Snively requested that this item be addressed at the July meeting.

10. New Business

10.1 Resolution of SCSI CAM (0792-D) Public Review Comments

John reported that the second public review for CAM closed recently. A set of comments was received from LLNL. Bill Dallas reported on his effort to resolve the comments. The comments and resolutions document is 95-206.

Charles Monia moved that X3T10 accept CAM revision 12b, which resolves the public review comments and includes responses for any non-substantive comments received after the public review closed, and forward 12b to X3 for final processing with the statement that 12b resolves all public review comments and contains no

substantive changes from the public review document. Duncan Penman seconded the motion. The motion passed 37:0:0:22.

Bill Dallas took an action item prepare CAM revision 12b. John Lohmeyer took an action item to forward CAM 12b to X3 for final processing.

10.2 Resolution of SCSI-3 SPI (0855-D) Public Review Comments

There were no comments on SPI. The X3 letter ballot for forward SPI to ANSI closes June 19th.

10.3 Resolution of SCSI-3 SBP (0992-D) Public Review Comments

At the request of the editors, action on SBP was deferred until July.

10.4 Resolution of SCSI-3 FCP (0993-D) Public Review Comments

Bob Snively moved that the FCP comments and responses document (95-204r2, revision 1 as further revised by the working group) be accepted as the comments and resolutions for the FCP first public review comments. Gary Watson seconded the motion. John noted that some of the responses resulted in substantive changes. Therefore, a second public review will be required for FCP. The motion passed 37:0:0:22.

John took an action item to ascertain which persons lodging comments must be notified of the comments resolution. John took an action item to notify those who commented on FCP (as per the results of the previous action item) of the comments resolution and their obligation to appeal the resolution within 20 days.

10.5 Resolution of SCSI-3 SAM (0994-D) Public Review Comments

Charles Monia reported that the public review comments and responses will substantially change the SAM. Therefore, a second public review will be required.

Bob Snively moved that the SAM comments and responses document (95-202) be accepted as the comments and resolutions for the SAM first public review comments. Larry Lamers seconded the motion. The motion passed 37:0:0:22.

John took an action item to notify those who commented on SAM of the comments resolution and their obligation to appeal the resolution within 20 days.

10.6 Resolution of SCSI-3 SCC (1047-D) Public Review Comments

John noted that two public review comments have been received. However no actions can be taken because the public review period is still open. George reported that the changes required by the public review are substantive and will require a second public review. [Chair's note: a third public review comment was received from Thomas Wicklund which will be dealt with in July.]

10.7 Request for Blocks of Density Codes and Medium Type Codes for QIC Tape Drives (95-201) [Freeman]

John introduced a request from QIC for blocks of density codes and medium codes for assignment by QIC.

John described the working group proposal that assignment of codes be delayed until the working group decided on proposed changes to the density code and medium code handling methodologies.

In the absence of any objections, John took an action item to write a letter to QIC informing them of the delay in the assignment of blocks of codes to QIC.

10.8 Initiator-controlled Write Protect (95-134) [Lappin]

Ted presented an SSC working group approved proposal that allows software to ask a tape drive to activate its write protect logic. Ted noted that this mechanism cannot override and disable hardware-based write protection. Ted Lappin moved that 95-134r0 be approved for inclusion in SSC. Gary Stephens seconded the motion. The motion passed 28:1:0:30. The negative vote was based on an existing proprietary implementation of a similar feature.

10.9 Medium Partition Page (1-4) enhancements (95-152r3) [Lappin]

Ted presented the SSC working group approved document describing enhancements to the medium partition pages (95-152r3). He described the features of the proposal. Ted moved that 94-152r3 be accepted for inclusion in the SSC. Gary Stephens seconded the motion. The motion passed 33:0:0:26.

10.10 ATA+PI Project Proposal [Milligan]

Gene Milligan described a recommendation resulting from the latest ATA working group meeting. He described a new project proposal that is the combination of the ATA-3 project and the ATAPI project. He noted that approval of the new project proposal would be followed by a request to discontinue the current ATA-3 and ATAPI projects.

Gene also described a proposal by the ATA working group that a new technical committee be formed (by X3) to handle ATA issues.

Gene moved that X3T10 approve forwarding the ATA-PI project proposal to X3 and that X3T10 request the formation of a new Technical Committee to address ATA related projects. He also requested that the question be divided. Steve Finch seconded the motion. The motion was immediately divided into the question of recommending the formation of a new Technical Committee (see next agenda item) and the forwarding of the ATA+PI project proposal. After substantial floor debate, John accepted a request to vote on the two motions by letter ballots (see next agenda item).

10.11 New TC [Milligan]

Gene moved that X3T10 recommend to X3 that a new Technical Committee be formed with responsibility for the ATA projects. Steve Finch seconded the motion. The relationship between the proposed TC and the SCSI command sets was discussed at length. The advantages of and needs for the separate TC were discussed.

Dal requested that the chair conduct the vote by letter ballot. Gene Milligan also requested that a letter ballot vote be conducted. John agreed with the request.

Gene was asked for the results of the working group vote to recommend a new technical committee in the ATA working group. Gene reported that the vote was 9:4.

