

Accredited Standards Committee*
X3, Information Technology

Doc. No.: X3T13/D96120R0

Date: January 23, 1996

Project:

Ref. Doc.:

Reply to: Lawrence J. Lamers

To: Membership of X3T13

From: Lawrence J. Lamers, Secretary X3T13
Gene Milligan, Chair X3T13 (acting)

Subject: Minutes of X3T13 Plenary #1
January 23-25, 1996 : Milpitas, CA

Agenda

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 - 13.2 X3T13 Policies and Procedures to augment the X3 SD-2

*Operating under the procedures of The American National Standards Institute.

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- 13.2.1 Documentation Procedures [McLean] ()
 - 13.2.2 Procedures for Preparing Documents for Committee Mailings [Lamers] ()
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 - 13.2.4 Procedure for Attendance Interpretation [Milligan] ()
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 - 19.1 Authorization of Working Group Meetings
 - 20. Adjournment
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Results of Meeting

1. Opening Remarks

Gene Milligan, the X3T13 Chair, called the meeting to order at 9:00 a.m., Tuesday January 23, 1996. He thanked Jim McGrath of Quantum Corp. for hosting the meeting.

Gene welcomed all attendees to the organizational meeting of the X3T13 Technical Committee. He outlined the procedures for conducting meetings, voting rules, and membership forms.

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 X3T13 were made available to those attending.

2. Approval of Agenda

The agenda was approved with the following additions

- 10.6 D96102r0 - 44-pin connector
- 12.3 2 Giga Byte barrier
- 12.4 8-Giga Byte barrier
- 12.5 READ DEFECTS
- 12.6 Y-cable interrupt / Shared IRQ

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 X3T13. The individual may vote at the second plenary meeting. Working group meetings do not count toward attendance requirements.

Organizations must also pay the X3 Service Fee (\$300) to maintain membership. The ANSI International Program Fee (also \$300) is billed at the same time. If a voting member organization (Principal Member) fails to attend two out of three successive plenary meetings, the Chair is required to warn the voting member organization that they are in jeopardy of being terminated (changed from Principal Member to Observer). The Chair is also required to warn a Principal Member of their jeopardy if they fail to fill out and return two successive Letter Ballots.

The X3T13 membership during the organizational plenary meeting was 27 organizations. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current X3T13 membership list.

4. 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.

The 1996 annual Mailing Subscription Fee for paper mailings \$300 North America and \$ 500 international. The CD mailing is also \$300 North America and \$400 international for the first CD and \$240 per year for additional CDs.

Pete McLean requested that all documents for the next mailing be in his hands by 10:30 a.m. on Friday 2 February 1996. Documents received after this time will go into a subsequent mailing.

The current document register is enclosure (3).

5. Overview of X3 and JTC 1 TAG Organization, Policies, and Procedures [Barra]

Lynn Barra, of the X3 Secretariat, gave a training session on X3 and the Technical Committee procedures (see 96DxxxR0). The presentation material will be distributed in the mailing.

Lynn reported that X3 is developing a copyright procedure. Gene requested that the draft of this procedure be provided to the Vice-Chair for the mailing. However it is not clear that X3 will be able to provide a draft in time for the first mailing.

Lynn also took an action item to get the information from Global Engineering regarding their subscription service and update notifications.

6. Review of Old Action Items

- 41) Gene Milliganto continue efforts to secure ANSI patent statement from Compaq regarding security. Continuing. He has received verbal confirmation from Compaq that they will provide a statement in compliance with the ANSI patent policy.
- 42) Larry Lamers to provide list of members of ATA WG and X3T10 to Pete McLean for dpANS. Carried over.
- 43) Larry Lamers to post the January meeting notice to the reflectors. Completed.
- 44) Larry Lamers to contact X3 and ensure that appropriate documents and forms are available at the January meeting. Completed.
- 45) Mark Evans to generate meeting announcements for the two subsequent plenaries. Carryover.

7. ATA Working Group Report

Gene Milligan reported.

Fifteen people attended the ad hoc meeting. The group did not review X3T10/2008D rev 6 since it was in a secret letter ballot but did review ATAPI X3T10/1120D rev 3.

Agreements were reached for file naming conventions for the new technical committee. Document types are: Word 6 documents; Excel 5 spreadsheets; PowerPoint 4 presentations; Text files in ASCII; and CSV Comma separated value file in ASCII.

Revision 4 of ATA-2 was made available for the group to review the pre-edit changes. Participants were requested to review the working draft for technical consistency with revision 3.

Tom Hanan reported that the document does not match the format of existing X3 documents and proposed revamping the draft. Tom reviewed a proposed table of contents for the next version.

Pete McLean reviewed ATA Overlap state diagrams.

Mark Evans presented a strawman proposal to alleviate proxy interrupt glitches. The group was receptive to having the strawman expanded.

Curtis Stevens made a proposal for Device Segmentation. This proposal would provide a public and a private area on the storage device. The new commands provide tools to allocate and read or write segments. The consensus of the group was that Curtis should pursue the proposal with modifications resulting from the discussions at the ad hoc meeting.

