

**Doc. No.:** X3T10/94-016r1

**Date:** January 25, 1994

**Project:**

**Ref. Doc.:**

**Reply to:** John Lohmeyer

To: Membership of X3T10

From: Lawrence J. Lamers, Acting Secretary X3T10  
John B. Lohmeyer, Acting Chair X3T10

Subject: Minutes of X3T10 Plenary Meeting #1  
San Diego, CA -- January 13, 1994

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### Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. X3 Tutorial
5. Approval of Minutes - November Meeting Colo Spgs, CO (X3T9.2/93-176r1)
6. Document Distribution
7. Call for Patents
8. Review of Old Action Items
9. Subgroup and/or Project Status Reports
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  - 9.12 SCSI-3 Primary Commands (SPC) Status [Weber]
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  - 9.16 SCSI-3 Medium Changer Commands (SMC) [open]
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  - 9.19 SCSI-3 Serial Storage Protocol (SSP) [Scheible]
  - 9.20 SCSI-3 Controller Commands (SCC) (93-130) [Hagerman]
  - 9.21 Replacement of ANSI X3.80-1988, Interfaces Between Flexible Disk Cartridges and Their Host Controllers, with ISO 9315:1989.
  - 9.22 RAID Study Group [Penokie]

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

**X3 Secretariat, Computer and Business Equipment Manufacturers Association (CBEMA)**

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10. Old Business
    - 10.1 Technical Information Bulletins
    - 10.2 GPP: Standard or Technical Report? [Milligan] ( )
  11. New Business
    - 11.1 X3T10 Subscription Mailing Program
    - 11.2 Review of new documents
    - 11.3 Task Set Basis Selection
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- 

## Results of Meeting

### 1. Opening Remarks

John Lohmeyer, the Acting Chair, called the meeting to order at 1:00 p.m., Thursday January 13, 1994. He thanked Rich Bailly of Vitro Corp. for arranging and hosting the first meeting of X3T10. John said that he had copies of the call for volunteers to Chair X3T10 for anyone who wishes to apply.

John said that X3 Subgroup Membership forms and 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. The X3 Membership forms and the X3T10 Mailing Subscription forms should be mailed to the X3 Secretariat.

He also announced that any eligible organization may join X3T10 at the meeting by giving John a letter stating their interest in X3T10 and naming the principal and alternate members. Form letters were available for those who forgot to bring a letter with them.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated. Copies of the draft agenda and general information on X3T10 were made available to those attending.

### 2. Approval of Agenda

The draft agenda was approved with the following additions:

- 11.3 Task Set Basis Selection
- 11.4 Delivery Mechanism Sequentiality

- 11.5 SCC Project Proposal
- 11.5 MMC Project Proposal

### **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. Since the meeting was the first meeting of X3T10, it was a special case and those present were permitted to join without prior attendance.

Organizations must also pay the X3 Service Fee (\$300) to maintain membership. This year, the International Participation fee (\$300) will be billed separately directly from ANSI.

The X3 Secretariat will be invoicing all former X3T9.2 members for X3T10 membership. Those that do not wish to join the new committee should return their invoice marked "cancel". New members of X3T10 who were not on the X3T9.2 roster will receive an invoice eventually.

The initial X3T10 membership was 60 organizations. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current X3T10 membership list.

### **4. X3 Tutorial**

Per the requirements in 4.6.2 of the Organization, Rules and Procedures of X3 (SD-2), "Each newly formed TC shall establish time on its first agenda prior to conducting any technical business for presentation of an overview on X3 and its procedure." John Hill of OMC was present to give the overview (see X3T10/94-034).

### **5. Approval of Minutes - November Meeting Colo Spgs, CO (X3T9.2/93-176r1)**

The minutes were approved as written except that the motion regarding postponement of consideration of the motion on changing GPP to a technical report should have noted that the motion was postponed until January 13, 1994. The minutes will not be re-distributed.

### **6. Document Distribution**

Members who have any problems with their mailing subscription should deal directly with Katrina Gray at (202) 626-5741.

Larry Lamers requested that all documents for the next mailing must be sent so as to be received by noon on Friday, January 21, 1994. 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 microfilming. This means that high-quality, single-sided originals with adequate margins and proper identification must be submitted. Document X3T9.2/92-84 R1 contains the list of requirements for submissions.

As usual, minutes are also available on the SCSI BBS (719-574-0424) and will be distributed to the SCSI Reflector E-mail list. To be added to the SCSI Reflector, send an electronic message to: scsiadm@WichitaKS.NCR.COM.

The current document register is enclosure (3).

## **7. 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. The last page contains the ANSI patent policy.

X3 has recently approved two patent statements, one for the case where no patents have been identified and another for the case where patent(s) have been identified and the patent holder(s) have agreed to comply with the ANSI patent policy.

Gene Milligan asked about a statement in the proposed SCSI-to-SSA mapping. John Scheible stated that the statement was only applicable to SSA physical and will be removed from the proposed draft in the next revision.

## **8. Review of Old Action Items**

- 1) John Lohmeyer will contact Marilyn Courtot regarding AIIM activity.  
**Carry Over.**
- 2) John Lohmeyer will contact Fernando Podia regarding liaison reports.  
**Carry Over.**

John Lohmeyer stated that for X3T10 action items would be numbered sequentially without reusing previous numbers.

## **9. Subgroup and/or Project Status Reports**

### **9.1 Project Status Summary [Lohmeyer]**

John Lohmeyer presented the current X3T10 project status summary.

### **9.2 SCSI-2 Status [Lamers]**

John Lohmeyer reported that SCSI-2 was sent to the ANSI Board of Standards Review and should be approved, but he had not yet seen the approval letter.

### **9.3 SCSI Common Access Method (CAM) [Dallas]**

Ralph Weber reported. Rev 5 has been prepared to address public review comments. There were significant editorial comments that need to be reviewed. The next working group will have expanded hours to deal with the further editorial comments.