Larry took an action item to conduct a letter ballot vote on the question of creating a new technical committee for ATA. Larry took an action item to conduct a letter ballot vote to approve the ATA+PI project proposal.

10.12 Project Proposals (SPI-2, ESPC, FCP-2, and SSA-...)

Larry accepted an action item to conduct letter ballots on the SPI-2, ESPC, FCP-2, SSA-S2P, SSA-S3P, SSA-TL1, SSA-TL2, SSA-PH1, SSA-PH2 project proposals.

10.13 New "Last n deferred error notifications page" (95-218r0) [Frazier/Penokie]

George Penokie presented a proposal for addition of a deferred error notifications log page to the SPC. George moved that the proposal (95-218r0, as amended) be accepted for inclusion in the SPC. Bob Snively seconded the motion. The motion passed 13:9.

11. ISO Report [Milligan]

Gene Milligan, the X3T10 International Representative, gave a brief oral report and noted the members of the US delegation to the upcoming ISO/IEC JTC1/SC25/WG4 meeting in Montreal, Canada. These meetings are not open -- only the delegation members may attend.

11.1 Approval of the Memorandum of Understanding

Gene presented a memorandum of understanding that OMC had asked X3T10, X3T11, and X3T12 to generate. The memorandum has the effect of assigning a single technical committee to be the representative for all three on issues not specific to one of the TC's projects.

Gene moved that X3T10 approve the memorandum of understanding subject to the approval of X3T11 and X3T12. Gary Watson seconded the motion. The motion passed 26:0.

11.2 Instructions to the Delegation

John noted that the committee may give specific instructions to the delegation to the June WG4 meeting. No specific instructions were forthcoming.

12. Liaison Reports

12.1 X3T11 Liaison Report [Cummings]

X3T11 met on April 5, 1995 with 82 attenders. One member organization was added (Symbios Logic) and none lost, bringing the membership of X3T11 to 58 organizations.

The results of two separate first Public Reviews were announced. The 1PR for FC-SB (Rev 3.3) closed with comments from only the ANSI editor. The 1PR for FC-AL (Rev 4.4) closed with comments from both the ANSI editor and from FSI (186 comments).

The result of an X3T11 Letter Ballot on forwarding FC-FG Rev 3.2 for further processing and a first Public Review was announced as F42-O1-DNV14. Four of the For ballots included comments.

The approval of four new Projects were announced. The revision to HIPPI-SC was assigned Project 818-R. The HIPPI Serial Technical Report was assigned Project 1117-DT. The 10 bit gigabit interface Technical Report was assigned Project 1118-DT. The third generation Fibre Channel Physical and Signaling interface (FC-PH-3) was assigned Project 1119-D.

Four project proposals were also forwarded for further processing. A proposal for a HIPPI Serial Standard project was forwarded by a vote of F39-O03-DNV16. A proposal for a FC Copper Interface Implementation Guide Technical Report was forwarded by a vote of F39-O00-18DNV. A proposal for a second generation FC Generic Services definition (FC-GS-2) was forwarded by a vote of F40-O00-DNV18 and a proposal for a second generation FC Arbitrated Loop definition (FC-AL-2) was forwarded by a vote of F40-O00-DNV18.

A number of editorial mistakes and typos have been discovered in FC-PH Revision 4.3 over the last year. These items of have been collected into an erratum, and by a vote of F41-O01-DNV16 this erratum was also forwarded for further processing.

The situation regarding the editorship of FC-IG was discussed, but no resolution has yet been achieved. The release of the required tools from IBM is being pursued and a call for a new editor for this project will be issued.

A detailed review of FC-LE Revision 0.90 took place in an Ad Hoc meeting before the Plenary. Two or three major issues were discovered, and resolution is expected by the August X3T11 Plenary.

X3T11 Letter Ballots on HIPPI-FC (Rev. 3.1, the transport of FC frames over HIPPI) and FC-GS (Rev. 1.5, including a basic directory service, a common transport, a native SNMP mapping and a Time Service) were authorized.

A change control procedure which had been discussed since October 1994, and which emphasizes the provision of comments and requests for change in binary form, was adopted unanimously. It was also agreed that the procedure should presently be applied to the FC-AL, FC-FG & FC-GS projects.

The Next X3T11 Plenary meeting will be held on June 14,95 at Raddison Plaza hotel in Rochester, MN. The phone number for the hotel is (507) 281-8000. Horst Truedstedt of IBM Rochester is the host. The following X3T11 Plenary meetings will be held as follows: 8/9 in Tarrytown, NY; 10/4 in Toronto, ON; 12/6 in San Diego, CA (in conjunction with Supercomputing'95).

12.2 SFF Industry Group [Allan]

Dal Allan reported the results of the letter ballots taken by the SFF Committee.

SFF-8020 (ATAPI CD-ROM) was voted as two issues. The vote to forward passed and the vote to approve the technical content failed with many comments against the incorporation of extended overlap capabilities.

The information specification on how to properly handle ATA Termination on local buses passed. The revision of SFF-8004 to accommodate new-generation 2.5" disks passed with one negative comment, requesting that the changes be included in a different specification.

