

Accredited Standards Committee*
X3, Information Technology

Doc. No.: X3T13/D96138R0

Date: May 16, 1996

Project:

Ref. Doc.:

Reply to: Gene Milligan

To: Membership of X3T13

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

Subject: Minutes of X3T13 Plenary #2
April 26, 1996 : Milpitas, CA

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. Document Distribution
5. Review of Old Action Items
6. ATA Working Group Report
7. ATA-2 - Project 0948D
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9. Other ATAPI Items [] ()
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 - 12.7 Operations Policies and Procedures Tailored to X3T13 [Milligan] ()
 - 12.8 Documentation Procedures [McLean] ()
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 - 12.10 Electronic Notification Procedure [Milligan] (D96119r0)
 - 12.11 Procedure for Funding Technical Editors
13. New Business
 - 13.1 [] ()

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14. ISO
 - 14.1 AT Attachment ISO History and Status [] ()
 - 14.2 X3T13 ISO Strategy and Resultant Business [] ()
 15. Liaison Reports
 - 15.1 X3T10
 - 15.2 SFF
 16. Call for Patents
 17. Open Issues List Summary
 18. Review of Action Items
 19. Meeting Schedule
 - 19.1 Authorization of Working Group Meetings
 20. Adjournment
-

Results of Meeting

1. Opening Remarks

Gene Milligan, the X3T13 Acting Chair, called the meeting to order at 8:00 a.m., Friday April 26, 1996. He thanked Mark Evans of Quantum Corp. for hosting the meeting.

The Chair requested that Larry Lamers take the minutes for this meeting and thanked him for agreeing to the request.

Gene 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

- 12.12 Appointment of Chair
- 13.1 New Project Proposal D96134R1
- 13.2 SMART Proposal D96131R0

3. Attendance and Membership

The membership requirements were reviewed. X3 rules permit one vote per principal member organization. An individual from a new organization must attend two out of three consecutive plenary meetings. He/she may apply for voting membership at the second, or later, plenary meeting attended via a letter to the Chair of X3T13. Working group meetings do not count toward attendance requirements.

Organizations must also pay the X3 Service Fee (\$300) to maintain membership. 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.

Philips Semiconductor is in jeopardy for failing to return letter ballots. If they fail to return the next letter ballot they will lose their membership.

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.

CMD joined at this meeting. Conner Peripherals was purchased by Seagate resulting in a loss of the Conner membership.

4. Document Distribution

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

The 1996 annual Mailing Subscription Fee for paper mailings is \$300 for North American addresses and \$ 500 for other addresses. The CD mailing is also \$300 for North American addresses and \$400 other addresses 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, 10 May 1996. The acting chair requested that the deadline be extended an additional week. Documents received after this time will go into a subsequent mailing.

The current document register is enclosure (3).

5. Review of Old Action Items

- 41) Gene Milligan to 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. Completed. Compaq has submitted a letter in accordance with the policy.
- 42) Larry Lamers to provide list of members of ATA WG and X3T10 to Pete McLean for dpANS. Completed.
- 45) Mark Evans to generate meeting announcements for the two subsequent plenaries. One completed and one a carryover.
- 46) Gene Milligan to survey system vendors on the use of pins A-D in 44-pin environments. Completed. Letters were sent out to sixty one companies which are currently not members of X3T13.
- 47) Gene Milligan to draft letter to X3T10 regarding development of CD command sets. Completed.
- 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. Completed. Letters were sent out to sixty one companies which are currently not members of X3T13.
- 49) Gene Milligan to pursue resolution of the restriction against abstentions on technical issues. Completed with unsatisfactory results. The X3 PPC has approved a rule change which allows abstentions except on votes which impose the two thirds rule. The chair has submitted additional comments on the abstention issue for the May X3 OMC meeting.