Gene Milligan moved and Ralph Weber seconded that revision 5 be accepted as the current working draft document for CAM. The motion passed 35:0.

### **9.4 AT Attachment Status (ATA) [Lamers]**

John Lohmeyer reported that ATA had passed its second public review and is now ready for the X3 letter ballot. The X3 Secretariat held up the ballot waiting for X3T10 to incorporate the correct ANSI patent statement. Since no patents have been identified to date, the statement saying no patents have been identified will be included by the technical editor and the document will be released for X3 letter ballot.

### **9.5 ATA Extensions (ATA-2) [Finch]**

The ATA extensions project is being driven to conclusion so that it can be forwarded.

Project proposals for ATA-3 standards are being drafted. ATA-3 will included a layered document structure with faster transfer rates and added device type support.

The first set of projects will deal with ATA-PH, ATA-XPT, ATA-BC, ATA-PI.

A reflector for ATA has been established. Send an email to majordomo@dt.wdc.com. The email should contain a line in the body of the message that states "subscribe ata yourinternetaddress". Postings to the ATA reflector should be sent to ata@dt.wdc.com.

### **9.6 SCSI-3 Architecture Model (SAM) Status [Monia]**

Charles Monia reported responses have been prepared to the letter ballot comments. All responses will be or have been posted to the SCSI reflector.

There are two issues that need plenary action (see agenda items 11.3 and 11.4).

The next revision of SAM will be available prior to the next plenary. Charles will mail a copy of the document to anyone requesting it. It most likely will not be finished in time for the next mailing.

### **9.7 SCSI-3 Parallel Interface (SPI) Status [Lamers]**

The SPI first public review is October 29, 1993 to February 26, 1994. At its September '93 meeting, X3T9.2 authorized its chairman to submit a public review comment requesting that SCAM be incorporated into SPI as a normative annex.

### **9.8 SCSI-3 Interlocked Protocol (SIP) Status [Lamers]**

An editors meeting was held in December. More work needs to be done. Another working group meeting will be scheduled.

### **9.9 SCSI-3 Generic Packetized Protocol (GPP) Status [Stephens]**

Gary Stephens reported. Several changes have been made to accommodate comments received. A revision is planned to be available at the next meeting.

### **9.10 SCSI-3 Serial Bus Protocol (SBP) Status [Marazas]**

Scott Smyers reported. A working group meeting is scheduled for January 26, 1994 to resolve the letter ballot comments.

### **9.11 SCSI-3 Fiber Channel Protocol (FCP) Status [Snively]**

Robert Snively reported. Revision 7a is available and addresses all comments received from the letter ballot. Several items came to light in the review at the last working group. A revision 8 will be in the next mailing.

Bob requested a letter ballot be conducted to forward FCP in conjunction with the next mailing. The chair stated he would include a letter ballot if FCP Rev 8 is available at the time of the mailing.

**9.12 SCSI-3 Primary Commands (SPC) Status [Weber]**

Ralph Weber reported. An outline for the SPC document was in the mailing. A first draft will be available at the March meeting. This topic will be on the agenda for the next working group.

**9.13 SCSI-3 Block Commands (SBC) [open]**

A project editor is being sought.

**9.14 SCSI-3 Stream Commands (SSC) [open]**

Edward Lappin indicated that he is willing to act as project editor for the SSC project.

**9.15 SCSI-3 Graphics Commands (SGC) [open]**

A project editor is being sought.

**9.16 SCSI-3 Medium Changer Commands (SMC) [open]**

A project editor is being sought.

**9.17 Directly-Addressable Device Interface (DADI) []**

No report.

**9.18 SCSI Common Access Method -2 (CAM-2) (93-082) [Dallas]**

This project is on hold until CAM-1 is ready to be returned to X3 for second public review.

**9.19 SCSI-3 Serial Storage Protocol (SSP) [Scheible]**

John Scheible reported. The project proposal is still in process. A proposal for an eventual working draft was in the last mailing.

**9.20 SCSI-3 Controller Commands (SCC) (93-130) [Hagerman]**

John Lohmeyer reported that while X3T9 did approve the SCC project proposal in December, they failed to send it OMC for its meeting last week. The failure was due to misplacing the project proposal file. Agenda item 11.5 was added to the agenda to re-forward the SCC project proposal to X3.

**9.21 Replacement of ANSI X3.80-1988, Interfaces Between Flexible Disk Cartridges and Their Host Controllers, with ISO 9315:1989.**

In April '93, X3T9.2 voted to recommend that simultaneous withdrawal of X3.80-1988 and adoption of ISO 9315:1989 as an ANSI standard. X3T9 accepted this recommendation and voted to make the same recommendation to X3. The public review period began October 15, 1993 and closes February 13, 1994.

**9.22 RAID Study Group [Penokie]**

George Penokie reported. Two meetings have occurred since the last plenary. The RAID model document has been revised. An extended addressing proposal has been developed and is stable. It will be incorporated into the RAID model.

**10. Old Business**

**10.1 Technical Information Bulletins**

Gary Stephens had prepared a TIB on the tape partition issue. Folks are advised to review it. It is anticipated that a forwarding motion will be taken as soon as SCSI-2 is approved.

**10.2 GPP: Standard or Technical Report? [Milligan] ()**

A motion on whether GPP should be a standard or technical report was postponed until this meeting:

Whereas having two I/O protocols for each SCSI physical interconnect is a problem for the industry although there may be some niche applications where GPP is useful, Gene Milligan moved and Ed Gardner seconded that X3T9.2 take the appropriate steps to convert it from a dpANS and to publish it as a technical report.

Neil Wanamaker moved and Jim McGrath seconded that the question be called. The motion passed: 22:8.