The SCA specifications were discussed at intermediate SSWG's (Specific Subject Working Groups) and new revisions will be discussed at tomorrow's meetings.

12.3 IEEE P1394 [Marazas]

Jerry Marazas, IEEE P1394 Chair, provided the following electronic report:

The P1394 Ballot Resolution Committee (BRC) is holding its final meeting next week, May 16 and 17 at the Sony Zanker Road facility in San Jose, California. Scott Smyers is the host for this meeting. It is my expectation that at the conclusion of this BRC meeting that all necessary work will have been completed toward responding to the Public Review comments issued relative to the P1394 draft standard. I further expect that final edit and clean up work will be completed regarding the P1394 document by the first week in June. At that time, the new draft of the P1394 document will be forwarded to the IEEE office for their administration of the re-circulation ballot. With luck, the re-circulation ballot will be conducted late Summer, or early Fall 1995 with the result of a ratified IEEE standard.

12.4 IEEE P1285 Status [Pak]

Bob Snively reported that the ballot sign-up period was continued, as requested by X3T10. He also noted that the public balloting should be started soon.

12.5 PCMCIA Report [McLean]

Pete reported that the new version of the standard (February 1995) is being shipped at this moment.

12.6 AIIM C21 [Podio]

Ralph Weber and Ken Hallam reported that the AIIM C21 activities have been completed and AIIM has published their document. John agreed to remove this item from the next meeting agenda.

13. Review of Action Items

- 82) Larry Lamers will include the X3T11 change control procedure in the next X3T10 mailing.
- 84) George Penokie will prepare a document (probably a technical report) describing the SPI fairness algorithm.
- 86) John Lohmeyer will write a letter to Compaq Computer Corporation regarding patent 5,375,243, "Hard Disk Password Security System" and issues with a similar scheme in ATA.
- 87) Bill Dallas will prepare CAM revision 12b.
- 88) John will forward CAM 12b to X3 for final processing.
- 89) John will ascertain which persons lodging comments must be notified of the comments resolution.
- 90) John will notify those who commented on FCP (as per the results of the previous action item) of the comments resolution and their obligation appeal the resolution within 20 days.
- 91) John will notify those who commented on SAM of the comments resolution and their obligation appeal the resolution within 20 days.
- 92) John will write a letter to QIC requesting a delay in the assignment of a block of codes to QIC.
- 93) Larry will conduct a letter ballot vote on the question of creating a new technical committee for ATA.
- 94) Larry will conduct a letter ballot vote to approve the ATA+PI project proposal.
- 95) Larry will conduct letter ballots on the SPI-2, ESPC, FCP-2, SSA-S2P, SSA-S3P, SSA-TL1, SSA-TL2, SSA-PH1, and SSA-PH2 project proposals.

14. Meeting Schedule

The next plenary meeting of X3T10 will be July 13, 1995, in Colorado Springs, CO, at the Red Lion Hotel (719-576-8900), hosted by Symbios Logic Inc. The meeting will begin at 1:00 p.m. on Thursday.

The meeting list for the next plenary week is:

July '95 Meeting Map

Day	9	10	11	12	1	2	3	4	5	6	7	8
Monday 7/10	+-----+											
	SPI-2 and ESPC Study Group											(30)
	+-----+											
	High Avail. SG											(20)
+-----+												
FC-AL Direct Attach Disk ad hoc											(40)	
+-----+												
Tuesday 7/11	+-----+											
	SCSI-3 WG											(40)
	+-----+											
CAM-3 WG											(10)	
+-----+												
Wednesday 7/12	+-----+											
	SCSI-3 WG											(40)
	+-----+											
	System Issues MMC Working Group											(40)
+-----+												
SFF Form Factor SFF/VHDCI WG											(30)	
+-----+												
Thursday 7/13	+-----+											
	SFF X3T10 Plenary											(40/80)
	+-----+											
SSC/SMC WG											(10)	
+-----+												
Friday 7/14	8	9	10	11	12							

(No meetings planned for Friday)

Meetings marked with == are X3T10-authorized meetings.

Meetings marked with -- are authorized by other groups and may change without notice.

Meeting Map Abbreviation Key:

- 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)
- ESPC:** Expanded System Physical Configuration
- Fast- 20:** Synchronous Data Transfer at 20 Megatransfers/second
- FC- AL:** Fibre Channel - Arbitrated Loop (an X3T11 project)
- 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.)
- Plenary:** Full Committee Meeting
- RAB:** RAID Advisory Board (not an X3 activity)
- RAID:** Redundant Array of Independent Devices
- SCC:** SCSI- 3 Controller Commands (RAID)
- SCSI:** Small Computer System Interface
- 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)
- SSP:** Serial Storage Protocol (Protocol for SSA)
- 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
MMC Working Group	Tu 6/7- 8	9 am	Colorado Springs / Ron Roberts
ATA Working Group	We 6/21- 22	9 am	Milptas, CA / Quantum
ATA Working Group	Tu 7/18- 20	9 am	Milptas, CA / Quantum

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

Activity	Contact	Telephone/Email
ATA- 2	Steve Finch	(714) 573- 6808 steve.finch@tus.ssi1.com
ATA- 3 & ATAPI	Gene Milligan	(405) 324- 3070 Gene_Milligan@notes.seagate.com