6. ATA Working Group Report

Gene Milligan reported Since the last plenary ad hoc meetings were held in February in Milpitas hosted by Quantum, March in Longmont hosted by Seagate, and Milpitas hosted by Quantum. A joint ad hoc was held with the X3T10 MMC ad hoc. The ad hocs addressed all the outstanding projects except 1120D. Particular emphasis was placed on completing ATA-3, zero budgeting on options and vendor unique, strong command overlap and queuing, and the 1153 D project. The ad hoc also addressed the various X3T13 letter ballots. particular:

- The ad hocs addressed the ATA-3 letter ballot comments which resulted from the X3T10 ballot;

- Recommended by a vote of 10-2 that the title of the document be changed to AT Attachment - 4 with Packet Interface Extensions (ATA/ATAPI-4).
- Recommended by a vote of 12:1 that D96105r0 replace the proxy interrupt definition in D96104r1.
- Unanimously recommended that for packet service, commands are directed to the logical unit number in Bits(2:0) of the Device Head Register.
- Unanimously recommended that bits 7 and 5 of the Device Head register be changed to obsolete.
- By a vote of 16:1 recommended that method two for handling commands addressed to device 1 in a device 0 only configuration be removed.
- Unanimously recommended that Pins A-D on 44-pin Connector D96102R2 be included in 1153.
- Agreed with the MMC ad hoc to recommend that a change to the command name to IDENTIFY PACKET DEVICE; to review the 1153 Soft Reset for correctness; to define packet device behavior with the ATA IDENTIFY DEVICE command; define packet device ATA READ command behavior; add CDB padding algorithm to 1153 and/or MMC; an annex to be added to MMC to profile the commands to be implemented by an ATAPI device; for MMC to add a paragraph to define ATAPI usage of the command descriptor block; to further review ATAPI security, and power management; to expand words 82 and 83 in 1153 to define the command set supported along with an annex to list the document wherein that command set resides and how to register new command sets; to recommend unanimously that working draft 1153 include a statement that packet devices use packet SMART; and that no new commands are presently needed in MMC to support ATAPI devices. Another joint ad hoc is planned for June 96.
- Patent calls were made at each of the ad hoc meetings. None resulted in the identification of new patent issues.

Pete McLean moved and Ron Roberts seconded a motion that X3T13 accepts the recommendations of the ad hocs except for those recommendations specifically addressed by later agenda items. The motion carried unanimously.

7. ATA-2 - Project 0948D

Larry Lamers reported that the file has been recovered and the file posted to the ftp site and a paper copy sent to the chair for further processing.

8. ATAPI - Project 1120D

Tom Hanan moved and Curtis Stevens seconded that Project 1120D be withdrawn. The motion carries 17:2:0:6.

Ron Roberts and Rick Kalish stated that they voted no to save the number in anticipation if a project would be needed.

9. Other ATAPI Items [] ()

10. ATA-3 - Project 2008D

10.1 ATA-3 Letter Ballot Results and Comment Resolution

The results of the X3T10 letter ballot were 46:0:0:5.

Hale Landis moved and Curtis Stevens seconded that the comment resolution, D96112r0, be accepted along with the editorial changes in D96129r0.

Pete McLean moved and Hale Landis seconded that ATA-3 revision 7 be forwarded for further processing.

The Chair asked if there was any objection to combining the two questions in a single roll call vote. There was no objection.

| | | | | |
|---------|------------|---------------------------|---|---|
| Richard | Kalish | Adaptec, Inc. | P | Y |
| Ron | Roberts | Apple Computer | A | Y |
| Joe | Chen | Cirrus Logic Inc. | P | A |
| Hale | Landis | Consultant | P | Y |
| Paul | Raikunen | Digital | P | Y |
| I. Dal | Allan | ENDL | P | A |
| Robert | Liu | Fujitsu Computer Products | P | A |
| 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 |
| Robert | Griffith | Oak Technology | A | Y |
| Bill | McFerrin | Philips KMG | P | A |
| Curtis | Stevens | Phoenix Technologies | P | Y |
| Greg | Elkins | QLogic Corp. | P | A |
| Mark | Evans | Quantum Corp. | P | Y |
| Konichi | Kasima | Sanyo Electric Co Ltd | P | Y |
| Gene | Milligan | Seagate Technology | P | Y |
| Yogi | Schaefer | Silicon Systems | P | A |
| Pat | Mercer | SyQuest Technology Corp | A | Y |
| Tokuyuk | Totani | Toshiba America Info. | P | Y |
| Tom | Hanan | Western Digital Corp. | P | Y |
| Masa | Morizumi | Yamaha | P | Y |

The roll call on the motions passed 20:0:0:6

11. ATA-4 - Project 1153D

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

The document was reviewed during the working group. There was no further business to conduct in the plenary on this item.