The main motion passed in a roll call vote:

| Voting Organization       | Name                       | S | Yes | No | Abs | NP      |
|---------------------------|----------------------------|---|-----|----|-----|---------|
| 3M Company                | Mr. Alan R. Olson          | P | 1   |    |     |         |
| AMP, Inc.                 |                            | P |     |    |     | 1       |
| AT&T                      | Mr. John Lohmeyer          | P |     | 1  |     |         |
| Adaptec, Inc.             | Mr. Norm Harris            | P | 1   |    |     |         |
| Advanced Micro Devices    | Mr. David Skinner          | P | 1   |    |     |         |
| Amdahl Corp.              | Mr. Neil T. Wanamaker      | P |     | 1  |     |         |
| Ancot Corp.               | Mr. Gary Porter            | A |     | 1  |     |         |
| Apple Computer            | Mr. Scott Smyers           | P | 1   |    |     |         |
| BusLogic                  | Mr. Clifford E. Strang Jr. | P | 1   |    |     |         |
| CMD Technology            | Mr. Edward Haske           | P | 1   |    |     |         |
| Ciprico Inc.              | Mr. Gerry Johnsen          | P |     | 1  |     |         |
| Circuit Assembly Corp.    | Mr. Ian Morrell            | A | 1   |    |     |         |
| Cirrus Logic Inc.         | Mr. Dave Weber             | A | 1   |    |     |         |
| Compaq Computer Corp.     | Mr. Bill Galloway          | P | 1   |    |     |         |
| Conner Peripherals        | Mr. Joseph Wach            | A | 1   |    |     |         |
| Dallas Semiconductor      | Mr. Louis Grantham         | P | 1   |    |     |         |
| Digital Equipment Corp.   | Mr. Edward A. Gardner      | A | 1   |    |     |         |
| Distributed Processing Te | Mr. Tom Treadway           | P | 1   |    |     |         |
| ENDL                      | Mr. I. Dal Allan           | P |     | 1  |     |         |
| Exabyte Corp.             | Mr. Edward Lappin          | P |     | 1  |     |         |
| FSI Consulting Services   | Mr. Gary R. Stephens       | P |     | 1  |     |         |
| Foxconn                   |                            | P |     |    |     | 1       |
| Fujitsu                   | Mr. Robert Liu             | P | 1   |    |     |         |
| Future Domain Corp.       | Mr. Mark Woithe            | P | 1   |    |     |         |
| Harbor Electronics        | Mr. Ray Kallio             | P | 1   |    |     |         |
| Harting Electronik, Inc.  |                            | P |     |    |     | 1       |
| Hewlett Packard Co.       | Mr. Jeffrey L. Williams    | P | 1   |    |     |         |
| Hitachi                   | Dr. Sam Karunanithi        | P | 1   |    |     |         |
| Honda Connectors          |                            | P |     |    |     | 1       |
| IBM Corp.                 | Mr. George Penokie         | P | 1   |    |     |         |
| Interphase Corp.          | Mr. Varouj Der-Hacopian    | A | 1   |    |     |         |
| JAE                       | Mr. Guy R. Addis           | A | 1   |    |     |         |
| Maxoptix Corp.            | Ms. Donna Pope             | P | 1   |    |     |         |
| Maxtor Corp.              | Mr. Lawrence J. Lamers     | A |     | 1  |     |         |
| Methode Electronics, Inc. |                            | P |     |    |     | 1       |
| Molex Inc.                | Mr. Joe Dambach            | P | 1   |    |     |         |
| NEC                       | Mr. Bruce Anderson         | P | 1   |    |     |         |
| National Semiconductor    |                            | P |     |    |     | 1       |
| Oak Technology, Inc.      |                            | P |     |    |     | 1       |
| P. E. Logic Corp.         |                            | P |     |    |     | 1       |
| Pacific Electro Data Inc. |                            | P |     |    |     | 1       |
| Panasonic (Matsushita)    | Mr. Charles I. Yang        | A | 1   |    |     |         |
| Quantum Corp.             | Mr. James McGrath          | P | 1   |    |     |         |
| Rancho Technology, Inc.   | Mr. Anuj Garg              | A | 1   |    |     |         |
| Ricoh Corporation         | Mr. Satwinder S. Mangat    | A |     | 1  |     |         |
| Samsung Semiconductor     | Mr. S. Jauher Zaidi        | P | 1   |    |     |         |
| Seagate Technology        | Mr. Gene Milligan          | P | 1   |    |     |         |
| Silicon Systems, Inc.     | Mr. Stephen G. Finch       | P | 1   |    |     |         |
| Sony Electronics, Inc.    | Mr. Mike Yokoyama          | P | 1   |    |     |         |
| Storage Technology Corp.  | Mr. Erich Oetting          | P | 1   |    |     |         |
| Sun Microsystems, Inc.    | Mr. Robert N. Snively      | P | 1   |    |     |         |
| Tandem Computers          | Mr. John Moy               | P |     | 1  |     |         |
| Thomas & Betts            |                            | P |     |    |     | 1       |
| U.S. Design               |                            | P |     |    |     | 1       |
| UNISYS Corporation        | Mr. Peter Dougherty        | P |     | 1  |     |         |
| Unitrode                  | Mr. Paul D. Aloisi         | P | 1   |    |     |         |
| Western Digital Corporati | Mr. Jeff Stai              | P | 1   |    |     |         |
| Woven Electronics         | Mr. Doug Piper             | P | 1   |    |     |         |
| Totals:                   |                            |   | 36  | 11 | 0   | 11 = 58 |

Note: The above tally is slightly different from the results tentatively announced during the meeting. Upon re-examining the membership list, it was discovered that one observer organization erroneously was called during the roll call (who voted in the affirmative). This error was due to the inherent difficulties in establishing the initial X3T10 membership and does not affect the outcome of the vote. Two organizations joined X3T10 after the roll call



vote was taken.

The chair requested a volunteer to revise the project proposal for GPP. Gene Milligan volunteered.