CAM	Bill Dallas	(603) 881-2508 dallas@wasted.enet.dec.com
SAM	Charles Monia	(508) 841-6757 monia@starch.enet.dec.com
SPI, Fast-20, & SSA-xxx	Larry Lamers	(408) 957-7817 ljlammers@aol.com
System Issues	Duncan Penman	(408) 730-2565 penman@netcom.com
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GPP	Gary Stephens	(602) 321-1725 6363897@mcimail.com
SBP and MMC	Ron Roberts	(408) 432-4322 rkroberts@aol.com
SPC	Ralph Weber	(603) 881-1497 roweber@acm.org
SBC and SGC	Thomas Tewell	(415) 459-7978 thomas.tewell@seqadvtech.com
SSC	Edward Lappin	(303) 447-7718 tedl@exabyte.com
SMC	Erich Oetting	(303) 673-2178 Erich_Oetting@Stortek.com
SIP, SCC	George Penokie	(507) 253-5208 gop@rchvmp3.vnet.ibm.com
Other Activities	John Lohmeyer	(719) 573-3362 john.lohmeyer@symbios.com

The long-term X3T10 meeting week schedule is:

Date	Location	Host/Comments
Jul 9-14, 1995	Colorado Springs, CO	Symbios Logic
Sep 10-15, 1995	Manchester, NH	Digital
Nov 5-10, 1995	Palm Springs, CA	Western Digital
Jan 8-12, 1996	Dallas, TX	Quantum
Mar 11-15, 1996	Newport Beach, CA	QLogic
May 6-10, 1996	Atlanta, GA	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

Ron Roberts moved that all the above meetings, hosts, and locations be accepted. Erich Oetting seconded the motion. The motion passed 26:0.

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.

Steve Finch moved and Ken Hallam seconded that X3T10 authorize the X3T10-related meetings and events in the list above. The motion passed 29:1.

15. Adjournment

The meeting was adjourned at 6:49 p.m. on Thursday May 11, 1995.

Meeting Attendees -- Enclosure (1)

Name	S	Organization	Electronic Mail Address
Mr. Rick Heidick	A	3M Company	rdheidick@mmm.com
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Mr. Ron Apt	P	Advanced Micro Devices	Ronald.Apt@amd.com
Mr. Edward Fong	P	Amdahl Corp.	esf10@aol.amdahl.com
Mr. Charles Brill	P	AMP, Inc.	cebrill@amp.com
Mr. Michael Wingard	P	Amphenol Interconnect	
Mr. Carl Booth	O	Amphenol/Spectra-Strip	7480559@mci mail.com
Mr. Ron Roberts	A	Apple Computer	rkroberts@aol.com
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71 People Present

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

Minutes of X3T10 Plenary Meeting #9 in Harrisburg, PA

X3T10/95-211r1

May 18, 1995 - X3T10 Attendance Database - Enclosure (2)

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Minutes of X3T10 Plenary Meeting #9 in Harrisburg, PA

X3T10/95-211r1

May 18, 1995 - X3T10 Document Register - Enclosure (3)

X3T10/95-001R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01]
X3T10 Project Summary

X3T10/95-001R1 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02]
X3T10 Project Summary

X3T10/95-002R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01]
X3T10 Draft Agenda for Meeting #8

X3T10/95-003R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01]
Jeopardy Letter for Mar '95 Meeting

X3T10/95-004R0 Date: 1/20/95 Author: J. Lohmeyer [SY-95-01]
Letter Ballot on Forwarding ATA-2 to IPR

X3T10/95-005R0 Date: 1/26/95 Author: J. Lohmeyer [SY-95-01]
Letter requesting that Project 964-D (DADI) be withdrawn

X3T10/95-006R0 Date: 1/27/95 Author: J. Lohmeyer [SY-95-01]
Transmittal letter on SCC Rev 4 to first public review

X3T10/95-007R0 Date: 2/2/95 Author: J. Lohmeyer [SY-95-02]
Transmittal letter on SCSI-2 TIBs #1 and #2

X3T10/95-008R0 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02]
X3T10 Draft Agenda for Meeting #9

X3T10/95-009R0 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02]
Jeopardy Letter for May '95 Meeting

X3T10/95-010R0 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02]
I/O Interface Related Reflectors (mailing lists)

X3T10/95-011R0 Date: 3/20/95 Author: J. Lohmeyer [SY-95-02]
ltr to Stuart Mabon, Micropolis, re patent 5,191,584

X3T10/95-012R0 Date: 3/21/95 Author: J. Lohmeyer [SY-95-02]
X3T10 Annual Report (April 1994 -- March 1995)

X3T10/95-013R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Cover Letter on May/June '95 Letter Ballots

X3T10/95-014R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Recommending that an ATA TC be formed

X3T10/95-015R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding ATA+PI Project Proposal

X3T10/95-016R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding SPI-2 Project Proposal

X3T10/95-017R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding ESPC Technical Report Project Proposal

X3T10/95-018R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding FCP-2 Project Proposal