Richard Schnell volunteered to develop a proposal for cache flush control. He also reviewed his suggestions that had been posted on the reflector for ATA+PI.

Pete McLean made a proposal for recommending an implementation for pins A-D to use for drive selection. Members were requested to review this for consideration at the January meeting.

Curtis Stevens reported that presently there is no way to tell which channel is asserting interrupt in a 'Y' cable environment. It may be possible to use the interrupt reason register to accomplish this.

8. ATA-2 - Project 0948D

Ron Roberts moved and Rick Kalish seconded that X3T13 approve the ANSI pre-edit change as non-substantive, repair the table of contents and table C.1. The motion carried 20 Yes: 0 No: 7 Absent.

The X3 Secretariat requested that the vote be by roll-call due to precedent.

Roll-call of the above motion:

FNAME	LNAME	COMPANY	CLASS	VOTE
Richard	Kalish	Adaptec, Inc.	P	Y
Ron	Roberts	Apple Computer	A	Y
Joe	Chen	Cirrus Logic Inc.	P	Y
Marc	Noblitt	Conner Peripherals	P	G
Hale	Landis	Consultant	P	G
Paul	Raikunen	Digital	P	G
I. Dal	Allan	ENDL	P	G
Robert	Liu	Fujitsu Computer Products	P	Y
Tony	Goodfellow	GSI	P	Y

J. R.	Sims	Hewlett Packard Co.	P	Y
Anthony	Yang	Hitachi America Ltd	P	Y
Dan	Colegrove	IBM Corp.	P	Y
Duncan	Penman	IIX Consulting	P	Y
Pete	McLean	Maxtor Corp.	P	Y
Darrin	Bulik	Micro House Int.	P	Y
Robin	Freeze	Oak Technology	A	Y
Bill	McFerrin	Philips KMG	P	Y
Curtis	Stevens	Phoenix Technologies	P	G
Greg	Elkins	Q Logic	P	Y
Jim	McGrath	Quantum Corp.	A	Y
Konichi	Kasima	Sanyo Electric Co Ltd	P	G
Gene	Milligan	Seagate Technology	P	Y
Schaeffner	Yogi	Silicon Systems	P	G
Pat	Mercer	SyQuest Technology Corp	A	Y
Tokuyuk	Totani	Toshiba America Info.	P	Y
Devon	Worrell	Western Digital Corp.	A	Y
Masa	Morizumi	Yamaha	P	Y

Vote Notes: Y = Yes; G = Did not respond; X = Abstained

9. ATAPI - Project 1120D

9.1 ATAPI Working Draft Review [Hanan]

Tom Hanan reported that he had not brought the document for review but would download the file from a private area of the server and get review copies printed by Thursday. He requested that the review be deferred until Thursday. The Chair agreed to defer the review until Tom had copies available for review. However this was overtaken by the 12.7 business.

9.2 Other ATAPI items

See 12.7 for additional background.

Devon Worell stated that the industry consortia should change their specifications to reference Project 1153D, and that the command set of SFF 8020 should become a project for X3T13.

Jim McGrath moved and Devon Worrell seconded that X3T13 endorses that the work for pass through commands (packet contents) be done in one Technical Committee and that the committee be X3T13.

There was considerable discussion over potential conflict this could cause in view of the X3T10 MMC project. Ron Roberts reported that MMC had already documented the needed pass through commands. Devon emphasized that there were too many options in MMC for the ATAPI tier of the market and characterized the additional need as being a profile which specifies a minimal command set with few if any options.

Gene requested that the question be divided by unanimous consent. There was no object

The divided motion that X3T13 endorses that the work for pass through commands (packet contents) be done in one Technical Committee carried 18:0:1.

A motion by Tom Hanan and seconded by Curtis Stevens passed to amend the remainder motion from X3T13 to X3T10.

The remaining divided motion that X3T13 endorses that the work for pass through commands (packet contents) be done in X3T10 carried 12:2 :5

10. ATA-3 - Project 2008D

10.1 ATA-3 Letter Ballot Results and Comment Resolution

Gene Milligan asked if there was any objection to accepting the X3T10 letter ballot results as if the ballot had been conducted by X3T13. There were no objections.

Pete McLean reviewed the letter ballot results and presented the comment resolution (see 96D112r0).

Apple Item 7 will be placed on the list of items to address in next version of the ATA standard.

Apple Item 8 put the 'going to' back into the idle and standby modes of CHECK POWER MODE.

Ron Werbow moved and Curtis Stevens seconded that the following wording be adopted for CHECK POWER MODE:

NORMAL OUTPUTS - The Sector Count register shall be set to 0 (00h) if the device is going to, in or leaving standby mode. The Sector Count register shall be set to 255 (FFh) if the device is in active mode. The sector count register shall be set to 80h or FFh if the device is in idle mode.

The motion carried 19:1:0.

In addressing his No, Mark Evans stated that the syntax of the text was changed by this motion.

Change vendor specific (obsolete) to obsolete.