## **11. New Business**

### **11.1 X3T10 Subscription Mailing Program**

Bob Snively moved and Jeff Williams seconded that X3T10 request the X3 Secretariat to initiate a Document Distribution Program for X3T10 and to transfer the remaining funds from the X3T9.2 Document Distribution Program to X3T10's fund. The motion passed unanimously.

Steve Finch requested that consideration be given to combining the X3T10.1 task group mailing in the X3T10 mailing and allowing members of either subgroup to subscribe to the combined mailing. The chair stated he will investigate the possibility.

### **11.2 Review of new documents**

None.

### **11.3 Task Set Basis Selection**

This item was added to the agenda at the request of the working group to attempt resolution of this recurring topic.

Ralph Weber moved and Jeff Williams seconded that alternative task set definitions (Annex A) be removed from SAM. The motion carried 34:2.

### **11.4 Delivery Mechanism Sequentiality**

Bob Snively moved and Scott Smyers seconded that in-order delivery not be required by SAM. The motion carried 32:4.

### **11.5 SCC Project Proposal**

Bob Snively moved and Steve Finch seconded that X3T10 forward the SCSI-3 Controller Commands project proposal (X3T10/94-035r0) to X3 for further processing. The motion carried 47:0:0:5.

### **11.6 MMC Project Proposal**

Steve Finch moved and Jeff Stai seconded that X3T10 forward the SCSI-3 Multi-Media Commands project proposal (X3T10/94-036r0) to X3 for further processing. The motion carried 47:0:0:5.

## **12. ISO [Milligan]**

Gene Milligan, the acting X3T10 International Representative, gave an oral report. The electronic report was not available in time for the mailing.

ISO Report  
January 1994

The following is extracted from a letter sent by the IR to Walter v. Pattay, Siemens Nixdorf:

I have been trying to reach the SC 25 Secretariat for a while to find out why nothing seems to have progressed since the June

meeting. When I called Barth the phone just rings without answer and without voice mail. I was going to switch my enquiry to Prof. Popovic this week to find out why we have heard nothing since the meeting.

Last Thursday I heard a rumor that Hr. Barth had left Siemens and that you had taken over the Secretariat. So that added another question to ask Prof. Popovic. I presume from your fax that the rumor may be factual. So I will ask you the following questions, instead of Popovic, most of the questions relate to the WG 4 report:

1) Would you please confirm what is the Status and Makeup of the SC 25 Secretariat. (Depending on the answer to this item please address or ignore the following items.)

2) The FDDI HRC (Project 25.13.01.06) was submitted for ISO/IEC publication. What is the publication status?

3) The ESDI 10 222 (Project 25.13.10.12) was submitted for ISO/IEC publication. What is the publication status? This was a specific resolved action item for the SC 25 Secretariat to check on from the June meeting.

4) SCSI-2 9316-1 (was previously 10 288) (Project 25.13.10.12) was to be issued as a DIS letter ballot. What is the status of the DIS ballot?

5) IPI-6 (Project 25.13.10.14) was to be issued as 9318-6 CD letter ballot. What is the status of the CD ballot?

6) HIPPI-PH (Project 25.13.12.01) was to be issued as 11 518-1 DIS letter ballot. What is the status of the DIS ballot?

7) HIPPI-FP (Project 25.13.12.02) was to be issued as 11 518-1 CD letter ballot. What is the status of the CD ballot?

8) HIPPI-LE (Project 25.13.12.03) was to be issued as 11 518-1 CD letter ballot. What is the status of the CD ballot?

9) FC-PH (Project 25.13.13.01) (WG 4 Den Haag 5) was to be issued as a CD letter ballot. What is the status of the CD ballot? (Note: If this CD has still not issued and if it would not cause much further delay I could provide the latest X3T9 revision for the CD.)

Many of the questions have not yet been answered and it is not known if Barth is still with Siemens. But Walter v. Pattay is the new secretariat. He is now working down the backlog. As a first step SCSI-2 has been processed and a DIS should now be forthcoming. It seems reasonable to expect faster processing in the future.

### **13. Liaison Reports**

#### **13.1 X3T10.1 Task Group Report [Scheible]**

John Scheible reported orally. See document 94-017 for details.

**13.2 X3T9.3 Liaison Report [Cummings]**

Roger Cummings had prepared a report, but it was not given due to the late hour.

**13.3 Small Form Factor Industry Group [Allan]**

Dal Allan reported on the recent SFF activities.

The January meeting was held on Monday 1/10 at the Catamaran Hotel.

All documents being balloted passed, and the projects for >528MB and ATAPI CD-ROM were approved.

The suggestion that the Unitized Parallel Connector (3-in-1) for Rack Applications be dropped was opposed. As a result of the discussion, it was agreed that it is important to define the 3 1/2" form factor with the same degree of precision as the 2 1/2".

The call for a leader was met by Jay Neer, who volunteered to lead a SSWG which will be held in the first week of February to consider the following:

- Form factor of 3 1/2" drives
- Extended form factor of 3 1/2" drives with Unitized Serial Connector
- " " " " 2 1/2" " " " " "
- " " " " 5 1/4" " " " " "
- Placement of Serial Unitized Connector on 2 1/2" drives
- " " " " " " 3 1/2" drives
- " " " " " " 5 1/4" drives

An updated revision of the >528MB draft was presented by Hale Landis.

Bill Ham extended the description of the various wiring schemes (22 of 26 are completed) between unlike connectors.

ATAPI CD-ROM was distributed shortly before Christmas, and a SSWG will be held in late January to address the remaining issues.

**13.4 IEEE P1394 [Marazas]**

Scott Smyers reported. The editing is on going - forwarding is expected in March '94. Sections 7 and 8 still need work.

**13.5 IT8 [Lohmeyer]**

No report.

**13.6 IEEE P1285 Status [Pak]**

Scott Smyers said that Dennis Pak had given him a report, which Scott had forgotten to bring with him. The report is in document 94-037.