12. Old Business

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

The chair noted that this item had changed in scope to device segmentation and was still being actively pursued in ad hoc meetings with the latest contribution being a proposal from Dan Colegrove D96137r0.

12.2 Items from the Open Issues List [] ()

None.

12.3 ATA Mode X Analog Issues [] ()

No action taken in the working group. There was no further business to conduct in the plenary on this item.

12.4 ATA Cable Issues and Definitions [McGrath] ()

The chair noted that X3T13 is closely following the activity in SFF on this item and is currently awaiting availability of feasibility terminators and terminator test results.

12.5 Cache Flush [Schnell] ()

The ad hoc had reviewed Richard Schnell's proposal and requested detailed revisions. Ron Roberts indicated that no updates were available.

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

Tom Hanan reported that the directory has been automated on the web page to start automatic download. The reflector name has been turned on 'X3T13@dt.wdc.com'. The incoming directory will have the ??z file extensions expanded on a once a day basis.

Pete McLean reported that the incoming directory will be cleaned out after the mailing.

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

The letter ballot passed 25:0:0:1 and will be submitted to X3 PPC. Since it is in conformance with the SD-2 X3T13 will use it as a guideline pending PPC approval.

12.8 Documentation Procedures [McLean] (D96110r1)

The letter ballot passed 24:1:0:1. The ad hoc recommended that the Phoenix Yes comments be accepted. The file size for small documents defined in D96119R1 64 KB will be added as the recommended break point for using compression. The ad hoc recommended that the Quantum NO comments be partially accepted. The requirement for electronic form is two-fold. X3T13 has decided to have the primary mailing vehicle be electronic format. In addition certain documents may eventually be incorporated in a project document which is facilitated by having an electronic original. Shifting the responsibility of converting such documents from the contributing party to the technical editor is an unfair additional burden which the committee does not endorse. However it is recognized that certain contributions may be made to X3T13 which do not satisfy the intent of clause 4.2. Therefore a paragraph will be added to clause 2.1 which states:

"If documents are submitted to X3T13 which do not comply with the other provisions of this document process (e.g. a paper only document) the Chair will decide if the document will be accepted for a document number and if it will be included in a mailing by a scanning conversion to one of the standard formats."

The ad hoc recommended that the Gene Milligan YES comments be rejected.

The ad hoc recommended that the Toshiba YES comments be accepted. Item (3) will be expanded to allow the alternative of submitting a "DOS formatted" diskette or Email UUENCODED copy of the file.

The ad hoc voted 13:0 to recommend these resolutions to the plenary.

Mark Evans stated that as a result of the changes made Quantum requests that their no vote be changed to yes.

Curtis Stevens moved and Mark Evans seconded a motion that X3T13 accepts the recommended resolution of the letter ballot comments. The chair conducted the following roll call vote which passed 23:00:00:04. (CMD Technology had requested and been granted membership since the prior roll call vote.)

| | | | | |
|---------|---------|-------------------|---|---|
| Richard | Kalish | Adaptec, Inc. | P | Y |
| Ron | Roberts | Apple Computer | A | Y |
| Joe | Chen | Cirrus Logic Inc. | P | Y |
| Raymond | Lang | CMD Technology | A | Y |
| Hale | Landis | Consultant | P | Y |

| | | | | |
|---------|------------|---------------------------|---|---|
| Paul | Raikunen | Digital | P | Y |
| I. Dal | Allan | ENDL | P | Y |
| Robert | Liu | Fujitsu Computer Products | P | A |
| 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 |
| Robert | Griffith | Oak Technology | A | Y |
| Bill | McFerrin | Philips KMG | P | A |
| Curtis | Stevens | Phoenix Technologies | P | Y |
| Greg | Elkins | QLogic Corp. | P | A |
| Mark | Evans | Quantum Corp. | P | Y |
| Konichi | Kasima | Sanyo Electric Co Ltd | P | Y |
| Gene | Milligan | Seagate Technology | P | Y |
| Yogi | Schaefer | Silicon Systems | P | A |
| Pat | Mercer | SyQuest Technology Corp | A | Y |
| Tokuyuk | Totani | Toshiba America Info. | P | Y |
| Tom | Hanan | Western Digital Corp. | P | Y |
| Masa | Morizumi | Yamaha | P | Y |

12.9 Letter Ballot D96005r0 Results X3T13 Project Document Format Guideline [McLean] (D96111r0)

The letter ballot passed 25:0:0:1. The ad hoc recommended that the Gene Milligan YES comments be rejected. The ad hoc vote on the recommendation was unanimous.

Ron Roberts moved and Hale Landis seconded a motion that X3T13 accepts the recommended resolution of the letter ballot comments. The motion passed unanimously.

12.10 Electronic Notification Procedure [Milligan] (D96119r0)

The letter ballot passed 23:2:0:1. The ad hoc recommended that the GSI NO comments be rejected since the added expense for Email, if any, is significantly less than the added cost of paper notification. Beyond the cost aspect the Email means offers productivity improvements for the administration of the committee.

The ad hoc recommended that the Toshiba NO comment (1) be accepted. Task group will be changed to Technical Committee; that comment 2 be accepted by changing the primary means of notification to "The primary means of added to the X3T13 e-mail list"; that comment 3 be accepted with the statement will be changed to "notice be sent using the X3T13 e-mail list and if a volunteer is currently providing a reflector, the X3T13 reflector at least three"; that comment 4 be accepted with clause 5 changed to "Distribution of documents for consideration at X3T13 meetings"; that comment 5 be accepted with the statement changed to "notice be sent using the X3T13 e-mail list and if a volunteer is currently providing a reflector, the X3T13 reflector".

The ad hoc vote on the recommendations was unanimous.

Joe Chen moved and Patrick Mercer seconded a motion that X3T13 accepts the recommended resolution of the letter ballot comments. The chair conducted the following roll call vote which passed 23:00:00:04.

| | | | | |
|---------|---------|-------------------|---|---|
| Richard | Kalish | Adaptec, Inc. | P | Y |
| Ron | Roberts | Apple Computer | A | Y |
| Joe | Chen | Cirrus Logic Inc. | P | Y |
| Raymond | Lang | CMD Technology | A | Y |

| | | | | |
|---------|------------|---------------------------|---|---|
| Hale | Landis | Consultant | P | Y |
| Paul | Raikunen | Digital | P | Y |
| I. Dal | Allan | ENDL | P | Y |
| Robert | Liu | Fujitsu Computer Products | P | A |
| 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 |
| Robert | Griffith | Oak Technology | A | Y |
| Bill | McFerrin | Philips KMG | P | A |
| Curtis | Stevens | Phoenix Technologies | P | Y |
| Greg | Elkins | QLogic Corp. | P | A |
| Mark | Evans | Quantum Corp. | P | Y |
| Konichi | Kasima | Sanyo Electric Co Ltd | P | Y |
| Gene | Milligan | Seagate Technology | P | Y |
| Yogi | Schaefer | Silicon Systems | P | A |
| Pat | Mercer | SyQuest Technology Corp | A | Y |
| Tokuyuk | Totani | Toshiba America Info. | P | Y |
| Tom | Hanan | Western Digital Corp. | P | Y |
| Masa | Morizumi | Yamaha | P | Y |

12.11 Procedure for Funding Technical Editors

The letter ballot passed 25:0:0:1 and has already been put into effect.

12.12 Appointment of Chair [] ()

Gene reported that the appointment of the X3T13 chair is on the July agenda for OMC.

13. New Business

13.1 Project Proposal for Technical Report for Enhanced BIOS Disk Drive Technical Report [Stevens] (D96134r1)

Ron Roberts moved and Hale Landis seconded that the project proposal be forwarded to X3 for further processing.

| | | | | |
|---------|------------|---------------------------|---|---|
| Richard | Kalish | Adaptec, Inc. | P | Y |
| Ron | Roberts | Apple Computer | A | Y |
| Joe | Chen | Cirrus Logic Inc. | P | Y |
| Raymond | Lang | CMD Technology | A | Y |
| Hale | Landis | Consultant | P | Y |
| Paul | Raikunen | Digital | P | Y |
| I. Dal | Allan | ENDL | P | Y |
| Robert | Liu | Fujitsu Computer Products | P | A |
| 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 |
| Robert | Griffith | Oak Technology | A | Y |
| Bill | McFerrin | Philips KMG | P | A |

17. Review of Action Items

- 50) Gene Milligan to take appropriate action to withdraw project 1120.
- 51) Pete McLean to prepare rev 7 of ATA-3.
- 52) Gene Milligan to send rev 7 of ATA-3 to X3 for further processing.
- 53) Gene Milligan to send project proposal for ~~ATA~~ Technical Report for Enhanced BIOS Disk Drive to X3 for further processing.

18. Meeting Schedule

The next plenary meeting of X3T13 will be August 2, 1996 in the San Jose area hosted by Quantum. The hotel is not yet confirmed but Quantum will provide a notice for prospective attendees. Chair's note: The minutes have been overtaken by events. The meeting location will be the cafeteria training room in Seagate Building 5 at 3081 Zanker Road in San Jose, California.

The subsequent plenary meeting of X3T13 will be October 25, 1996 in Wakakai, Hawaii hosted by Quantum at the Sheraton Hotel.

Plenary meetings are also planned for:

January 24, 1997
April 25, 1997
July 31, 1997
October 24, 1997

The starting time is 9:00am.

18.1 Authorization of Working Group Meetings

X3T13 Working Group on May 22-24, 1996 at the Biltmore Hotel in San Jose, CA.
X3T13 Working Group on June 19-21, 1996 at Western Digital, in Irvine, CA
X3T13 Working Group on July 31-August 1, 1996 in Milpitas, CA.
X3T13 Working Group on August 21-23, 1996 in Milpitas, CA.
X3T13 Working Group on September 25-27, 1996 at Western Digital in Irvine, CA.
X3T13 Working Group on October 23-24, 1996 at the Sheraton Hotel in Wakakai, Hawaii.

Although not yet authorized, it is likely that the following ad hoc meetings will be required:

X3T13 Working Group on November 13-15, 1996 at Western Digital in Irvine, CA.
X3T13 Working Group on January 22-23, 1997 hosted by Quantum.
X3T13 Working Group on February 19-21, 1997 hosted by Quantum.
X3T13 Working Group on March 19-21, 1997 hosted by Western Digital.
X3T13 Working Group on April 23-24, 1997 hosted by Quantum.
X3T13 Working Group on May 21-23, 1997 hosted by Quantum

Ron Roberts moved that the November working group be changed to Nov 11-13, 1996. The motion failed 3:6:12.

A co-located working group meeting with MMC was planned for June. (Chair's note: The subsequent MMC working group decided not to hold a June joint meeting.)

19. Adjournment

The meeting was adjourned upon completion of all agenda items.

Meeting Attendees -- Enclosure (1)

| | | | |
|----------|-------------|-------------------------|---|
| Richard | Kalish | Adaptec, Inc. | P |
| Ron | Roberts | Apple Computer | A |
| Joe | Chen | Cirrus Logic Inc. | P |
| Raymond | Liang | CMD Technology | A |
| Hale | Landis | Consultant | P |
| Paul | Raikunen | Digital | P |
| I. Dal | Allan | ENDL | P |
| Tony | Goodfellow | GSI | P |
| J. R. | Sims | Hewlett Packard Co. | P |
| Anthony | Yang | Hitachi America Ltd | P |
| Dan | Colegrove | IBM Corp. | P |
| Duncan | Penman | IIX Consulting | P |
| Pete | McLean | Maxtor Corp. | P |
| Darrin | Bulik | Micro House Int. | P |
| Robert | Griffith | Oak Technology | A |
| Mike | Christensen | Phoenix Technologies | G |
| Curtis | Stevens | Phoenix Technologies | P |
| Mark | Evans | Quantum Corp. | P |
| Kenichi | Kojima | Sanyo Electric Co Ltd | P |
| Gene | Milligan | Seagate Technology | P |
| Patrick | Mercer | SyQuest Technology Corp | A |
| Tokuyuki | Totani | Toshiba America Info. | P |

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

X3T13 Attendance Database - Enclosure (2)

| | | |
|---|--------------------------------|--|
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Minutes of X3T13 Plenary Meeting #2 in Milpitas, CA

X3T13/D96138r0

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