X3T10/95-019R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding SSA-PH1 Project Proposal

X3T10/95-020R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
Letter Ballot on Forwarding SSA-PH2 Project Proposal

X3T10/95-021R0 Date: 5/13/95 Author: J. Lohmeyer [SY-95-03]
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]
Letter Ballot on Forwarding SSA-TL2 Project Proposal

X3T10/95-023R0 Date: 5/13/95 Author: J. Lohmeyer [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]
Letter Ballot on Changing Name for Project 1051-D

X3T10/95-025R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03]
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]
Draft Agenda for July '95 X3T10 Meeting

X3T10/95-027R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03]
X3T10 Project Summary

X3T10/95-028R0 Date: 5/16/95 Author: J. Lohmeyer [SY-95-03]
Jeopardy Letter for Jul '95 Meeting

X3T10/95-101R0 Date: 1/1/95 Author: Milligan/Lamers [SY-95-01]
Minutes of ATA-3 Working Group - 11/30/94

X3T10/95-102R0 Date: 1/11/95 Author: D. Worrell [SY-95-01]
Proposal for Enhanced IDE 95 Features

X3T10/95-103R0 Date: 1/16/95 Author: R. Weber [sy-95-01]
Attached Medium Changer Operation Codes

X3T10/95-103R2 Date: 1/16/95 Author: R. Weber [sy-95-02]

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X3T10/95-211r1

Attached Medium Changer Operation Codes

X3T10/95-104R0 Date: 1/16/95 Author: S. Smyers [SY-95-01]
 CDR Command Proposal

X3T10/95-105R0 Date: 1/16/95 Author: G. Penokie [SY-95-01]
 Fast-20 Letter ballot comments

X3T10/95-106R0 Date: 1/16/95 Author: G. Penokie [SY-95-01]
 SPC comments

X3T10/95-107R0 Date: 1/16/95 Author: G. Penokie [SY-95-02]
 Public Review Comment #1 on SAM (X3.270)

X3T10/95-108R0 Date: 1/16/95 Author: G. Penokie [SY-95-01]
 XOR Commands comments

X3T10/95-109R1 Date: 1/16/95 Author: T. Asami [SY-95-01]
 Fast-20 Definition

X3T10/95-110R0 Date: 1/16/95 Author: C. Monia [SY-95-01]
 Comparison of CA & ACA

X3T10/95-111R0 Date: 1/16/95 Author: D. Colegrove [SY-95-01]
 PFA for ATA

X3T10/95-111R1 Date: 1/16/95 Author: D. Colegrove [SY-95-02]
 PFA for ATA

X3T10/95-112R1 Date: 1/16/95 Author: L. Sloan [SY-95-01]
 Presentation on 3rd Party Operations

X3T10/95-113R0 Date: 1/16/95 Author: L. Sloan [SY-95-02]
 Technical details on 3rd Party Proposal

X3T10/95-114R0 Date: 1/16/95 Author: J. Elrod [SY-95-01]
 Minutes of XOR Study Group - Jan '95

X3T10/95-115R0 Date: 1/16/95 Author: J. Molina [SY-95-01]
 Letter on hotel locations

X3T10/95-116R0 Date: 1/16/95 Author: G. Stephens [SY-95-01]
 Response for GPP Letter Ballot

X3T10/95-117R0 Date: 1/16/95 Author: E. Lappin [SY-95-01]
 Space past EOD

X3T10/95-118R0 Date: 1/16/95 Author: E. Lappin [SY-95-01]
 READ POSITION

X3T10/95-118R1 Date: 1/16/95 Author: E. Lappin [SY-95-02]
 READ POSITION

X3T10/95-119R0 Date: 1/16/95 Author: R. Roberts [SY-95-01]
 Minutes of MMC Working Group - Jan '95

X3T10/95-120R0 Date: 1/16/95 Author: Lamers/Milligan [SY-95-01]
 Minutes of ATA-3 Working Group - 1/11-12/95

X3T10/95-121R0 Date: 1/16/95 Author: S. Finch [SY-95-01]
 ATA-2 Annex F Issues

X3T10/95-122R0 Date: 1/16/95 Author: J. Chen [SY-95-01]
 ATA 22MB/sec Timing Proposal

X3T10/95-123R0 Date: 1/16/95 Author: J. Lohmeyer [SY-95-01]
 Letter ballot results from mailing SY-9406

X3T10/95-124R0 Date: 1/16/95 Author: G. Penokie [SY-95-02]
 Public Review Comment #1 on FCP (X3.269)

X3T10/95-125R0 Date: 1/16/95 Author: M. Chow [SY-95-01]
 Dynamic Power Selection in ATA

X3T10/95-126R0 Date: 1/16/95 Author: L. Leach [SY-95-01]
 Cable Error Detection Proposal

X3T10/95-127R0 Date: 1/16/95 Author: D. Penman [SY-95-01]
 Additional ATA-3 Topics

X3T10/95-128R0 Date: 1/16/95 Author: D. Pak [SY-95-01]
 Liaison Report from 1285

X3T10/95-129R0 Date: 1/16/95 Author: R. Weber [SY-95-01]
 Minutes of SCSI Working Group - Jan '95