**13.7 PCMCIA Report**

No report.

**13.8 AIIM C21 [Podio]**

No report.

**14. Review of Action Items**

- 1) John Lohmeyer will contact AIIM regarding AIIM activities.
- 2) John Lohmeyer will contact Fernando Podia regarding liaison reports.
- 3) Larry Lamers will incorporate the correct patent statement in the dpANS AT Attachment and will send a copy to the X3 Secretariat.
- 4) On behalf of X3T10, John Lohmeyer will submit a public review comment against SPI requesting that SCAM be incorporated.
- 5) John Lohmeyer to progress the SCC project proposal to X3.
- 6) John Lohmeyer to progress the MMC project proposal to X3.
- 7) John Lohmeyer to discuss combined TC/TG mailing with X3 Secretariat.
- 8) Gene Milligan to revise project proposal on GPP.
- 9) John Lohmeyer to contact the X3 Secretariat regarding electronic SDs.

**15. Meeting Schedule**

The next plenary meeting of X3T10 will be March 17-18, 1994, in Newport Beach, CA, at the Hyatt Newporter Hotel (714-729-1234), hosted by QLogic Corporation. The meeting will begin at 1:00 pm on Thursday and at 8:30 am on Friday (if necessary).

The meeting list for the next plenary week is:

Meeting Map -- March 14-18, 1994 -- Newport Beach, CA  
(1/13/94 Version)

|                |               |                            |    |    |    |                   |   |   |   |   |         |   |      |
|----------------|---------------|----------------------------|----|----|----|-------------------|---|---|---|---|---------|---|------|
| Sunday 3/13    | 9             | 10                         | 11 | 12 | 1  | 2                 | 3 | 4 | 5 |   |         |   |      |
|                |               |                            |    |    |    | +=====+           |   |   |   |   |         |   |      |
|                |               |                            |    |    |    | Gen Edit Sess     |   |   |   |   | (10)    |   |      |
|                |               |                            |    |    |    | +=====+           |   |   |   |   |         |   |      |
| Monday 3/14    | 9             | 10                         | 11 | 12 | 1  | 2                 | 3 | 4 | 5 | 6 | 7       | 8 |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | Small Form Factor          |    |    |    | ATA Working Group |   |   |   |   | (40)    |   |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | SCSI CAM Working Group     |    |    |    |                   |   |   |   |   |         |   | (25) |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
| Tuesday 3/15   | 9             | 10                         | 11 | 12 | 1  | 2                 | 3 | 4 | 5 | 6 | 7       | 8 |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | SSA-UIG                    |    |    |    | X3T10.1 (SSA)     |   |   |   |   | (30)    |   |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | SBP LB Res                 |    |    |    | P1394 Plenary     |   |   |   |   | (30)    |   |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | RAID SG / RAB              |    |    |    |                   |   |   |   |   |         |   | (40) |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | P1394 Connector Task Group |    |    |    |                   |   |   |   |   |         |   | (15) |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
| Wednesday 3/16 | 9             | 10                         | 11 | 12 | 1  | 2                 | 3 | 4 | 5 | 6 | 7       | 8 |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | SCSI-3 WG                  |    |    |    |                   |   |   |   |   |         |   | (55) |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | P1394 Plenary Meeting      |    |    |    |                   |   |   |   |   |         |   | (30) |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
| Thursday 3/17  | 9             | 10                         | 11 | 12 | 1  | 2                 | 3 | 4 | 5 | 6 | 7       | 8 |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | SSP WG                     |    |    |    | X3T10 Plenary     |   |   |   |   | (30/80) |   |      |
|                | +-----+=====+ |                            |    |    |    |                   |   |   |   |   |         |   |      |
| Friday 3/18    | 8             | 9                          | 10 | 11 | 12 | 1                 | 2 |   |   |   |         |   |      |
|                | +=====+       |                            |    |    |    |                   |   |   |   |   |         |   |      |
|                |               | X3T10 Plenary              |    |    |    |                   |   |   |   |   |         |   | (80) |
|                | +=====+       |                            |    |    |    |                   |   |   |   |   |         |   |      |

Meetings marked with == are X3T10-authorized meetings.  
Meetings marked with -- are authorized by other groups and may change without notice.

Several other X3T10 events are also planned:

| Event                 | Day/Date       | Time    | Location/contact |
|-----------------------|----------------|---------|------------------|
| ATA Working Group     | Fri 1/28       | 9a - 5p | Milpitas/Finch   |
| ATA Working Group     | Wed 2/23       | 9a - 5p | Bay Area/Finch   |
| ATA Working Group     | Wed 3/30       | 9a - 5p | TBD/Finch        |
| ATA-2 Editors Meeting | TBD            |         | TBD/Finch        |
| MMC Study Group       | ~ 2/22 or 2/24 |         | Bay Area/Harris  |
| RAID Study Group      | Tue 2/15       | 9a - 5p | Austin/Penokie   |

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

| Activity          | Contact        | Telephone/Email                                     |
|-------------------|----------------|---|
| CAM Working Group | Bill Dallas    | (603) 881-2508<br>dallas@wasted.enet.dec.com        |
| ATA Working Group | Steve Finch    | (714) 573-6808<br>5723283@mcimail.com               |
| GPP Working Group | Gary Stephens  | (602) 321-1725<br>6363897@mcimail.com               |
| MMC Study Group   | Norm Harris    | (408) 945-8600 x2230<br>nharris@adapte.com          |
| RAID Study Group  | George Penokie | (507) 253-5208<br>gop@rchvmp3.vnet.ibm.com          |
| SAM Working Group | Charles Monia  | (508) 841-6757<br>monia@starch.enet.dec.com         |
| SBP Working Group | Jerry Marazas  | (407) 982-4423<br>marazas@bcrvmpc2.vnet.ibm.com     |
| SPI Contact       | Larry Lamers   | (408) 432-4776<br>71540.2756@compuserve.com         |
| SIP Contact       | Larry Lamers   | (408) 432-4776<br>71540.2756@compuserve.com         |
| SCAM Contact      | Ed Gardner     | (719) 548-2247<br>gardner@ssag.enet.dec.com         |
| Other Activities  | John Lohmeyer  | (719) 573-3362<br>john.lohmeyer@ftcollinsco.ncr.com |