Curtis Stevens moved and Mark Evans seconded that the word "code" be struck in the definition of reserved. The motion carried unanimously.

A similar change was requested for the definition of vendor specific.

IBM/Quantum/Maxtor comment on SMART commands: Dan Colegrove moved and Jim McGrath seconded that the enable/disable autosave be mandatory if SMART commands are implemented. The motion carried 19:0:0.

Greg Elkins requested that the Qlogic no vote be changed to a yes vote and withdrew the comment. The Chair agreed to his request and thanked him.

Figure 2 - The request to remove the phrase "This configuration is not recommended" was contentious since it does accurately reflect the technical advice of the committee but due to the stated difficulty it poses for certain system manufacturers, the committee agreed to remove the phrase.

Rick Kalish moved and Jim McGrath seconded that the content of the prerequisite paragraph related to the ordering of READ LONG/WRITE LONG be deleted and noting that prerequisites are vendor specific. The motion passed unanimously.

Western Digital withdrew their comment. Pete McLean thanked them.

Based upon a letter ballot comment and the decision of item 14.2 Jim McGrath moved and Greg Elkins seconded that the American conventions regard numbers, using "," and "." be adopted for ATA-3. The motion passed unanimously.

Jim McGrath moved and Hale Landis seconded that the 16383/16384 issue be remanded to the working group. The motion carried 12:3.

The 10k pull-up issue is also remanded to the working group for resolution.

Jim McGrath moved and Pete McLean seconded that the comment resolution be accepted, except for the two issues remanded to the working group (Apple #7 part 2 and Quantum #17). The motion carried 16 Yes: 1 No: 0 Abstentions: 10 Not Voting: 0 Absent.

11. ATA+PI - Project 1153D

11.1 X3 Letter Ballot Results and Response to Comments

The Chair reported that X3 has approved project 1153 D ATA+PI. The X3 letter ballot approving the project proposal passed without comments.

11.2 Strong Command Overlap and Command Queuing [McLean] (96D104r1)

Pete McLean reported that the state diagram regarding the drive selected was updated (see 96D104r1). John Masiewicz stated he had several clarifications that he would work with Pete off-line. Mark Noblitt is also preparing comments on the proposal.

11.3 Proxy Interrupt Glitch [Evans] (96D105r0)

Mark Evans is still working on this. Results are expected at the next meeting. The proposal would change IRQ to assert and tri-state, to allow either device to assert it. This would require level-sensitive versus edge sensitive interrupts and would only be used if both devices on the channel supported it. Devon Worrell commented that this was very similar to his original proposal which was not accepted.

12. Old Business

12.1 IDENTIFY DRIVE data in support of host requirements [Stevens] (D96107r0)

Curtis Stevens is still working on the proposal. He will attempt to post it to the reflector prior to the next ad hoc (working group) meeting.

12.2 Items from the Open Issues List [] ()

None.

12.3 ATA Mode X Analog Issues [] ()

No one had any business to conduct.

12.4 ATA Cable Issues and Definitions [McGrath] ()

Jim McGrath reported that SFF has an effort underway to investigate improvements in cables and connectors for ATA. SFF has the needed experts. Four approaches are under investigation: 1) improve dielectric materials: testing has shown that there is not a significant improvement; 2) improve grounding, but remain backward compatible, by changing wire gauge: offers little benefit; 3) improve grounding by doubling conductors to 80 wire 30 AWG: offers significant improvement but at significant cost increase; 4) Adding terminators: this raises cost of all devices unless the terminator is placed in the cable assembly and further study is needed to understand if termination with better grounding is beneficial.

12.5 Cache Flush [Schnell] ()

Richard Schnell was unable to attend due to illness.

12.6 Pins A-D on 44-pin Connector [] (D96102R0)

Pete McLean proposed advising folks on how to use pins A-D for doing cable select, device 0, device 1. This recommendations would not redefine the pins from their current definition as vendor specific.

Several alternatives were offered by other organizations. See 96D102r0, 96D113r0, and 96D117R0. Pete is still attempting to reach some consensus on this going forward.

12.7 Project Schedules [] ()

Gene Milligan reviewed the schedule previously agreed to by X3T10.

Devon Worrell moved and Steve Finch seconded that X3T13 suspend work on Project 1120 (ATAPI) as a standard and devote the standard development activity towards completion of 1153D. The motion carried 22:0:0.