X3T10/95-130R0 Date: 1/16/95 Author: R. Weber [SY-95-01]
 Minutes of X3T10 Plenary Meeting #7

X3T10/95-131R0 Date: 1/16/95 Author: D. Penman [SY-95-01]
 ATA Systems Issues

X3T10/95-132R0 Date: 1/16/95 Author: T. Lappin [SY-95-01]
 Write without reaad block mode control

X3T10/95-132R1 Date: 1/16/95 Author: T. Lappin [SY-95-02]
 Write without reaad block mode control

X3T10/95-133R0 Date: 1/16/95 Author: T. Lappin [SY-95-01]

Minutes of X3T10 Plenary Meeting #9 in Harrisburg, PA

X3T10/95-211r1

Clearing ASC/ASCQ

X3T10/95-133R1 Date: 1/16/95 Author: T. Lappin [SY-95-02]
Clearing ASC/ASCQ

X3T10/95-134R0 Date: 1/16/95 Author: T. Lappin [SY-95-01]
Write protect control

X3T10/95-135R0 Date: 1/16/95 Author: R. Weber [SY-95-01]
Status of AIIM C21 M559 Standard at X3T10

X3T10/95-136R0 Date: 1/24/95 Author: B. Dallas [SY-95-01]
Minutes of CAM WG - 1/'95

X3T10/95-137R0 Date: 1/18/95 Author: K. Calvert [SY-95-01]
Letter re: Copyright Release for ATASPI

X3T10/95-138R0 Date: 1/26/95 Author: M. Alexenko [SY-95-01]
SCAM issues in SPI rev 15

X3T10/95-139R0 Date: 1/26/95 Author: J. Lohmeyer [SY-95-01]
Minimum Active Negation Current Issue

X3T10/95-139R1 Date: 2/1/95 Author: J. Lohmeyer []
Minimum Active Negation Current Issue

X3T10/95-139R2 Date: 2/8/95 Author: J. Lohmeyer [sy-95-02]
Minimum Active Negation Current Issue

X3T10/95-140R0 Date: 1/27/95 Author: F. Podia [SY-95-01]
Use of Log Pages Assigned by X3T10 to AIIM B21

X3T10/95-141R0 Date: 1/27/95 Author: K. Calvert [SY-95-01]
ATASPI Presentation

X3T10/95-142R0 Date: 1/27/95 Author: K. Calvert [SY-95-01]
ATASPI Specification

X3T10/95-143R0 Date: 1/27/95 Author: D. Worrell [SY-95-01]
ATA-3 Features Proposal

X3T10/95-144R0 Date: 2/8/95 Author: H. Landis [SY-95-02]
Identify DMA proposal

X3T10/95-145R0 Date: 2/8/95 Author: H. Landis [SY-95-02]
Device 1 Only proposal

X3T10/95-146R0 Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02]
Electronic Notification Procedure

X3T10/95-147R0 Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02]
Preparing Documents for Committee Mailings

X3T10/95-148R0 Date: 2/9/95 Author: Lamers/Lohmeyer [SY-95-02]
Procedure for Funding X3T10 Technical Editors

X3T10/95-149R0 Date: 2/12/95 Author: R. Roberts [SY-95-02]
Minutes of MMC Working Group - Feb 95

X3T10/95-150R0 Date: 2/15/95 Author: Lamers/Milligan [SY-95-02]
Minutes of ATA-3 Working Group - 1/26/95

X3T10/95-151R1 Date: 2/15/95 Author: Lamers/Milligan [SY-95-02]
Minutes of ATA-3 Working Group - 2/15-16/95

X3T10/95-152R0 Date: 2/15/95 Author: J. McGrath [SY-95-02]
Problems with System Implementation of Dual Ports

X3T10/95-153R0 Date: 2/15/95 Author: C. Stevens [SY-95-02]
Enhanced Disk Drive Specification

X3T10/95-154R0 Date: 2/15/95 Author: H. Landis [SY-95-02]
Version Identification in ATA

X3T10/95-154R1 Date: 2/15/95 Author: G. Milligan [SY-95-03]
Version Identification in ATA

X3T10/95-155R0 Date: 2/15/95 Author: H. Landis [SY-95-02]
Comment on clause 10.5 of ATA-2

X3T10/95-156R0 Date: 2/15/95 Author: H. Landis [SY-95-02]
BIOS Types, CHS Translation, LBA and other Good Stuff

X3T10/95-157R0 Date: 2/28/95 Author: J. Lohmeyer [SY-95-02]
Flowchart on X3T10 procedures

X3T10/95-158R0 Date: 3/2/95 Author: G. Penokie [SY-95-02]
IBM Patent Policy for SCC

X3T10/95-159R0 Date: 3/8/95 Author: L. Sloan [SY-95-02]
Distributed SCSI I/O: Status and New Issues

X3T10/95-160R0 Date: 3/8/95 Author: L. Sloan [SY-95-02]
Public Review Comment #2 on SAM (X3.270)

X3T10/95-161R0 Date: 3/8/95 Author: G. Houlder [SY-95-02]
Minutes of XOR Study Group