The long-term X3T10 meeting week schedule is:

| Date            | Location            | Host/Comments   |
|-----------------|---------------------|-----------------|
| Mar 14-18, 1994 | Newport Beach, CA   | Emulex          |
| May 16-20, 1994 | Harrisburg, PA      | AMP             |
| Jul 18-22, 1994 | Manchester, NH      | DEC             |
| Sep 12-16, 1994 | Houston, TX         | Compaq          |
| Nov 7-11, 1994  | Southern California | Western Digital |

John Lohmeyer presented a foil showing a proposal for future plenary weeks (May '94 and beyond) that would move the ATA working group to Thursday morning. The idea is to make it easier for those interested in ATA to attend the X3T10 meeting:

Proposed Future Meeting Map (after March '94)

|           | 9                              | 10 | 11 | 12 | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |         |
|-----------|--------------------------------|----|----|----|----|---|---|---|---|---|---|---|---------|
| Monday    | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | SCSI CAM Working Group         |    |    |    |    |   |   |   |   |   |   |   | (25)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | Gen Edit Sess                  |    |    |    |    |   |   |   |   |   |   |   | (10)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
| Tuesday   | 9                              | 10 | 11 | 12 | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |         |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | SSA-UIG   X3T10.1              |    |    |    |    |   |   |   |   |   |   |   | (30)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | RAID SG / RAB                  |    |    |    |    |   |   |   |   |   |   |   | (40)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | IEEE P1394 Plenary             |    |    |    |    |   |   |   |   |   |   |   | (30)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | P1394 Connector Task Group (?) |    |    |    |    |   |   |   |   |   |   |   | (15)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
| Wednesday | 9                              | 10 | 11 | 12 | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |         |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | SCSI-3 WG                      |    |    |    |    |   |   |   |   |   |   |   | (45)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | P1394 Plenary Meeting          |    |    |    |    |   |   |   |   |   |   |   | (30)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
| Thursday  | 9                              | 10 | 11 | 12 | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 |         |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | ATA WG   X3T10 Plenary         |    |    |    |    |   |   |   |   |   |   |   | (40/80) |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | SSP WG (?)                     |    |    |    |    |   |   |   |   |   |   |   | (30)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
| Friday    | 8                              | 9  | 10 | 11 | 12 | 1 | 2 |   |   |   |   |   |         |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | X3T10 (if needed)              |    |    |    |    |   |   |   |   |   |   |   | (80)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |
|           | Small Form Factor              |    |    |    |    |   |   |   |   |   |   |   | (40)    |
|           | +-----+                        |    |    |    |    |   |   |   |   |   |   |   |         |

Several variations of the above proposal were also discussed. A decision on the meeting schedule is planned for the March plenary meeting.

**15.1 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 is automatically deferred to the plenary group.

Jeff Stai moved and Ed Gardner seconded that X3T10 authorize the X3T10-related meetings and events in the list above. The motion passed unanimously.

**16. Adjournment**

The meeting was adjourned at 8:00 p.m. on Thursday January 13, 1994.