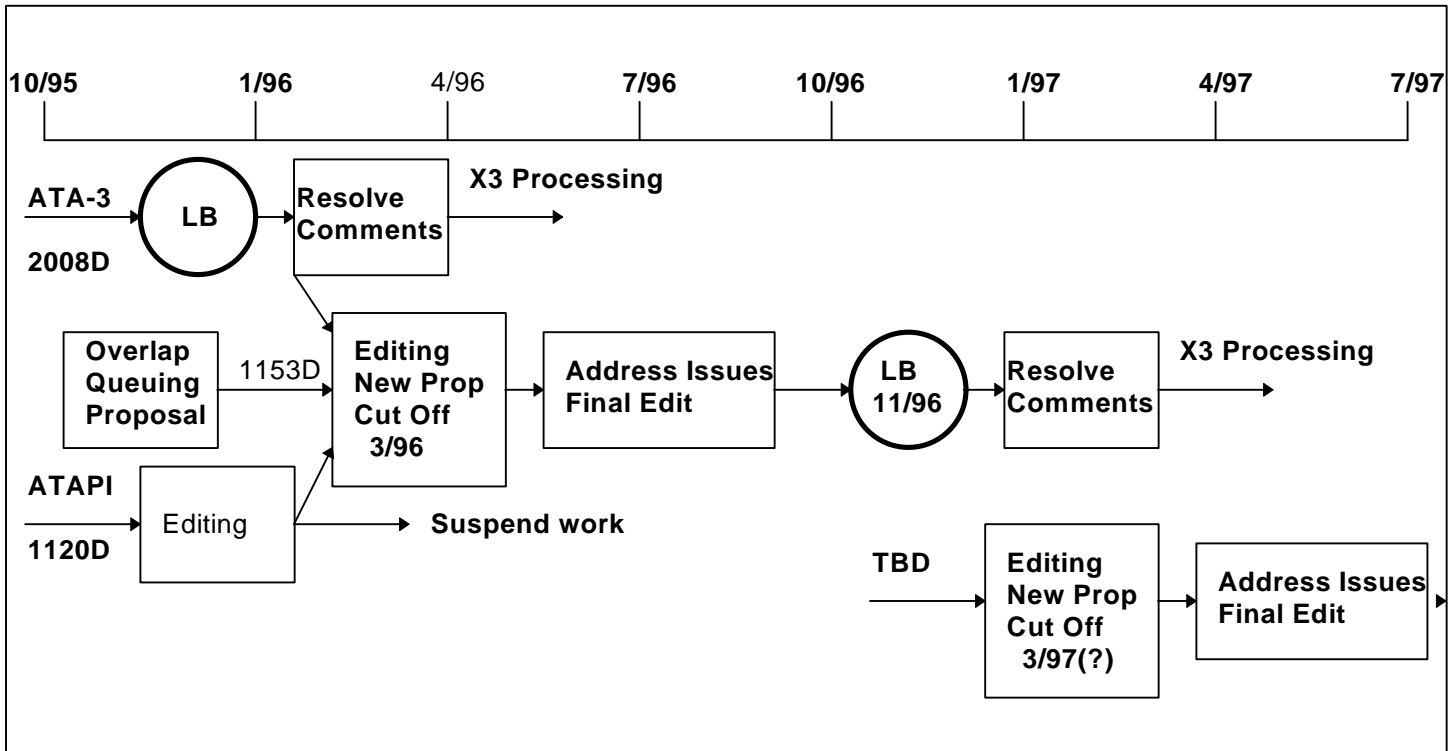
Pete stated that he will provide a document that will be a combination of the current ATA-3 and the available ATAPI documents.

In order to give guidance to the schedule update the acting Chair conducted the following straw pole based upon participants requested items using a binary priority vote of high priority - low priority for 1153D as reflected by the vote. The Initial priority is merely the subtraction of the low priority from the high priority votes.

Item	Proposer	Initial Priority	Document	Vote
ATAPI	Hanan	27	1120	27-0
Delete Useless Commands	Evans	26		27-1
8 GB Barrier	Stevens	23		24-1
2 GB Barrier	Stevens	22		23-1
CSEL Recommendations	Evans	22		22-0
Shared IRQs	Stevens	20		21-1
Minimize Vendor Specific	Evans	19		19-0
Reporting settings	Schnell	15		17-2
Overlap Queuing	McLean	11	D96104r1	15-4
Cache Flush	Schnell	11		15-4
Definition of Defaults	Schnell	11		16-5
Private Data Area	Stevens	8	D96107r0	14-6
44 Pin A-D	McLean	0	D96102r0	8-8
Higher Data Rate	Chen	-9		5-14
Non 512B Transfer Blocks	Bonke	-10		6-16
Read Defects	Totani	-13	D96116r0	2-15
80 Conductor Cable	SFF	-18		2-20
Terminator	SFF	-18		2-20
Direct Connect	SFF	-18		2-20
Defect Management	Landis	-19		1-20
Out of order transfers	Worrell	-20		1-21

The plenary arrived at an updated schedule shown below featuring a cutoff for new proposals for ATA+PI of 3/96 with a target for issuing the letter ballot 11/96.

Curtis Stevens moved and Tony Goodfellow seconded that the project schedule be revised per the above paragraph. The motion passed unanimously.



13. New Business

13.1 X3T13 Reflector, ftp and web site setup [Hanan] ()

Tom reviewed these items. The committee consensus was to request that files over 100 KB be compressed on the ftp site. Tom reviewed the convention for email subject lines. Tom will post the guidelines to the reflector.

13.2 X3T13 Policies and Procedures to augment the X3 SD-2

Gene Milligan noted that due to the more specialized work within the Technical Committee, additional procedures are useful for conducting its work.

13.2.1 Documentation Procedures [McLean] ()

Pete McLean presented a proposal for a documentation procedure.

Ron Roberts moved and Marc Noblitt seconded that D96110R0 be adopted as modified. The vote will be taken by letter ballot.

Gene Milligan noted that the group should anticipate issues with access, by people outside the X3 participants, to working drafts and requested Tom Hanan to investigate methods to limit access on the ftp site to the resultant project document.

13.2.2 Procedures for Preparing Documents for Committee Mailings [Lamers] ()

See 13.2.1

13.2.3 Electronic Notification Procedure [Milligan] (D96119r0)

Gene Milligan reviewed a proposal for electronic notification. There was objection to 'email meetings' without further definition of what they are. The chair suggested that folks get a document 'Robert's Rules of Email Meetings' to prepare for a discussion on this. The proposed procedure will be sent out for letter ballot.

13.2.4 Procedure for Funding Technical Editors

Larry Lamers reviewed the success of this procedure as used by X3T10. The funds are used by the technical committee to pay for professional editorial assistance in the final preparation of a draft standard. Depending upon the total number of subscribers, the fund comes from an approximately \$50 fee which would be included in the subscription fee. This procedure will be balloted with the other procedures.

13.2.5 Procedure for Attendance Interpretation [Milligan] (D96xxxrn)

Tom Hanan requested that 13.2.5 and then 13.2.7 be addressed before the other procedure items. The Chair agreed to the request.

Jim McGrath moved and Pete McLean seconded that the policies and procedures (D96109r0 and D96108r0) be adopted and become effective at the next plenary and forwarded to X3 for approval.

See D109r0 to see the original attendance proposal. Through a series of "friendly amendments the motion became: the X3T13 Proposed Attendance Procedures: X3T13 uses the procedure defined by the X3 SD-2. The Technical Committee interprets "Attendance at a Meeting" to require: (1) registering presence in the attendance roster; (2) conduct in accordance with the X3 SD-2; and (3) responding to all roll call votes requiring two-thirds vote where a majority of the membership is not present and that the vote is required to complete the meeting agenda. and the Operations Policies and Procedures Tailored to X3T13 (D96108r0) be adopted and become effective at the next plenary and forwarded to X3 for approval.

Bill McFerrin moved and Devon Worrell seconded a motion to amend the main motion to delete from "and (3)" forward through "agenda." The wording on the attendance procedure foil (this removes the attendance impact of roll call votes). The motion passed 9 Yes: 4 No: 14 Not Voting: 0 Absent.

Gene noted that the resultant attendance procedure, if approved, would provide no guidance for the Chair in interpreting the SD-2 and consequently would be of no value.

Joe Chen moved and Jim McGrath seconded that the question be divided. The motion was divided by unanimous consent.

The motion for approval of the revised attendance procedure failed 3 Yes: 15 No: 9 Not Voting: 0 Absent.

The chairman stated that the D96108r0 vote would be conducted by letter ballot.

13.2.6 Operations Policies and Procedures Tailored to X3T13 [Milligan] (D96108r0)

These procedures are the same as those adopted by X3T10. The opinion of the chair is that these procedures are not in conflict with the X3 SD-2.

Jim McGrath moved and Pete McLean seconded that the policies and procedures (D96108r0) be adopted and become effective at the next plenary and forwarded to X3 for approval. (The divided motion from 13.2.5)

After discussion, the Chair indicated that he would conduct a letter ballot on the motion.

13.2.7 Voting Privileges and Letter Balloting [Hanan]

Tom Hanan proposed additional recommended procedures for X3T13. They were:

“All X3T13 Action will be approved by letter ballot only. Roll call and plenary meeting votes shall not be used during X3T13 plenary unless this procedure is modified by 2/3 letter ballot.” *the majority of the X3T13 membership believe that the ability to participate in ALL substantial decisions via letter ballot will increase international participation by significantly reducing the travel costs associated with mandatory participation.*

TC shall hold no more than (2) two Plenary each year. *the majority of the X3T13 membership believe that minimizing the number of mandatory attendance meetings will increase international participation by significantly reducing the travel costs associated with mandatory participation.*

New Member Voting eligibility shall be modified to include written acknowledgment of receipt and review of (2) two sequential X3T13 Working Group or Plenary meeting minutes as a means of achieving voting status between Plenary. *the majority of the X3T13 membership believe that minimizing the number of mandatory attendance meetings should not prevent or delay the ability of new members to achieve voting status. This procedure must be approved by X3 before new members may achieve voting status using this procedure”*

While members welcome additional participants in the work of X3T13, there was considerable disagreement with the proposal and the assertions Tom had made on the belief of a majority of the membership. On the contrary, several individuals pointed out the need for in person discussion of the issues and tradeoffs. There was also concern over how cumbersome it would be to expeditiously reach consensus through a series of letter ballots.

Jim McGrath moved and Tom Hanan seconded that the Technical Committee (TC) plan to meet four times in 1996 as a plenary. Following the straw pole below and the motion to amend the motion carried 17 Yes: 1 No: 1 Abstention: 8 Not Voting: 0 Absent.

Straw poll on the number of plenary meetings:

- 1 per year - 1
- 2 per year - 3
- 3 per year - 4
- 4 per year - 17
- 5 per year - 2
- 6 per year - 12

Joe Chen moved and Jim McGrath seconded that the motion be amended from four to six times. The motion to amend failed 9 Yes: 9 No: 9 Not Voting: 0 Absent.

Tom argued for adding the meeting frequency to the policy section. Gene urged that the attendance frequency not be a policy item to allow more flexibility to adjust it according to TC needs.

Joe Chen moved and Patrick Mercer seconded that the sense of X3T13 is that the X3 rule regarding no abstentions on TC on technical issues is not appropriate given the complexity of the projects and a change to the procedures should be pursued by the X3T13 Chair. The motion carried 18 Yes: 0 No: 1 Abstention: 8 Not Voting: 0 Absent.

13.3 2 GB Barrier [Curtis] ()

Curtis Stevens reported that there are a significant number of BIOS in the field that hang during post when more than 4096 cylinders is reported. His concern is of avoiding proliferation of 'solutions'. He would like all device manufacturers to think about the issue and try to reach a consensus for a solution. The group requested a proposed solution for consideration at the next meeting.

One solution is software that enables the capacity beyond 2 GB, the drive would start out as a 2 GB drive. The other possibility is a jumper to select 2 GB and over 2 GB capacity.

13.4 8 GB Barrier [McGrath]

Jim McGrath introduced the group to an issue with storage devices that have greater than 8 Giga Byte capacity. There is a proposed solution developed by Phoenix Technologies that their representative has stated could be made available if the group is willing to consider processing it. Duncan Penman indicated that there is already an X3T10 project for a Technical Report covering the solution.

13.5 READ DEFECTS [Totani] (D96116r0)

Totani-san presented a proposal on using READ DEFECTS to get some opinion from the group on how to best develop this proposal. The consensus was that this should not be standardized. Totani-san agreed. However he pointed out that the intent is to get a preferred method of implementation for customers who still insist on this vendor specific function. An opcode is needed for general distribution which will have to be one of the vendor specific codes.

13.6 Shared IRQs [Stevens] ()

Curtis Stevens requested this item, but due to his inability to attend this part of the meeting the item was deferred until the next meeting. Hale Landis noted that since 1981 it has been customary for the primary adapter to use IRQ 14, and the secondary host adapter use IRQ 15.

14. ISO**14.1 AT Attachment ISO History and Status ()**

Gene Milligan briefed the group on the current status. ATA-1 was submitted for an ISO new work item (NWI). A NWI ballot addresses six questions: (1) Do you accept the NWI in N XXXX as a sufficient definition of the work? **YES/NO**; (2) Do you support the addition of the NWI to the JTC program of work? **YES/NO**; (3) Do you commit to participate in the development of this NWI? **YES/NO**; (4) Are you able to offer a project editor? **YES/NO**; (5) Do you have a document to contribute? **YES/NO**. (6) Will a document be contributed within 90 days? **YES/NO**.

In the case of ATA the answers to these six questions were: (1) 16 YES: 1 NO; (2) 16 YES: 1 NO; (3) 4 YES: 13 NO; (4) 1 YES: 16 NO; (5) 1 YES: 16 NO; (6) 1 YES: 16 NO. Questions one and two have normal voting criteria. Question three has a threshold of 5 YES to pass. Questions four through six have a threshold of 1 YES. Consequently the ATA-1 NWI failed. Had the vote on Question three been 5 YES: 12 NO the NWI would have passed.

At the time of the ballot several other NWI failed due to four YES votes on Question three including the Fibre Channel NWI. The difficulty posed by Question three was addressed at the 1994 SC 25/WG 4 meeting and it was decided to seek approval of the various NWI, except ATA-1 and CAM, through whatever methods of appeal that could be found. However in the case of ATA-1 Germany, who had voted YES on Question three, indicated that purchase regulations requiring ISO standards addressed external interfaces and did not apply to internal interfaces. Consequently they recommended that energy not be expended pursuing appeal of the ATA-1 NWI.

At the 1995 SC 25/WG 4 meeting the status of ATA-3 and ATAPI was reviewed. In view of the changes in the ATA market, the group requested that revised NWI proposals be submitted with the expectation that they could gain acceptance with appropriate addressing considering question three. Submittal of a revised ATA NWI and an ATAPI NWI were deferred pending the formation of X3T13.

14.2 X3T13 ISO Strategy and Resultant Business ()

Jim McGrath moved and Hale Landis seconded that X3T13's position is that current projects not be submitted as new work items for international standards. The motion carried 15 YES: 1 No: 1 Abstention: 10 Not Voting: 0 Absent.

In view of the vote; there was no resultant business; ISO will not be included on future agenda except by special request; there will not be an International Representative appointed; and there will not be an International Participation fee assessed.

15. Liaison Reports

15.1 X3T10

X3T10 Report to X3T11, X3T12, and X3T13 -- January 18, 1996
John Lohmeyer, Chair X3T10

X3T10 met in Dallas, TX Thursday January 11, 1996 with 56 people present.
Membership is now at 50 voting organizations.

The IPF fairness issue remained quite alive after responses from the Chair of ITCC and the Director of the X3 Secretariat gave no ground. Another letter has been sent to the Chair of ITCC requesting detailed information on the collection and distribution of IPF funds.

X3 letter ballots on approving Fast-20, FCP, SAM, and SCC all close February 29th.

SBP will go to 2PR as soon as ANSI provides the dates to the X3 Secretariat.

GPP has been registered by ANSI as a Technical Report. It should be published within a few months.

SCSI-2 CAM is at BSR for approval.

New projects have been approved for Boot Considerations Technical Report (1154-DT) and Serial Bus Protocol - 2 (1155-D).

An X3T10 letter ballot on forwarding SIP to 1PR passed 44:1:0:6=51. X3T10 is addressing the comments and expects to approve the comments resolution and forward the revised document in March.

The X3 letter ballot on approving the SAM-2 project proposal closes March 1.

The SCSI Trade Association (STA) has formed to promote SCSI applications. A steering committee has formed, elected officers, and selected a facilitator. A press release announcing the organization is expected soon. STA is planning to meet monthly with X3T10 and X3T11.

The next plenary meeting of X3T10 will be March 14, 1996, in San Diego, CA at the Hyatt Islandia Hotel (619-224-1234), hosted by QLogic Corp. The meeting will begin at 1:00 p.m. Several ad hoc meetings are also scheduled earlier that week. Interim Ad Hoc meetings were also scheduled as follows:

Event	Day/Date	Location/contact
SPI-2 LVD SCSI WG	Mo-Tu 1/29-30	Denver, CO / Lohmeyer
ESI SG	Fr 2/16	Milpitas, CA / Harris
MMC WG	Tu-Th 2/13-15	? / Roberts (*)

(*) Three days; location to be announced on the MMC reflector.

15.2 SFF

don McGrath as app SFF liaison to SFF. Ron Roberts requested that Jim develop a procedure for

16. Call for Patents

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

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

The Chair requested that any participant aware of patents or patent disclosures that may be required to comply with any publications resulting from X3T13 projects provide an early disclosure of such patent and offer to license such patents under reasonable and non-discriminatory conditions in accordance with the ANSI Patent Policy. No additional patents were identified by the attendees in response to this call.

17. Open Issues List Summary

There were no issues added to the list which is currently a null list.

18. Review of Action Items

- 46) Gene Milligan to survey system vendors on the use of pins A-D in 44-pin environments.
- 47) Gene Milligan to draft letter to X3T10 regarding development of CD command sets.
- 48) Gene Milligan to extend an invitation to manufacturers of non-fixed disk removable media to attend the next X3T13 meeting to present a statement of their needs vis-à-vis ATAPI.
- 49) Gene Milligan to pursue resolution of the restriction against abstentions on technical issues.

19. Meeting Schedule

Ron Roberts moved and Dan Colgrove seconded that X3T13 plans to hold plenary meetings on April 26, 1996 August 2, 1996, October 25, 1996 and January 24, 1997. The motion passed unanimously.

Ron Roberts moved and Dan Colgrove seconded that the X3T13 meeting schedule allow working groups on Wednesday, Thursday, and Friday with the Plenary meeting scheduled for Friday at 8:00 am. The motion carried 15 YES: 1 No: 0 Abstentions: 11 Not Voting: 0 Absent.

The next plenary meeting of X3T13 will be April 26, 1996 in the San Jose area hosted by Quantum. The hotel is not yet confirmed but Quantum will provide a notice for prospective attendees.

19.1 Authorization of Working Group Meetings

X3T13 Working Group on February 21-23, 1996 at the Crown Sterling Suites in Milpitas, CA.
 X3T13 Working Group on March 27-29, 1996 at the Boulderado Hotel, in Boulder, CO.
 X3T13 Working Group on April 24-25, 1996 probably at the Holiday Inn in Milpitas, CA.

Larry Lamers moved and Tom Hanan seconded that the room rate cap be \$120+tax for scheduled meetings not held in the Bay Area. The rationale for not applying the cap in the Bay Area was that there are too many local participants to have any leveraged based upon room nights. The motion carried unanimously. The Chair interprets Bay Area to refer to the San Francisco Bay rather than numerous other bays.

Jim McGrath moved and Dal Allan seconded that a meeting fee be allowed of up to \$30 per day per person based on the host's net meeting cost. The Chair interprets net meeting costs to be less typical travel expenses that may be avoided by the host. He also interprets the allowance to only apply when the hotel does not include a meeting fee in the room rate of attendees. In this latter case the fee would still be allowed for those folks that do not identify themselves as attending the meeting and as staying in the meeting hotel. Finally the Chair interprets the fee as not applying to meetings held within a organization's facility. Dal Allan volunteered to provide for credit card payments and receipts. The motion passed unanimously.

20. Adjournment

The meeting was adjourned upon completion of all agenda items.

Meeting Attendees -- Enclosure (1)

Kent	Manabe	AKEI (Panasonic)	G
Richard	Kalish	Adaptec, Inc.	P
Tony	Kwan	Adaptec, Inc.	G
Lawrenc	Lamers	Adaptec, Inc.	A1
Ron	Roberts	Apple Computer	A
Siu	Victor	CMD Technology	O
Lang	Dennis	Circuit Assembly Corp.	O
Joe	Chen	Cirrus Logic Inc.	P
Les	Cline	Cirrus Logic Inc.	A
Marc	Noblitt	Conner Peripherals	P
Hale	Landis	Consultant	P
Paul	Raikunen	Digital	P
I. Dal	Allan	ENDL	P
Robert	Liu	Fujitsu Computer Products	P
Richard	Harcourt	GSI	A1
J. R.	Sims	Hewlett Packard Co.	P
Anthony	Yang	Hitachi America Ltd	P
Dan	Colegrove	IBM Corp.	P
Duncan	Penman	IIX Consulting	P
LeRoy	Leach	Maxtor Corp.	A
Pete	McLean	Maxtor Corp.	P
Darrin	Bulik	Micro House Int.	P
Dennis	Van Dalsen	Oak Technology	P
Robin	Freeze	Oak Technology, Inc	A1
Bill	McFerrin	Philips KMG	P
Curtis	Stevens	Phoenix Technologies	P
Greg	Elkins	QLogic Corp.	P
Mark	Evans	Quantum Corp.	P
Farbod	Falakfars	Quantum Corp.	O
James	McGrath	Quantum Corp.	A1
Steven	Peng	Samsung Semiconductor	O
Yoshihito	Higashitsutsumi	Sanyo Semiconductor	G
John	Masiewicz	Seagate Technology	A
Gene	Milligan	Seagate Technology	P
Ron	Werbow	Seagate Technology	O
Schaefner	Yogi	Silicon Systems	P
Stephen	Finch	Silicon Systems, Inc.	A
Patrick	Mercer	SyQuest Technology Corp	A
Tokuyuk	Totani	Toshiba America Info.	P
Carl	Bonke	Western Digital Corp.	A2
Tom	Hanan	Western Digital Corp.	P
Devon	Worrell	Western Digital Corp.	A1
Masa	Morizumi	Yamaha	P

P = Principal Member A = Alternate Member O = Observing Member G = Guest

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X3T13 Document Register - Enclosure (3)

Doc#	Description	Author	Pg	Date	Mailing
D96001r0	Organization meeting notice & agenda	milligan	2	12/16/95	DM9601
D96002r0	Meeting notice & agenda Plenary #2 - April 96	milligan	3	2/6/96	DM9601
D96003r0	Letter ballot - Development policy & procedures	milligan	1	2/5/96	DM9601
D96004r0	Letter ballot - Document process	milligan	1	2/5/96	DM9601
D96005r0	Letter ballot - Project document format guideline	milligan	1	2/5/96	DM9601
D96006r0	Letter ballot - Electronic notification & distribution	milligan	1	2/5/96	DM9601
D96007r0	Letter ballot - Funding for technical editors	milligan	1	2/5/96	DM9601
D96101r0	Minutes - working group - 11/29-30/95	lamers	7	1/04/96	DM9601
D96102r0	Use of pin A-D on 44-pin connector (Maxtor)	mclean	1	11/27/95	DM9601
D96103r0	ATAPI 1120 reformat	hanan			
D96104r1	ATA overlap proposal (X3T10/258r4)	mclean	23	12/4/95	DM9601
D96105r0	Alternatives to proxy interrupt	evans			
D96106r0	Proposal for ATA+PI	schnell			
D96107r0	Identify device data in support of host requirements	stevens	3		DM9601
D96108r0	Project procedure draft	milligan	13	12/16/95	DM9601
D96109r0	Attendance procedure	milligan	1	12/16/95	DM9601
D96110r1	X3T13 document process	mclean	5	1/29/96	DM9601
D96111r0	X3T13 Project Document Format Guideline	mclean	22	1/18/96	DM9601
D96112r1	Response to ATA3 letter ballot comments	mclean	13	1/18/96	DM9601
D96113r0	Use of pins A-D on 44-pin connector (IBM)	colegrove	1	1/22/96	DM9601
D96114r0	X3 copyright procedure	barra			
D96115r0	Voting requirements Table from SD2	hanan	4	1/24/96	DM9601
D96116r0	Read defects	totani	2	1/23/96	
D96117r0	Use of pins A-D on 44-pin conector (Toshiba)	totani	1	1/23/96	DM9601
D96118r0	Additional recommended internal procedures	hanan			
D96119r1	Electronic notification & distribution procedure	milligan	2	2/5/96	DM9601
D96120r0	Minutes - plenary 1/23-25/96	lamers	21	1/23/96	DM9601
D96121r0	Funding for technical editors	milligan	1	2/5/96	DM9601