X3T10/95-162R1 Date: 3/8/95 Author: Lamers/Milligan [SY-95-02]

Minutes of X3T10 Plenary Meeting #9 in Harrisburg, PA

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Minutes of ATA Working Group - 3/8-9/95

X3T10/95-163R0 Date: 3/9/95 Author: J. Chen [SY-95-02]
Comments on ATA-2

X3T10/95-164R0 Date: 3/9/95 Author: T. Pione [SY-95-02]
Worldwide Industry Hardware Support

X3T10/95-165R0 Date: 3/9/95 Author: T. Pione [SY-95-02]
ATAPI Test Program

X3T10/95-166R0 Date: 3/9/95 Author: J. Lohmeyer [SY-95-02]
ATA-2 Forwarding Letter Ballot Results

X3T10/95-167R0 Date: 3/9/95 Author: C. Patton [SY-95-02]
ATA Electrical Simulation Plots

X3T10/95-168R0 Date: 3/9/95 Author: J. McGrath [SY-95-02]
ATA Electrical Issues with 2 Ports

X3T10/95-168R1 Date: 3/9/95 Author: J. McGrath [SY-95-03]
ATA LLine Termination Issues

X3T10/95-169R0 Date: 3/9/95 Author: R. Roberts [SY-95-02]
Minutes of MMC Working Group - 3/8/95

X3T10/95-170R0 Date: 3/9/95 Author: Weber/Lohmeyer [SY-95-02]
SCSI Working Group Minutes - 3/95

X3T10/95-171R0 Date: 3/9/95 Author: Weber/Lohmeyer [SY-95-02]
Minutes of X3T10 Plenary Meeting #8

X3T10/95-172R0 Date: 3/9/95 Author: Weber/Lohmeyer [SY-95-02]
SPI Futures Working Group Minutes - 3/95

X3T10/95-173R0 Date: 3/9/95 Author: D. Pak [SY-95-02]
P1285 Liaison Report - 3/95

X3T10/95-174R0 Date: 3/9/95 Author: B. Dallas [SY-95-02]
Minutes of the CAM-3 Working Group - 3/95

X3T10/95-175R0 Date: 3/17/95 Author: P. Johansson [SY-95-02]
Editorial Correction to SPI rev 15

X3T10/95-176R0 Date: 3/17/95 Author: L. Barra [SY-95-02]
Public Review Comment on FCP (X3.269)

X3T10/95-177R0 Date: 3/17/95 Author: L. Barra [SY-95-02]
Public Review Comment on SAM (X3.270)

X3T10/95-178R0 Date: 3/17/95 Author: K. Gingerich [SY-95-02]
Comments on Fast-20

X3T10/95-179R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
3.3 Volt SCSI Termpower

X3T10/95-180R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
SCSI-3 SPI Low Voltage

X3T10/95-181R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
Low Power SCSI

X3T10/95-182R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
proposed working draft SPI-LP

X3T10/95-183R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
Project Proposal for SPI-LV Standard

X3T10/95-184R0 Date: 3/17/95 Author: P. Aloisi [SY-95-02]
SPI Hot Swapping/Plugging

X3T10/95-185R0 Date: 3/20/95 Author: T. Lappin [SY-95-02]
Minutes of the SSC Meeting - 03/95

X3T10/95-186R0 Date: 3/25/95 Author: C. Monia [SY-95-02]
Public Review Comment #1 on SBP (X3.268)

X3T10/95-187R0 Date: 3/25/95 Author: T. Wickland [SY-95-02]
Public Review Comment #3 on SAM (X3.270)

X3T10/95-188R0 Date: 3/25/95 Author: G. Witalka [SY-95-02]
Public Review Comment #2 on FCP (X3.269)

X3T10/95-189R0 Date: 3/25/95 Author: C. Monia [SY-95-02]
Public Review Comment #3 on FCP (X3.269)

X3T10/95-190R0 Date: 3/25/95 Author: L. Sloan [SY-95-02]
Public Review Comment #4 on FCP (X3.269)

X3T10/95-191R0 Date: 3/25/95 Author: G. Stephens [SY-95-02]
Public Review Comment #5 on FCP (X3.269)

X3T10/95-192R0 Date: 3/25/95 Author: S. Smyers [SY-95-02]
Public Review Comment #2 on SBP (X3.268)

X3T10/95-193R0 Date: 3/30/95 Author: L. Sloan [SY-95-03]
Public Review Comment #n on CAM (X.232)

X3T10/95-194R0 Date: 4/4/95 Author: P. McLean [SY-95-03]

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Overlap Proposal

X3T10/95-195R0 Date: 4/8/95 Author: R. Roberts [SY-95-03]
Minutes of MMC Working Group - 3/29-30/95

X3T10/95-196R0 Date: 4/11/95 Author: Lamers/Lohmeyer [SY-95-03]
Minutes of Server SCSI Working Group - 4/10/95

X3T10/95-197R0 Date: 4/11/95 Author: K. Gingerich [SY-95-03]
Power Dissipation Analysis

X3T10/95-198R0 Date: 4/12/95 Author: Lamers/Milligan [SY-95-03]
Minutes of ATA Working Group - 4/11-13/95

X3T10/95-199R Date: 4/12/95 Author: T. Hanan [SY-95-03]
Driver Current for ATA-3

X3T10/95-200R0 Date: 4/13/95 Author: H. Landis [SY-95-03]
Default Set Multiple Value

X3T10/95-201R0 Date: 3/21/95 Author: J. Lohmeyer [SY-95-03]
Request for denisty codes and medium type codes for QIC

X3T10/95-202R0 Date: 4/25/95 Author: C. Monia [SY-95-03]
Proposed Responses to SAM Public Review Comments

X3T10/95-203R0 Date: 4/26/95 Author: C. Binford [SY-95-03]
Proposal to handle unconfirmed FCP_RSP

X3T10/95-204R0 Date: 4/27/95 Author: R. Snively [SY-95-03]
Response to Public Review Comments on FCP

X3T10/95-205R0 Date: 5/3/95 Author: P. McLean [SY-95-03]
ATA-3 issues with ATAPI

X3T10/95-206R0 Date: 5/3/95 Author: B. Dallas [SY-95-03]
Response to Public Review Comments on CAM

X3T10/95-207R0 Date: 5/8/95 Author: J. Lohmeyer [SY-95-03]
Project Proposal for SPI-2 Standard

X3T10/95-208R0 Date: 5/8/95 Author: E. Gardner [SY-95-03]
FCP or DDA Profile use of Disconnect-Reconnect Mode Page

X3T10/95-209R0 Date: 5/8/95 Author: R. Weber [SY-95-03]
Minutes of SPI Futures Study Group - 5/95

X3T10/95-210R0 Date: 5/8/95 Author: R. Weber [SY-95-03]
Minutes of SCSI Working Group - 5/95

X3T10/95-211R0 Date: 5/8/95 Author: Weber/Lohmeyer [SY-95-03]
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X3T10/95-212R0 Date: 5/9/95 Author: C. Binford [SY-95-03]
Public Review Comment on SCC

X3T10/95-213R0 Date: 5/9/95 Author: B. Ham [SY-95-03]
Project Proposal for Expanded System Physical Configuration (ESPC) Technical Report

X3T10/95-214R0 Date: 5/10/95 Author: Lamers/Milligan [SY-95-03]
Minutes of ATA Working Group - 5/10-11/95

X3T10/95-215R0 Date: 5/11/95 Author: R. Roberts [SY-95-03]
Minutes of MMC Working Group - 5/10/95

X3T10/95-216R0 Date: 5/11/95 Author: D. Allan [SY-95-03]
Report on SFF-8020 Ballot

X3T10/95-217R0 Date: 5/11/95 Author: S. Sicola [SY-95-03]
Fault tolerant configurations for SCSI

X3T10/95-218R0 Date: 5/11/95 Author: G. Frazier [SY-95-03]
New Error Notification Log Page

X3T10/95-219R0 Date: 5/11/95 Author: J. McGrath [SY-95-03]
Project Proposal for ATA+PI Standard

X3T10/95-220R0 Date: 5/13/95 Author: G. Penokie [SY-95-03]
Response to public review comments on SCC

X3T10/95-221R0 Date: 5/13/95 Author: R. Weber [SY-95-03]
Vendor specific mode page codes for tape

X3T10/95-222R0 Date: 5/13/95 Author: R. Weber [SY-95-03]
Power condition mode page code

X3T10/95-223R0 Date: 5/13/95 Author: R. Roberts [SY-95-03]
MMC Functional Requirements

X3T10/95-224R0 Date: 5/13/95 Author: T. Lappin [SY-95-03]
Report Density Support

X3T10/95-225R0 Date: 5/13/95 Author: R. Cummings [SY-95-03]
X3T11 Change Control Procedure

X3T10/95-226R0 Date: 5/13/95 Author: E. Oetting [SY-95-03]
Minutes of SMC/SCC Working Group - 5/95

X3T10/95-227R0 Date: 5/13/95 Author: D. Penman [SY-95-03]

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Minutes of System Issues Study Group - 5/95

X3T10/95-228R0 Date: 5/13/95 Author: R. Snively [SY-95-03]
Project Proposal for FCP-2 Standard

X3T10/95-229R0 Date: 5/13/95 Author: R. Snively [SY-95-03]
Proposal for Persistent Reserve

X3T10/95-230R0 Date: 5/13/95 Author: G. Milligan [SY-95-03]
Memorandum of Understanding

X3T10/95-231R0 Date: 5/13/95 Author: G. Milligan [SY-95-03]
TAG Annual Report

X3T10/95-232R0 Date: 5/13/95 Author: J. Elrod [SY-95-03]
Minutes of XOR Study Group - 5/95

X3T10/95-233R0 Date: 5/13/95 Author: L. Lamers [SY-95-03]

X3T10/95-234R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-PH1 Standard

X3T10/95-235R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-PH2 Standard

X3T10/95-236R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-TL1 Standard

X3T10/95-237R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-TL2 Standard

X3T10/95-238R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-S2P Standard

X3T10/95-239R0 Date: 5/13/95 Author: Scheible/Lamers [SY-95-03]
Project Proposal for SSA-S3P Standard