## Meeting Attenders -- Enclosure (1)

| Name                       | S | Organization                  | Electronic Mail Address                            |
|----------------------------|---|-------------------------------|--|
| Mr. Alan R. Olson          | P | 3M Company                    | usmmm5cd@ibmmail.com                               |
| Mr. Norm Harris            | P | Adaptec, Inc.                 | nharris@adaptec.com                                |
| Mr. David Skinner          | P | Advanced Micro Devices        | David.Skinner@amd.com                              |
| Mr. Neil T. Wanamaker      | P | Amdahl Corp.                  | ntw20@amail.amdahl.com                             |
| Mr. Jerrie L. Allen        | O | Amdahl Corp.                  | Jerrie.Allen@cccmvs.amdahl.com                     |
| Mr. Charles Brill          | P | AMP, Inc.                     | cbrill@cup.portal.com                              |
| Mr. Ken Scherzinger        | V | Amphenol Spectra Strip        |  |
| Mr. Gary Porter            | A | Ancot Corp.                   | garyp@ancot.com                                    |
| Mr. Scott Smyers           | P | Apple Computer                | smyers.s@applelink.apple.com                       |
| Mr. Christian Mollard      | O | BULL S.A.                     |  |
| Mr. Clifford E. Strang Jr. | P | BusLogic                      |  |
| Mr. Gerry Johnsen          | P | Ciprico Inc.                  | gerry@cipric.mn.org                                |
| Mr. Dennis Lang            | P | Circuit Assembly Corp.        |  |
| Mr. Ian Morrell            | A | Circuit Assembly Corp.        |  |
| Mr. Dave Weber             | A | Cirrus Logic Inc.             | davew@cirrus.com                                   |
| Mr. Edward Haske           | P | CMD Technology                |  |
| Mr. Bill Galloway          | P | Compaq Computer Corp.         | billg@bangate.compaq.com                           |
| Mr. Joseph Wach            | A | Conner Peripherals            | Joe_Wach+aDevelopment+aColorado%conner@mcimail.com |
| Mr. Louis Grantham         | P | Dallas Semiconductor          | grantham@dalsemi.com                               |
| Mr. Charles Monia          | P | Digital Equipment Corp.       | monia@starch.enet.dec.com                          |
| Dr. William Ham            | A | Digital Equipment Corp.       | ham@subsys.enet.dec.com                            |
| Mr. Ralph Weber            | A | Digital Equipment Corp.       | weber@star.enet.dec.com                            |
| Mr. Douglas Hagerman       | A | Digital Equipment Corp.       | hagerman@starch.enet.dec.com                       |
| Mr. Edward A. Gardner      | A | Digital Equipment Corp.       | gardner@ssag.enet.dec.com                          |
| Mr. Tom Treadway           | P | Distributed Processing Tech.  | Treadway@dpt.com                                   |
| Mr. I. Dal Allan           | P | ENDL                          | 2501752@mcimail.com                                |
| Mr. Kenneth J. Hallam      | A | ENDL                          | khallam@endlas.com                                 |
| Mr. Edward Lappin          | P | Exabyte Corp.                 | tedl@exabyte.com                                   |
| Mr. Nick Ladas             | P | Foxconn                       |  |
| Mr. Gary R. Stephens       | P | FSI Consulting Services       | 6363897@mcimail.com                                |
| Mr. Robert Liu             | P | Fujitsu Computer Products, Am |  |
| Mr. Kevin R. Pokorney      | A | Fujitsu Computer Products, Am | pokorney@intellistor.com                           |
| Mr. Joel Urban             | A | Fujitsu Microelectronics/ECD  |  |
| Mr. Mark Woithe            | P | Future Domain Corp.           | markw@fdc.mhs.compuserve.com                       |
| Mr. Ray Kallio             | P | Harbor Electronics            |  |
| Ms. Sherry L. Johnson      | P | Harting Electronik, Inc.      |  |
| Mr. Jeffrey L. Williams    | P | Hewlett Packard Co.           | jlw@hpdmd48.boi.hp.com                             |
| Mr. Paul Boulay            | A | Hitachi Computer Products     | p_boulay@hitachi.com                               |
| Dr. Sam Karunanithi        | P | Hitachi Micro Systems, Inc.   | skarunan@hmsi.hitachi.com                          |
| Mr. Thomas J. Kulesza      | A | Honda Connectors              |  |
| Mr. George Penokie         | P | IBM Corp.                     | gop@rchvmp3.vnet.ibm.com                           |
| Mr. John P. Scheible       | A | IBM Corp.                     | Scheible@vnet.ibm.com                              |
| Mr. Robert Kembel          | O | IBM Corp.                     | rkembel@vnet.ibm.com                               |
| Mr. Varouj Der-Hacopian    | A | Interphase Corp.              | varouj@iphase.com                                  |
| Mr. Guy R. Addis           | A | JAE Electronics               |  |
| Mr. Dean Wallace           | P | Linfinity Micro               |  |



## Meeting Attenders -- Enclosure (1)

| Name                    | S | Organization                 | Electronic Mail Address                 |
|-------------------------|---|------------------------------|---|
| Mr. Robert Bellino      | P | Madison Cable Corp.          |   |
| Ms. Donna Pope          | P | Maxoptix Corp.               | 6471084@mcimail.com                     |
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| Mr. Bob Masterson       | P | Methode Electronics, Inc.    |   |
| Mr. Joe Dambach         | P | Molex Inc.                   |   |
| Mr. Robbie Shergill     | P | National Semiconductor       | rss@berlios.nsc.com                     |
| Mr. John Lohmeyer       | P | NCR Corp.                    | john.lohmeyer@ftcollinsco.ncr.com       |
| Mr. Charles Binford     |   | NCR Corp.                    | Charles.Binford@WichitaKS.NCR.COM       |
| Mr. Bruce Anderson      | P | NEC Technologies Inc.        | banderson@necotech.com                  |
| Mr. Cliff Carlson       | V | NRAD                         | wcarlson@nosc.mil                       |
| Mr. Peter Brown         | P | Oak Technology, Inc.         | brown@oaktech.com                       |
| Mr. Earl J. Perera      | P | P. E. Logic Corp.            |   |
| Mr. Thomas Steury       | P | Pacific Electro Data Inc.    |   |
| Mr. Charles I. Yang     | A | Panasonic Industrial Co.     |   |
| Mr. James McGrath       | P | Quantum Corp.                | JMCGRATH@QNTM.COM                       |
| Mr. Anuj Garg           | A | Rancho Technology, Inc.      |   |
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| Mr. Mike Yokoyama       | P | Sony Electronics, Inc.       | masayuki@cppc.sel.sony.com              |
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| Mr. Roger Cummings      | A | Storage Technology Corp.     | Roger_Cummings@Stortek.com              |
| Mr. Robert N. Snively   | P | Sun Microsystems, Inc.       | Bob.Snively@sun.com                     |
| Mr. John Moy            | P | Tandem Computers             | moy_john@tandem.com                     |
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| Mr. Harvey Waltersdorf  | P | Thomas & Betts               |   |
| Mr. Chuck Duquette      | P | U.S. Design                  | dennis@usdc.com                         |
| Mr. Peter Dougherty     | P | UNISYS Corporation           | peter.dougherty@mv-oc.com               |
| Mr. Paul D. Aloisi      | P | Unitrode Integrated Circuits | Aloisi@uicc.com                         |
| Mr. Jeff Stai           | P | Western Digital Corporation  | stai@dt.wdc.com                         |
| Mr. Tak Asami           | A | Western Digital Corporation  | asami@dt.wdc.com                        |
| Mr. Devon Worrell       | A | Western Digital Corporation  | worrell@dt.wdc.com                      |
| Mr. Doug Piper          | P | Woven Electronics            | WOVEN ELECTRONICS / MCI<br>ID: 549-9900 |

82 People Present

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

Jan 24, 1994 - X3T10 Membership - Enclosure (2)

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Minutes of X3T10 Plenary Meeting #1 in San Diego, CA

X3T10/94-016r1

Jan 24, 1994 - X3T10 Document Register - Enclosure (3)

X3T10/94-001R0 Date: Author: J. Lohmeyer []  
 Desc: X3T10 Annual Report  
 Res:

X3T10/94-002R0 Date: Author: []  
 Desc: X3T10 Project Status Summary  
 Res:

X3T10/94-003R0 Date: Author: []  
 Desc: Draft Agenda X3T10 Meeting - March '94  
 Res:

X3T10/94-010R0 Date: 12/7/93 Author: G. Penokie [2/15/94]  
 Desc: Minutes of Raid Study Group - Dec '93  
 Res:

X3T10/94-011R0 Date: 1/11/94 Author: G. Penokie [2/15/94]  
 Desc: Minutes of Raid Study Group - Jan '94  
 Res:

X3T10/94-012R0 Date: 1/21/93 Author: Lamers/Finch [2/15/94]  
 Desc: Minutes of ATA Working Group - Jan '94  
 Res:

X3T10/94-013R0 Date: 1/21/94 Author: Lamers/Lohmeyer [2/15/94]  
 Desc: Minutes of General Working Group - Jan '94  
 Res:

X3T10/94-014R0 Date: 11/22/94 Author: R. Snively [2/15/94]  
 Desc: Response to Comments for FCP  
 Res:

X3T10/94-015R0 Date: 1/12/94 Author: R. Weber [2/15/94]  
 Desc: Minutes of the CAM Working Group - Jan '94  
 Res:

X3T10/94-016R0 Date: 1/21/94 Author: Lamers/Lohmeyer [2/15/94]  
 Desc: Minutes of X3T10 Meeting #1 - Jan '94  
 Res:

X3T10/94-017R0 Date: 1/13/94 Author: J. Scheible [2/15/94]  
 Desc: Minutes of X3T10.1 Meeting #1 - Jan '94  
 Res:

X3T10/94-018R0 Date: 1/13/94 Author: R. Weber [2/15/94]  
 Desc: Processor Commands for SPC  
 Res:

X3T10/94-019R0 Date: 1/14/94 Author: S. Finch [2/15/94]  
 Desc: Project Proposal - ATA-PH3  
 Res:

X3T10/94-020R0 Date: 1/14/94 Author: S. Finch [2/15/94]  
 Desc: Project Proposal - ATA3-XPT  
 Res:

X3T10/94-021R0 Date: 1/14/94 Author: S. Finch [2/15/94]  
 Desc: Project Proposal - ATA3-PI  
 Res:

X3T10/94-022R0 Date: Author: S. Finch [2/15/94]  
 Desc: Project Proposal - BC  
 Res:

X3T10/94-023R0 Date: 1/12/94 Author: B. Ham [2/15/94]  
 Desc: Ultra-SCSI Update 1  
 Res:

X3T10/94-024R0 Date: 1/5/94 Author: D. Hagerman [2/15/94]  
 Desc: Error Handling for SCSI Controllers  
 Res:

X3T10/94-025R0 Date: 1/5/94 Author: D. Hagerman [2/15/94]  
 Desc: Additional Device Models  
 Res:

X3T10/94-026R0 Date: 1/5/94 Author: D. Hagerman [2/15/94]  
 Desc: Comments on SDA States  
 Res:

X3T10/94-027R0 Date: 12/6/93 Author: R. Kalish [2/15/94]  
 Desc: Proposal for Data CRC across the Cable  
 Res:

X3T10/94-028R0 Date: 1/19/94 Author: C. Monia [2/15/94]  
 Desc: Summary of Proposed Responses to Comments on SAM, revision 12  
 Res:

X3T10/94-029R0 Date: 1/19/94 Author: C. Monia [2/15/94]  
 Desc: Summary of Proposed SAM responses for Working Group Discussion  
 Res:

X3T10/94-030R0 Date: 1/19/94 Author: C. Monia [2/15/94]  
 Desc: Key Issues from Review of SAM, Revision 12  
 Res:

X3T10/94-031R0 Date: Author: G. Penokie [2/15/94]  
 Desc: SCSI Logical Unit Addressing  
 Res:

X3T10/94-032R0 Date: Author: G. Houlder [2/15/94]  
 Desc: Message Handling  
 Res:

Minutes of X3T10 Plenary Meeting #1 in San Diego, CA

X3T10/94-016r1

X3T10/94-033R0       Date: 1/7/94   Author: R. Snively [2/15/94]  
Desc: Fibre Channel Icon Proposal  
Res:

X3T10/94-034R0       Date:       Author: OMC [2/15/94]  
Desc: Presentation on X3 Procedures  
Res:

X3T10/94-035R0       Date:       Author: D. Hagerman [2/15/94]  
Desc: Project Proposal for SCSI-3 Controller Commands  
Res:

X3T10/94-036R0       Date:       Author: Lohmeyer/Harris [2/15/94]  
Desc: Project Proposal for Multi-Media Command Set  
Res:

X3T10/94-037R0       Date:       Author: D. Pak [2/15/94]  
Desc: Liaison Report - P1285 - January '94  
Res:

X3T10/94-038R0       Date: 1/20/94   Author: P. Aloisi [2/15/94]  
Desc: Proposed changes to SPI  
Res:

X3T10/94-039R0       Date: 1/13/94   Author: D. Arnold [2/15/94]  
Desc: Call for Volunteers - X3T10  
Res:

X3T10/94-040R0       Date: 12/10/93   Author: G. Penokie [2/15/94]  
Desc: SCSI Disk Array Model  
Res:

X3T10/94-041R0       Date: 12/12/93   Author: G. Penokie [2/15/94]  
Desc: SDA States and Types  
Res:

X3T10/94-042R0       Date: 12/10/93   Author: G. Penokie [2/15/94]  
Desc: SDA Commands & Mode Pages  
Res:

X3T10/94-043R0       Date: 1/24/94   Author: C. Monia [2/15/94]  
Desc: Response to WG Comments on SAM  
Res:

X3T10/94-044R0       Date: 1/25/94   Author: J. Lohmeyer [2/15/94]  
Desc: Letter Ballot on forwarding FCP Rev 8 to X3  
Res: