Doc. No.: X3T10/94-016r2

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

Agenda

- 1. Opening Remarks
- 2. Approval of Agenda
- 3. Attendance and Membership
- 4. X3 Tutorial
- 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
 - 9.1 Project Status Summary [Lohmeyer]
 - 9.2 SCSI-2 Status [Lamers]
 - 9.3 SCSI Common Access Method (CAM) [Dallas]
 - 9.4 AT Attachment Status (ATA) [Lamers]
 - 9.5 ATA Extensions (ATA-2) [Finch]
 - 9.6 SCSI-3 Architecture Model (SAM) Status [Monia]
 - 9.7 SCSI-3 Parallel Interface (SPI) Status [Lamers]
 - 9.8 SCSI-3 Interlocked Protocol (SIP) Status [Lamers]
 - 9.9 SCSI-3 Generic Packetized Protocol (GPP) Status [Stephens]
 - 9.10 SCSI-3 Serial Bus Protocol (SBP) Status [Marazas]
 - 9.11 SCSI-3 Fiber Channel Protocol (FCP) Status [Snively]
 - 9.12 SCSI-3 Primary Commands (SPC) Status [Weber]
 - 9.13 SCSI-3 Block Commands (SBC) [open]
 - 9.14 SCSI-3 Stream Commands (SSC) [open]
 - 9.15 SCSI-3 Graphics Commands (SGC) [open]
 - 9.16 SCSI-3 Medium Changer Commands (SMC) [open]
 - 9.17 Directly-Addressable Device Interface (DADI) [] 9.18 SCSI Common Access Method -2 (CAM-2) (93-082) [Dallas]
 - 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]

- 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
 - 11.4 Delivery Mechanism Sequentiality
 - 11.5 SCC Project Proposal
 - 11.6 MMC Project Proposal
- ISO [Milligan] 12.
- Liaison Reports
 - 13.1 X3T10.1 Task Group Report [Scheible]
 - 13.2 X3T9.3 Liaison Report [Cummings]
 - 13.3 Small Form Factor Industry Group [Allan]
 - 13.4 IEEE P1394 [Marazas]
 - 13.5 IT8 [Lohmeyer]
 - 13.6 IEEE P1285 Status [Pak]
 - 13.7 PCMCIA Report
 - 13.8 AIIM C21 [Podio]
- 14. Review of Action Items
- Meeting Schedule
 - 15.1 Authorization of Working Group Meetings
- 16. Adjournment

Results of Meeting

Opening Remarks 1.

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.

Approval of Agenda 2.

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).

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

- John Lohmeyer will contact Marilyn Courtot regarding AIIM activity. Carry Over.
- 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				No	Abs	NP	
3M Company	Mr.	Alan R. Olson	Р	1			1	
AMP, Inc. AT&T	MΥ	John Lohmeyer	P		1		1	
Adaptec, Inc.		Norm Harris	P	1	_			
Advanced Micro Devices		David Skinner	Ρ	1				
Amdahl Corp.		Neil T. Wanamaker	Ρ		1			
Ancot Corp.		1	A		1			
Apple Computer BusLogic		Scott Smyers Clifford E. Strang Jr.	P	1 1				
CMD Technology			P	1				
Ciprico Inc.			Ρ		1			
Circuit Assembly Corp.		Ian Morrell	Α					
Cirrus Logic Inc.		Dave Weber	A					
Compaq Computer Corp. Conner Peripherals		2	P A					
Dallas Semiconductor		. =	P					
Digital Equipment Corp.		Edward A. Gardner	Ā					
Distributed Processing Te		Tom Treadway	Ρ					
ENDL			Ρ		1			
Exabyte Corp. FSI Consulting Services			P P		1			
Foxconn	MIT.	Gary k. Scephens	P				1	
Fujitsu	Mr.	Robert Liu	P	1			_	
Future Domain Corp.			Ρ	1				
Harbor Electronics	Mr.	Ray Kallio	Ρ	1			-	
Harting Electronik, Inc. Hewlett Packard Co.	М×	Jeffrey L. Williams	P P	1			1	
Hitachi		Sam Karunanithi	P	1				
Honda Connectors	22.		P	_			1	
IBM Corp.		George Penokie	Ρ					
Interphase Corp.		Varouj Der-Hacopian	A					
JAE Maxoptix Corp.		Guy R. Addis Donna Pope	A P	1 1				
Maxtor Corp.		Lawrence J. Lamers	A	_	1			
Methode Electronics, Inc.			Ρ		_		1	
Molex Inc.		Joe Dambach	Ρ	1				
NEC	Mr.	Bruce Anderson	Р	1			-1	
National Semiconductor Oak Technology, Inc.			P P				1 1	
P. E. Logic Corp.			P				1	
Pacific Electro Data Inc.			P				1	
Panasonic (Matsushita)			Α					
Quantum Corp.			P	1				
Rancho Technology, Inc. Ricoh Corporation	Mr.	Anuj Garg Satwinder S. Mangat	A		1			
Samsung Semiconductor		S. Jauher Zaidi	P	1	_			
Seagate Technology		Gene Milligan	P	1				
Silicon Systems, Inc.		Stephen G. Finch	Ρ	1				
Sony Electronics, Inc.		Mike Yokoyama	Ρ	1				
Storage Technology Corp. Sun Microsystems, Inc.		Erich Oetting Robert N. Snively	P P	1 1				
Tandem Computers		John Moy	P	_	1			
Thomas & Betts		-	Ρ				1	
U.S. Design		D . D . L	Ρ		-		1	
UNISYS Corporation Unitrode		Peter Dougherty Paul D. Aloisi	P	1	1			
Western Digital Corporati			P P	1 1				
Woven Electronics		Doug Piper	P	1				
	_	-				-		
	Tota	als:		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 as follows:

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 provided the following report:

91 people attended the December X3T9.3 Plenary. Final membership in X3T9.3 was 45.

FC-PH Revision 4.2 is in Second Public Review, closing 2/15/94. FC-FP Revision 2.1 is in First Public Review, closing May 21,1994. FC-AL Revision 3.4 is in X3T9 Letter Ballot, closing 1/21/94.

HIPPI-ATM, FC-ATM, HIPPI-FP Amendement project proposals have beeen approved. FC-SB draft expected at 2/94 X3T11 Plenary for Letter Ballot for First Public Review.

```
Activity starting in 2/94 on:
  Optical variants faster than 1062.5 megabaud
   Additional copper variants (e.g. STP-5)
  New features for FC-EP (fractional bandwidth etc.)
```

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" from 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
  - 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.

Review of Action Items 14.

- John Lohmeyer will contact AIIM regarding AIIM activities.
- John Lohmeyer will contact Fernando Podia regarding liaison reports. 2)
- 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.
- John Lohmeyer to progress the SCC project proposal to X3. John Lohmeyer to progress the MMC project proposal to X3. 5)
- 6)
- John Lohmeyer to discuss combined TC/TG mailing with X3 Secretariat. 7)
- Gene Milligan to revise project proposal on GPP. 8)
- 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)

		(:	1/13/94	Version	1)			
Sunday 3/13	9 10	11 12	+===: Gen	====== Edit Se	==+ ess			(10)
			+===:	======	:==+			
Monday 3/14	9 10	11 12		3 4				
		Form Fac	ctor 2	ATA Work	ing G	roup		(40)
	SCSI C	CAM Work:	ing Gro	цр				(25)
Tuesday 3/15	9 10					6	7 8	
	SSA-UI	:: :G	X3T10	0.1 (SSA	7)			(30)
	SBP LE	+======+ SBP LB Res					(30)	
		G / RAB						(40)
	P1394	Connect	or Task	Group				(15)
Wednesday 3/16	9 10							
		8 WG					j	(55)
	+====== P1394 +	Plenary				====	====+	(30)
Thursday 3/17	9 10							
	+====== SSP WG +======	3	X3T10) Plenar	У			(30/80)
Friday 3/18 8								
	X3T10 Pl	enary	İ					(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 Event	are also planned: Day/Date Time	Location/contact
ATA Working Group ATA Working Group ATA Working Group ATA-2 Editors Meeting	Fri 1/28 9a - 5p Wed 2/23 9a - 5p Wed 3/30 9a - 5p TBD	Milpitas/Finch Bay Area/Finch TBD/Finch TBD/Finch
MMC Study Group RAID Study Group	~ 2/22 or 2/24 Tue 2/15 9a - 5p	Bay Area/Harris 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
ATA Working Group	Steve Finch	dallas@wasted.enet.dec.com (714) 573-6808 5723283@mcimail.com
GPP Working Group	Gary Stephens	(602) 321-1725
MMC Study Group	Norm Harris	6363897@mcimail.com (408) 945-8600 x2230 nharris@adaptec.com
RAID Study Group	George Penokie	(507) 253-5208
SAM Working Group	Charles Monia	gop@rchvmp3.vnet.ibm.com (508) 841-6757
SBP Working Group	Jerry Marazas	monia@starch.enet.dec.com (407) 982-4423 marazas@bcrvmpc2.vnet.ibm.com
SPI Contact	Larry Lamers	(408) 432-4776
SIP Contact	Larry Lamers	71540.2756@compuserve.com (408) 432-4776
SCAM Contact	Ed Gardner	71540.2756@compuserve.com (719) 548-2247
Other Activities	John Lohmeyer	gardner@ssag.enet.dec.com (719) 573-3362 john.lohmeyer@ftcollinsco.ncr.com

The long-term X3T10 meeting week schedule is:

Date	Location	Host/Comments
May 16-20, 1994 Jul 18-22, 1994 Sep 12-16, 1994	Manchester, NH	Emulex AMP DEC Compaq 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)	
Monday	9 10 11 12 1 2 3 4 5 6 7 8	
	SCSI CAM Working Group	(25)
	Gen Edit Sess +=======+	(10)
Tuesday	9 10 11 12 1 2 3 4 5 6 7 8	
	++========++ SSA-UIG	(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	(40/80)
	SSP WG (?) 	(30)
Friday 8		
	-==========+ X3T10 (if needed)	(80)
İ	-===========+ 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 Mr. Norm Harris Mr. David Skinner Mr. Neil T. Wanamaker Mr. Jerrie L. Allen	P 3M Company P Adaptec, Inc. P Advanced Micro Devices P Amdahl Corp. O Amdahl Corp.	usmmm5cd@ibmmail.com nharris@adaptec.com David.Skinner@amd.com ntw20@amail.amdahl.com Jerrie.Allen@cccmvs.amdah
Mr. Charles Brill Mr. Ken Scherzinger Mr. Gary Porter Mr. Scott Smyers	P AMP, Inc. V Amphenol Spectra Strip A Ancot Corp. P Apple Computer	<pre>l.com cbrill@cup.portal.com garyp@ancot.com smyers.s@applelink.apple.</pre>
Mr. Christian Mollard Mr. Clifford E. Strang Jr.	O BULL S.A.	com
Mr. Gerry Johnsen Mr. Dennis Lang Mr. Ian Morrell	P Ciprico Inc. P Circuit Assembly Corp. A Circuit Assembly Corp.	gerry@cipric.mn.org
Mr. Dave Weber Mr. Edward Haske	A Cirrus Logic Inc. P CMD Technology	davew@cirrus.com
Mr. Bill Galloway Mr. Joseph Wach	P Compaq Computer Corp. A Conner Peripherals	<pre>billg@bangate.compaq.com Joe_Wach+aDevelopment+aCo lorado%conner@mcimail.com</pre>
Mr. Louis Grantham Mr. Charles Monia Dr. William Ham Mr. Ralph Weber	P Dallas Semiconductor P Digital Equipment Corp. A Digital Equipment Corp. A Digital Equipment Corp.	<pre>grantham@dalsemi.com monia@starch.enet.dec.com ham@subsys.enet.dec.com weber@star.enet.dec.com</pre>
Mr. Douglas Hagerman	A Digital Equipment Corp.	hagerman@starch.enet.dec.
Mr. Edward A. Gardner Mr. Tom Treadway	A Digital Equipment Corp. P Distributed Processing Tech.	gardner@ssag.enet.dec.com Treadway@dpt.com
Mr. I. Dal Allan Mr. Kenneth J. Hallam Mr. Edward Lappin Mr. Nick Ladas	P ENDL A ENDL P Exabyte Corp. P Foxconn	2501752@mcimail.com khallam@endlas.com tedl@exabyte.com
Mr. Gary R. Stephens Mr. Robert Liu	P FSI Consulting Services P Fujitsu Computer Products, Am	6363897@mcimail.com
Mr. Kevin R. Pokorney	A Fujitsu Computer Products,Am	pokorney@intellistor.com
Mr. Joel Urban Mr. Mark Woithe	A Fujitsu Microelectronics/ECD P Future Domain Corp.	markw@fdc.mhs.compuserve.
Mr. Ray Kallio	P Harbor Electronics	com
Ms. Sherry L. Johnson Mr. Jeffrey L. Williams	P Harting Electronik, Inc. P Hewlett Packard Co.	jlw@hpdmd48.boi.hp.com
Mr. Paul Boulay Dr. Sam Karunanithi	A Hitachi Computer Product P Hitachi Micro Systems, Inc.	s p_boulay@hitachi.com skarunan@hmsi.hitachi.com
Mr. Thomas J. Kulesza Mr. George Penokie Mr. John P. Scheible Mr. Robert Kembel Mr. Varouj Der-Hacopian Mr. Guy R. Addis	A Honda Connectors P IBM Corp. A IBM Corp. O IBM Corp. A Interphase Corp. A JAE Electronics	gop@rchvmp3.vnet.ibm.com Scheible@vnet.ibm.com rkembel@vnet.ibm.com varouj@iphase.com
Mr. Dean Wallace	P Linfinity Micro	

Meeting Attenders -- Enclosure (1)

	Name	S	Organization	Electronic Mail Address
Ms. Mr. Mr. Mr.	Robert Bellino Donna Pope Ron Roberts Lawrence J. Lamers Bob Masterson Joe Dambach	P P A P	Madison Cable Corp. Maxoptix Corp. Maxtor Corp. Maxtor Corp. Methode Electronics, Inc. Molex Inc.	6471084@mcimail.com ron_roberts@maxtor.com larry_lamers@maxtor.com
Mr.	Robbie Shergill John Lohmeyer	Ρ	National Semiconductor NCR Corp.	rss@berlioz.nsc.com john.lohmeyer@ftcollinsco .ncr.com
Mr.	Charles Binford		NCR Corp.	Charles.Binford@WichitaKS .NCR.COM
Mr. Mr. Mr. Mr.	Bruce Anderson Cliff Carlson Peter Brown Earl J. Perera Thomas Steury	V P P	NEC Technologies Inc. NRAD Oak Technology, Inc. P. E. Logic Corp. Pacific Electro Data Inc.	banderson@nectech.com wcarlson@nosc.mil brown@oaktech.com
Mr. Mr. Mr.	Charles I. Yang James McGrath Anuj Garg Satwinder S.	P A	Panasonic Industrial Co. Quantum Corp. Rancho Technology, Inc. Ricoh Corporation	JMCGRATH@QNTM.COM mangat@str.ricoh.com
Mang				_
	S. Jauher Zaidi Gene Milligan		Samsung Semiconductor Seagate Technology	syed@sam.com Gene_Milligan@notes.seaga te.com
Mr.	Gerald Houlder	A	Seagate Technology	<pre>Gerry_Houlder@notes.seaga te.com</pre>
	Stephen G. Finch Mike Yokoyama		Silicon Systems, Inc. Sony Electronics, Inc.	5723283@mcimail.com masayuki@cppc.sel.sony.co
	Erich Oetting Roger Cummings		Storage Technology Corp. Storage Technology Corp.	Erich_Oetting@Stortek.com Roger_Cummings@Stortek.co m
Mr. Mr.	Robert N. Snively John Moy Bill Boyd Harvey Waltersdorf	P O	Sun Microsystems, Inc. Tandem Computers Texas Instruments Thomas & Betts	Bob.Snively@sun.com moy_john@tandem.com
Mr. Mr.	Chuck Duquette Peter Dougherty Paul D. Aloisi	P P	U.S. Design UNISYS Corporation Unitrode Integrated Circuits	dennis@usdc.com peter.dougherty@mv-oc.com Aloisi@uicc.com
Mr.	Jeff Stai	Ρ	Western Digital	stai@dt.wdc.com
Mr.	Tak Asami	A	Corporation Western Digital	asami@dt.wdc.com
Mr.	Devon Worrell	A	Corporation Western Digital Corporation	worrell@dt.wdc.com
Mr.	Doug Piper	Ρ	Woven Electronics	WOVEN ELECTRONICS / MCI ID: 549-9900

82 People Present

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

Mr. William Dallas

ZKU3-3/T79 110 Spit Brook Road

Digital Equipment Corp. ZK03-3/T79

Nashua, NH 03062-2698 Phone: (603) 881-2508 FAX: (603) 881-2257

Jan 24, 1994 - X3T10 Membership - Enclosure (2) Mr. Alan R. Olson (P) Mr. Rick Heidick (A) Mr. Norm Harris (P) MT. RICK Heldick (A) 3M Company 6801 River Place Blvd. Austin, TX 78726-9000 Phone: (512) 984-6832 FAX: (512) 984-2184 Email: Mr. Norm Harris (P) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035 Phone: (408) 945-8600 x2230 FAX: (408) 957-7145 3M Company Bldg. 236-GN-06 3M Center St. Paul, MN 55016 Phone: (612) 736-4821 FAX: (612) 737-2801 Email: usmmm5cd@ibmmail.com Email: nharris@adaptec.com Mr. Richard Kalish (A) Mr David Skinner (P) Mr. Neil T. Wanamaker (P) Mr. Neil T. Wanamaker (P) Amdahl Corp. 1250 E. Arques Ave. MS 275 Sunnyvale, CA 94088-3470 Phone: (408) 746-7237 Advanced Micro Devices Mail Stop 70 P.O. Box 3453 Adaptec, Inc. 691 S. Milpitas Blvd. MS50-4 Milpitas, CA 95035 Phone: (408) 957-7169 FAX: (408) 957-7165 Email: rkalish@rahul.net Sunnyvale, CA 94088-3453
Phone: (408) 987-2945
FAX: (408) 987-2814
Email: David.Skinner@amd.com FAX: Email: ntw20@amail.amdahl.com Mr. Charles Brill (P)
AMP, Inc.
Mail Stop 210-20
P. O. Box 3608
Harrisburg, PA 17105
Phone: (717) 561-6198
FAX: (717) 561-6179
Email: cbrill@cup.portal.com Mr. Rich Taborek (A) Amdahl Corp. 1250 E Arques Ave. MS 312 POB 3470 Sunnyvale, CA 94088-3470 Amdahl Corp. Amdani Corp. 1250 E Arques Avenue Sunnyvale, CA 94088-3470 Phone: (408) 746-6533 FAX: (408) 733-2377 Phone: (408) 944-3712 FAX: (408) 943-6620 Email: Jerrie.Allen@cccmvs.amdahl.com Email: rzt40@cccvm.ccc.amdahl.com Mr. Jan V. Dedek (P) Mr. Gary Porter (A) Mr. Bob Whiteman (A) AMP, Inc. P.O. Box 3608 M/S 26-17 Ancot Corp. 115 Constitution Dr. Ancot Corp. 115 Constitution Dr. Harrisburg, PA 17105 Phone: (717) 780-7481 FAX: (717) 780-6976 Menlo Park, CA 94025 Phone: (415) 322-5322 FAX: (415) 322-0455 Email: dedek@ancot.com Menlo Park, CA 94025 Phone: (415) 322-5322 FAX: (415) 322-0455 Email: garyp@ancot.com Email: whiteman@cup.portal.com Mr. Scott Smyers (P) Mr. Dennis Pak (A) Mr. Joe Lawlor (A) Apple Computer MS 696 Apple Computer 3535 Monroe St., MS 69-G AT&T 1100 E. Warrenville Rd. IIIO E. Warrenville Ro Rm 2A-429 Naperville, IL 60566 Phone: (708) 979-0133 FAX: (708) 979-0291 Email: Santa Clara, CA 95051 Phone: (408) 974-4874 FAX: (408) 974-2898 3535 Monroe St. Santa Clara, CA 95051 Phone: (408) 974-7057 FAX: (408) 974-2898 FAX: (408) 9/4-2098 Email: dennis.pak@applelink.apple.com Email: smyers.s@applelink.apple.com Mr. Christian Mollard (0) Mr. Clifford E. Strang Jr. (P) Mr. Steven Ramberg (A) Mr. Clifford E. Strang BusLogic 4151 Burton Dr. Santa Clara, CA 95054 Phone: (408) 970-1432 FAX: (408) 970-0941 Email: Mr. Steven Ramberg (18 BusLogic 4151 Burton Dr. Santa Clara, CA 95054 Phone: (408) 492-9090 FAX: (408) 490-0941 Email: BULL S.A. Rue Jean Jaures 78340 Les cPayes-Sous-Bois FRANCE
Phone: 33(1)30807077
Email: Mr. Gerry Johnsen (P) Ciprico Inc. 2800 Campus Dr. Suite 60 Mr. Kurt Witte (A) Ciprico Inc. 2800 Campus Drive Mr. Dennis Lang (P) Circuit Assembly Corp. Troine, CA 92718-2703 Phone: (714) 855-7887 FAX: (714) 855-4298 Email: Plymouth, MN 55441
Phone: (612) 551-4069
FAX: (612) 551-4002
Email: Plymouth, Mn 55441
Phone: (612) 551-4000
FAX: (612) 551-4002
Email: gerry@cipric.mn.org Mr. Ian Morrell (A) Circuit Assembly Corp. Mr. Dave Weber MI. JOE Chen (P) Cirrus Logic Inc. 3100 W. Warren Ave. Fremont, CA 94538 Phone: (510) 226-2101 FAX: (510) 226-2170 Email: Mr. Dave weber (A) Cirrus Logic Inc. 3100 W. Warren Ave. Fremont, CA 94538 Phone: (510) 226-2367 FAX: (510) 226-2170 Circuit Assembly Corp. 18 Thomas St. Irvine, CA 92718-2703 Phone: (714) 855-7887 FAX: (714) 855-4298 Email: Email: davew@cirrus.com Mr. Roger Wang (A) Mr. Edward Haske (P) Mr. Bill Galloway (P) Mr. Bill Galloway (P) Compaq Computer Corp. P.O. Box 692000 M090504 Houston, TX 77269-2000 Phone: (713) 374-6732 FAX: (713) 374-0514 CMD Technology CMD Technology 1 Vanderbilt Irvine, CA 92718 Phone: (714) 454-0800 FAX: (714) 455-1656 Email: CMD Technology 1 Vanderbilt Irvine, CA 92718 Phone: (714) 454-0800 FAX: (714) 455-1656 Email: Email: billg@bangate.compaq.com Mr. Michael Bryan (P) Mr. Ken Bush (A) Mr. Joseph Wach (A) Mr. Ken Bush (A)
Compaq Computer Corp.
Box 692000 M090504
Houston, TX 77269-2000
Phone: (713) 374-5553
FAX: (713) 374-0514
Email: bushk@bangate.compaq.com @mcimail.com @mcimail.com Mr. Louis Grantham Dallas Semiconductor Dallas Semiconductor
4401 S. Beltwood Pkwy
Dallas, TX 75244-3292
Phone: (214) 450-8110
FAX: (214) 450-3715
Email: grantham@dalsemi.com

Mr. Michael Bryan (P)

Conner Peripherals

2400 Trade Centre

Longmont, C0 80503

Phone: (303) 682-8407

FAX: (303) 772-0182

Email: Mike_Bryan+aDevelopment+aColorado%conner Mr. Charles Monia (P)
Digital Equipment Corp.
SHR3-2/W04
334 South Street
Shrewsbury, MA 01545
Phone: (508) 841-6757
FAX: (508) 841-6100
Email: monia@starch.enet.dec.com Mr. Michael Smith (A)
Dallas Semiconductor
4401 S. Beltwood Pkwy
Dallas, TX 75244
Phone: (214) 450-0457
FAX: (214) 450-3715
Email: msmith@dalsemi.com Mr. Douglas Hagerman (A) Mr. Edward A. Gardner (A) Digital Equipment Corp. CXO1-2/N22 Digital Equipment Corp. SHR3-2/W3 CXO1-2/N22 301 Rockrimmon Blvd. 334 South Street Colo Spgs, CO 80919-2398 Phone: (719) 548-2247 FAX: (719) 548-2451 Email: gardner@ssag.enet.dec.com Shrewsbury, MA 01545 Phone: (508) 841-2145 FAX: (508) 841-6100 Email: hagerman@starch.enet.dec.com FAX: (603) 881-2257 Email: dallas@wasted.enet.dec.com 18

Dr. William Ham (A) Digital Equipment Corp. SHR3-2/W04 334 South Street Shrewsbury, MA 01545 Phone: (508) 841-2629 FAX: (508) 841-5266 Email: ham@subsys.enet.dec.com Mr. Tom Treadway (P) Mr. Tom Treadway (P)
Distributed Processing Tech.
140 Candace Dr.
Maitland, FL 32751
Phone: (407) 830-5522
FAX: (407) 260-5366
Email: Treadway@dpt.com Mr. Kenneth J. Hallam (A) ENDL 29112 Country Hills Rd. San Juan Capistrano, CA 92675 Phone: (714) 364-9626 FAX: (714) 364-3271 Email: khallam@endlas.com Mr. Nick Ladas (P) Mr. Nick Ladas (P) Foxconn 590 W. Lambert Rd. Brea, CA 92621 Phone: (714) 256-4080 FAX: (714) 256-2068 Email: Mr. Robert Liu (P)
Fujitsu Computer Products,Am
2904 Orchard Pkwy.
San Jose, CA 95134
Phone: (408) 894-3790
FAX: (408) 894-3748
Email: Mr. Mark Woithe Future Domain Corp. 2801 McGaw Ave. 1rvine, CA 92714 Phone: (714) 253-0482 FAX: (714) 253-0913 Email: markw@fdc.mhs.compuserve.com Mr. Ray Kallio (P) Harbor Electronics Rarbor Electronics 650 Danbury Road Ridgefield, CT 06877 Phone: (203) 438-9625 FAX: (203) 431-3001 Email: Mr. Jeffrey L. Williams (P)
Hewlett Packard Co.
P.O. Box 39
Boise, ID 83707
Phone: (208) 396-5030
FAX: (208) 396-6858
Email: jlw@hpdmd48.boi.hp.com Dr. Sam Karunanithi (P) Hitachi Micro Systems, Inc. 179 East Tasman Drive Phone: (408) 456-2186
FAX: (408) 433-0223
Email: skarunan@hmsi.hitachi.com Mr. George Penokie (P) IBM Corp. 2B7/114-2 2B7/114-2 37st Highway 52 N. Rochester, MN 55901-7829 Phone: (507) 253-5208 FAX: (507) 253-2432 Email: gop@rchvmp3.vnet.ibm.com Mr. David Lawson (P) Mr. David Lawson (P)
Interphase Corp.
13800 Senlac
Dallas, TX 75234-8823
Phone: (214) 919-9000
FAX: (214) 919-9200
Email: lawson@iphase.com Mr Guy R Addis (A) Mr. Guy R. Addis (A)
JAE Electronics
142 Technology Dr. #100
Irvine, CA 92718-2401
Phone: (714) 753-2600
FAX: (714) 753-2699
Email:

Mr. Ralph Weber (A) Digital Equipment Corp. ZK03-4/U14 110 Spit Brook Road Nashua, NH 03062-2698 Phone: (603) 881-1497 FAX: (603) 881-0189 Mr. Matt Giovanetti (0) Digital Equipment Corp. SHR1-3/013
333 South Street
Shrewsbury, MA 01545
Phone: (508) 841-6422
FAX: (508) 841-6410
Email: giovanetti@leds.enet.dec.com SHR1-3/013 Email: weber@star.enet.dec.com Mr. I. Dal Allan (P) Mr. Dave Race (A) Mr. Dave Race (A)
Distributed Processing Tech.
140 Candace Dr.
Maitland, FL 32751
Phone: (407) 830-5522
FAX: (407) 260-5366
Email: Treadway@dpt.com ENDL Vice Chair, X3T9.2 14426 Black Walnut Ct. Saratoga, CA 95070
Phone: (408) 867-6630
FAX: (408) 867-2115
Email: 2501752@mcimail.com Mr. Edward Lappin (P) Exabyte Corp. Mail Stop 751 1685 38th Street Boulder, CO 80301 Phone: (303) 447-7718 FAX: (303) 442-5146 Email: tedl@exabyte.com Mr. David Andreatta (A)
Exabyte Corp.
Mail Stop 752
1685 38th Street
Boulder, CO 80301
Phone: (303) 447-7966
FAX: (303) 442-5146
Email: Mr. Gary R. Stephens (P) FSI Consulting Services 1825 N. Norton Tucson, AZ 85719 Phone: (602) 321-1725 FAX: (602) 321-1725 Email: 6363897@mcimail.com Mr. Stan Sharp (A) Mr. Stan Sharp (A) Foxconn 590 W. Lambert Rd. Brea, CA 92621 Phone: (714) 256-4080 FAX: (714) 256-2068 Email: Mr. Kevin R. Pokorney (A)
Fujitsu Computer Products,Am
2402 Clover Basin Drive
Longmont, CO 80503
Phone: (303) 682-6649
FAX: (303) 682-6401
Email: pokorney@intellistor.com Mr. Joel Urban (A) Fujitsu Microelectronics/ECD Fujitsu Microelectronics 3545 North First Street San Jose, CA 95134 Phone: (408) 922-8928 FAX: (408) 428-0640 Email: Mr. Rene Macare Mr. Harvey Toyama (A) Fiture Domain Corp. 2801 McGaw Ave. Irvine, CA 92714 Phone: (714) 253-0498 FAX: (714) 253-0913 Future Domain Corp. Future Domain Corp.
2801 McGaw Ave.
Irvine, CA 92714
Phone: (714) 253-0491
FAX: (714) 253-0913
Email: renem@fdc.mhs.compuserve.com Email: harveyt@fdc.mhs.compuserve.com Ms. Sherry L. Johnson (P) Harting Electronik, Inc. 2155 Stonington Ave, Ste 212 Hoffman Estates, IL 60195 Phone: (708) 519-7700 FAX: (708) 519-7712 Email: Mr. Kim Davies (A) Harbor Electronics 650 Danbury Road Ridgefield, CT 06877 Phone: (203) 438-9625 FAX: (203) 431-3001 Email: Mr. Paul Boulay (A)
Hitachi Computer Products
3101 Tasman Drive
Santa Clara, CA 95054
Phone: (408) 986-9770 x205
FAX: (408) 986-1821
Email: p_boulay@hitachi.com Mr. Kurt Chan Hewlett Packard Co. 8000 Foothills Blvd MS R5NF2 Roseville, CA 95747-6588 Phone: (916) 785-5621 FAX: (916) 785-2875 FAX: (916) 785-2875 Email: kc@core.rose.hp.com Mr David McFadden (P) Mr. Thomas J. Kulesza (A) Mr. Thomas J. Kulesza (A)
Honda Connectors
960 Corporate Woods Parkway
Vernon Hill, IL 60061
Phone: (708) 913-9566
FAX: (708) 913-9587
Email: Honda Connectors
960 Corporate Woods Parkway Vernon Hills, IL 60061 Phone: (708) 913-9566 FAX: (708) 913-9587 Email: Mr. Robert Kembel (0) IBM Corp. 9000 S. Rita Road D75Z/071-2 Tucson, AZ 85744 Phone: (602) 799-2396 FAX: (602) 799-4148 Email: rkembel@vnet.ibm.com Mr. John P. Scheible (A) IBM Corp. G46/028 G46/028 5600 Cottle Road San Jose, CA 95193 Phone: (408) 256-7275 FAX: (408) 256-2254 Email: Scheible@vnet.ibm.com Mr. Varouj Der-Hacopian (A) Mr. David H. Shaff (P) Mr. Varouj Der-Hacopian Interphase Corp. 13800 Senlac Dallas, TX 75234-8823 Phone: (214) 919-9000 FAX: (214) 919-9200 Email: varouj@iphase.com JAE 2857 NE 26 Street Ft. Lauderdale, FL 33305 Phone: (305) 563-3484 FAX: (305) 563-3507 Email: Mr David J Fox (A) Mr. Dean Wallace (P) Mr. David J. Fox (A) JAE Electronics 142 Technology Dr. #100 Irvine, CA 92718-2401 Phone: (714) 753-2600 FAX: (714) 753-2699 Email: Linfinity Micro 11861 Western Ave. Garden Grove, CA 92641 Phone: (714) 898-8121 FAX: (714) 893-2570 Email:

Mr. Shufan Chan (A) Linfinity Micro 11861 Western Ave. Garden Grove, CA 92641 Phone: (714) 898-8121 FAX: (714) 893-2570 Email:

Mr. Randy Speer (A) Maxoptix Corp. 2520 Junction Ave. San Jose, CA 95134 Phone: (408) 954-9700 FAX: (408) 954-9711 Email:

Mr. Bob Masterson (P) Methode Electronics, Inc. 380C Paseo Lobo Green Valley, AZ 85614 Phone: (303) 792-3420 FAX: (602) 625-5244 Email:

Mr. Robbie Shergill (P)
National Semiconductor
M/S D3-970
P.O. Box 58090
Santa Clara, CA 95052
Phone: (408) 721-7959
FAX: (408) 721-7956
Email: rss@berlioz.nsc.com

Mr. Bruce Anderson (P) NEC Technologies Inc. 1414 Mass Ave. Boxborough, MA 01719 Phone: (508) 635-6053 FAX: (508) 264-8787 Email: banderson@nectech.com

Mr. Phil Veriusky (A)
Oak Technology, Inc.
139 Kifer Ct.
Sunnyvale, CA 94086
Phone: (408) 737-0888
FAX: (408) 737-3838
Email: phil@oaktech.com

Mr. Thomas Steury (P)
Pacific Electro Data Inc.
14 Hughes St. B205
Irvine, CA 92718
Phone: (714) 770-3244
FAX: (714) 770-7281
Email:

Mr. Stephen F. Heil (P)
Panasonic Technologies, Inc
2 Research Way, 3rd Floor
Princeton, New Jersey 08540
Phone: (609) 987-3948
FAX: (609) 987-0483
Email: sfh@research.panasonic.com

Mr. Anuj Garg (A) Rancho Technology, Inc. 10783 Bell Court Rancho Cucamonga, CA 91730 Phone: (909) 987-3966 FAX: (909) 989-2365 Email:

Mr. S. Jauher Zaidi (P) Samsung Semiconductor 3655 N. First Street MS/E3 San Jose, CA 95134-1713 Phone: (408) 954-7005 FAX: (408) 954-7150 Email: syed@sam.com

Mr. Brian Johnson (A) Seagate Technology 2655 Park Center Dr. Simi Valley, CA 93065 Phone: (805) 582-3808 FAX: (805) 583-8709 Email:

Mr. Daniel E. Moczarny (A) Silicon Systems, Inc. 14351 Myford Rd. Tustin, CA 92680-7022 Phone: (714) 573-6750 FAX: (714) 573-6914 Email: Mr. Robert Bellino (P) Madison Cable Corp. 125 Goddard Memorial Dr. Worchester, MA 01603 Phone: (508) 752-7320 FAX: (508) 752-4230 Email:

Mr. Ron Roberts (P)
Maxtor Corp.
150 River Oaks Parkway
San Jose, CA 95134
Phone: (408) 432-4322
FAX: (408) 432-4510
Email: ron_roberts@maxtor.com

Mr. John Cannon (A) Methode Electronics, Inc. 7444 West Wilson Ave Chicago, IL 60655 Phone: (708) 867-9600 FAX: (708) 867-4149 Email:

Mr. Simone Sadri (A)
National Semiconductor
M/S D3-970
P.O. Box 58090
Santa Clara, CA 95052
Phone: (408) 721-7959
FAX: (408) 721-7956
Email: tsisscetevm2.nsc.com

Mr. Dan Kennedy (A) NEC Technologies Inc. 1414 Mass Ave Boxborough, MA 01719 Phone: (508) 264-8000 FAX: (508) 264-8673 Email:

Mr. Earl J. Perera (P) P. E. Logic Corp. 22695 Old Canal Rd. Yorba Linda, CA 92687 Phone: (714) 282-6188 FAX: (714) 282-6199 Email:

Mr. Samir Desai (A) Pacific Electro Data Inc. 14 Hughes St. B205 Irvine, CA 92718 Phone: (714) 770-3244 FAX: (714) 770-7281 Email:

Mr. James McGrath (P) Quantum Corp. 500 McCarthy Blvd. Milpitas, CA 95035 Phone: (408) 894-4504 FAX: (408) 894-6352 Email: JMCGRATH@ONTM.COM

Dr. Tetsuro Motoyoma (P)
Ricoh Corporation
3001 Orchard Parkway
San Jose, CA 95134-2088
Phone: (408) 954-5445
FAX: (408) 432-8398
Email: motoyama@str.ricoh.com

Mr. Gene Milligan (P)
Seagate Technology
MS OKM 251
P. O. Box 12313
Oklahoma City, OK 73157
Phone: (405) 324-3070
FAX: (405) 324-3794
Email: Gene_Milligan@notes.seagate.com

Mr. D. Michael Robinson (A) Seagate Technology 920 Disc Drive Scotts Valley, CA 95066 Phone: (408) 439-2414 FAX: (408) 438-4190 Email:

Mr. Mike Yokoyama (P)
Sony Electronics, Inc.
3300 Zanker Rd. MS# SJ-3A7
San Jose, CA 95134
Phone: (408) 955-4344
FAX: (408) 955-5175
Email: masayuki@cppc.sel.sony.com

Ms. Donna Pope (P)
Maxoptix Corp.
2520 Junction Ave.
San Jose, CA 95134
Phone: (408) 954-9700 x315
FAX: (408) 954-9711
Email: 6471084@mcimail.com

Mr. Lawrence J. Lamers (A)
Maxtor Corp.
Mail Stop A697
251 River Oaks Pkwy
San Jose, CA 95134
Phone: (408) 432-4776
FAX: (408) 432-4510
Email: larry_lamers@maxtor.com

Mr. Joe Dambach (P) Molex Inc. 2222 Wellington Court Lisle, IL 60532 Phone: (708) 527-4546 FAX: (708) 969-1352 Email:

Mr. John Lohmeyer (P)
NCR Corp.
1635 Aeroplaza Dr.
Colorado Springs, CO 80916
Phone: (719) 573-3362
FAX: (719) 597-8225
Email: john.lohmeyer@ftcollinsco.ncr.com

Mr. Peter Brown (P)
Oak Technology, Inc.
139 Kifer Ct.
Sunnyvale, CA 94086
Phone: (408) 737-0888
FAX: (408) 737-3838
Email: brown@oaktech.com

Mr. Pat Lara (A) P. E. Logic Corp. 22695 Old Canal Rd. Yorba Linda, CA 92687 Phone: (714) 282-6188 FAX: (714) 282-6199 Email:

Mr. Charles I. Yang (A) Panasonic Industrial Co. 1600 McCandless Dr. Milpitas, CA 95035 Phone: (408) 262-2200 FAX: (408) 946-3753 Email:

Mr. John F. Fobel (P) Rancho Technology, Inc. 10783 Bell Court Rancho Cucamonga, CA 91730 Phone: (909) 987-3966 FAX: (909) 989-2365 Email:

Mr. Satwinder S. Mangat (A) Ricoh Corporation 3001 Orchard Parkway San Jose, CA 95134-2088 Phone: (408) 954-5484 FAX: (408) 432-8398 Email: mangat@str.ricoh.com

Mr. Gerald Houlder (A)
Seagate Technology
MPS043
8001 E. Bloomington Freeway
Bloomington, MN 55420-1094
Phone: (612) 844-5869
FAX: (612) 844-5708
Email: Gerry_Houlder@notes.seagate.com

Mr. Stephen G. Finch (P) Silicon Systems, Inc. 14351 Myford Road Tustin, CA 92680-7022 Phone: (714) 573-6918 FAX: (714) 573-6914 Email: 5723283@mcimail.com

Mr. Erich Oetting (P) Storage Technology Corp. 2270 South 88th St. Louisville, CO 80028-0231 Phone: (303) 673-2178 FAX: (303) 673-8196 Email: Erich_Oetting@Stortek.com Mr. Roger Cummings (A) Storage Technology Corp. 2270 South 88th St. Louisville, CO 80028-0211 Phone: (303) 673-6357 FAX: (303) 673-2568

Email: Roger_Cummings@Stortek.com

Mr. John Moy (P) Tandem Computers Loc 100-03 10555 Ridgeview Ct. Cupertino, CA 95014-0789 Phone: (408) 285-0463 FAX: (408) 285-9924 Email: moy_john@tandem.com

Mr. Harvey Waltersdorf (P) Thomas & Betts 200 Executive Ctr. Dr. 200 Executive Ctr. Dr. P.O. Box 24901 Greenville, SC 29616-2401 Phone: (803) 676-2905 FAX: (803) 676-2994 Email:

Mr. Peter Dougherty (P) UNISYS Corporation UNISYS Corporation MS-201 25725 Jeronimo Rd. Mission Viejo, CA 92691 Phone: (714) 380-6270 FAX: (714) 380-5858

Email: peter.dougherty@mv-oc.com

Mr. Paul D. Aloisi (P) Unitrode Integrated Circuits Ontirede integrated Cir 7 Continental Blvd Merrimack, NH 03045 Phone: (603) 429-8687 FAX: (603) 424-3460 Email: Aloisi@uicc.com

Mr. Tak Asami (A) Western Digital Corporation western Digital Corporate 8105 Irvine Ctr. Dr. Irvine, CA 92718 Phone: (714) 932-7621 FAX: (714) 932-6496 Email: asami@dt.wdc.com

Mr. Doug Piper Mr. Doug Piper (P)
Woven Electronics
PO Box 189
Mauldin, SC 29662
Phone: (803) 967-1751
FAX: (803) 963-1761

Email: WOVEN ELECTRONICS / MCI ID: 549-9900

Mr. Robert N. Snively (P) Sun Microsystems, Inc. Mail Stop 15-46 2550 Garcia Ave. Mountain View, CA 94043-1100 Phone: (415) 336-5332 FAX: (415) 336-3392

Email: Bob.Snively@sun.com

Mr. Pete Tobias (A) Tandem Computers Loc 100-03 10555 Ridgeview Ct. Cupertino, CA 95014-0789
Phone: (408) 285-9913
FAX: (408) 285-9924
Email: Tobias_Pete@Tandem.com

Mr. Chuck Duquette (P) U.S. Design 9075 Guilford Road Columbia, MD 21046 Phone: (410) 381-3000 FAX: (410) 381-3235 FAX: (410) 381-3235 Email: dennis@usdc.com

Mr. Allen Spalding (A) UNISYS Corporation 25725 Jeronemo Rd. Mission Viejo, CA 92691 Phone: FAX:

Mr. Mark Jordan (A) Unitrode Integrated Circuits Ontirode integrated CIP 7 Continental Blvd Merrimack, NH 03045 Phone: (603) 429-8628 FAX: (603) 424-3460 Email: Jordan@uicc.com

Mr. Tom Hanan (A) Western Digital Corporation 8105 Irvine Ctr. Dr. Irvine, CA 92718 Phone: (714) 932-7472 FAX: (714) 932-7796 Email: hanan_t@al.wdc.com

Mr. E.J. Mondor Mr. E.J. Mondor (A)
Woven Electronics
PO Box 189
Mauldin, SC 29662
Phone: (803) 967-1739
FAX: (803) 963-1761
Email: WOVEN ELECTRONICS / MCI ID: 549-9900

Mr. Vit Novak (A) Sun Microsystems, Inc. Mail Stop 15-46 2550 Garcia Ave. Mountain View, CA 94043-1100 Phone: (415) 336-2455 FAX: (415) 968-4873 Email: vit.novak@sun.com

Mr. Bill Boyd (0) Texas Instruments MS 8218 8360 LBJ Freeway Dallas, TX 75265 Phone: (214) 997-3673 FAX: (214) 997-5962 Email:

Mr. Skip Linehan (A) U.S. Design 9075 Guilford Road Columbia, MD 21046 Phone: (410) 381-3000 FAX: (410) 381-3235 Email:

Mr. Arlan P. Stone (A) UNISYS Corporation MS 201 25725 Jeronemo Rd. Mission Viejo, CA 92691 Phone: (714) 380-5982 FAX: (714) 380-6099 Email:

Mr. Jeff Stai (P)
Western Digital Corporation
8105 Irvine Ctr. Dr.
Irvine, CA 92718
Phone: (714) 932-7644
FAX: (714) 932-6496
Email: stai@dt.wdc.com

Mr. Devon Worrell (A) Western Digital Corporation western Digital Corporation 8105 Irvine Ctr. Dr. Irvine, CA 92718 Phone: (714) 932-7042 FAX: (714) 932-7796 Email: worrell@dt.wdc.com

Jan 25, 1994 - X3T10 Document Register - Enclosure (3)

X3T9.2/94-001R0 Date: Author: J. Lohmeyer [] Desc: X3T9.2 1993 Annual Report Date: 1/25/94 Author: J. Lohmeyer [2/15/94] X3T9.2/94-002R0 Desc: X3T10 Project Status Summary X3T9.2/94-003R0 Date: 1/24/94 Author: J. Lohmeyer [2/15/94] Desc: Draft Agenda for X3T10 Meeting - Mar '94 Res: $\tt X3T9.2/94-004R0$ Date: Author: J. Lohmeyer [] Desc: Draft Agenda for X3T10 Meeting - May '94 X3T9 2/94-005R0 Date: Author: J. Lohmeyer [] Desc: Draft Agenda for X3T10 Meeting - July '94 Res: X3T9.2/94-006R0 Date: Author: J. Lohmeyer Desc: Draft Agenda for X3T10 Meeting - September '9 Res: X3T9.2/94-007R0 Date: Author: J. Lohmeyer [] Desc: Draft Agenda for X3T10 Meeting - November '94 Res: X3T9.2/94-008R0 Date: Author: J. Lohmeyer [] Desc: Draft Agenda for X3T10 Meeting - January '95 Res: X3T9.2/94-009R0 Date: Author: J. Lohmeyer [] Desc: Jeopardy Letter Res: X3T9.2/94-010R0 Date: 12/7/93 Author: G. Penokie [2/15/94] Desc: Minutes of Raid Study Group - Dec '93 Res: X3T9.2/94-011R0 Date: 1/11/94 Author: G. Penokie [2/15/94] Desc: Minutes of Raid Study Group - Jan '94 Res: X3T9.2/94-012R0 Date: 1/21/93 Author: Lamers/Finch [2/15/94] Desc: Minutes of ATA Working Group - Jan '94 Res: X3T9.2/94-013R0 Date: 1/21/94 Author: Lamers/Lohmeyer [2/15/94] Desc: Minutes of General Working Group - Jan '94 X3T9.2/94-014R0 Date: 11/22/94 Author: R. Snively [2/15/94] Desc: Response to Comments for FCP Res: X3T9.2/94-015R0 Date: 1/12/94 Author: R. Weber [2/15/94] Desc: Minutes of the CAM Working Group - Jan '94 X3T9.2/94-016R0 Date: 1/21/94 Author: Lamers/Lohmeyer [] Desc: Minutes of X3T10 Meeting #1 - Jan '94 X3T9.2/94-016R1 Date: 1/25/94 Author: Lamers/Lohmeyer [2/15/94] Desc: Minutes of X3T10 Meeting #1 - Jan '94 Res: X3T9.2/94-017R0 Date: 1/13/94 Author: J. Scheible [2/15/94] Desc: Minutes of X3T10.1 Meeting #1 - Jan '94 Res: X3T9.2/94-018R0 Date: Author: R. Weber [2/15/94] Desc: Processor Commands for SPC Res: X3T9.2/94-019R0 Date: 1/14/94 Author: S. Finch [2/15/94] Desc: Project Proposal - ATA-PH3 Res: X3T9.2/94-020R0 Date: 1/14/94 Author: S. Finch [2/15/94] Desc: Project Proposal - ATA3-XPT Res: X3T9.2/94-021R0 Date: 1/14/94 Author: S. Finch [2/15/94] Desc: Project Proposal - ATA3-PI Res: X3T9.2/94-022R0 Date: Author: S. Finch [2/15/94] Desc: Project Proposal - BC Res: Date: 1/12/94 Author: B. Ham [2/15/94] X3T9.2/94-023R0 Desc: Ultra-SCSI Update 1 Res: X3T9.2/94-024R0 Date: 1/5/94 Author: D. Hagerman [2/15/94] Date: 1/5/94 Auth Desc: Error Handling for SCSI Controllers Res: Date: 1/5/94 Author: D. Hagerman [2/15/94] X3T9.2/94-025R0 Desc: Additional Device Models Res:

Res: $\tt X3T9.2/94-027R0$ Date: 12/6/93 Author: R. Kalish [2/15/94] Desc: Proposal for Data CRC across the Cable Res: X3T9.2/94-028R0 Date: Author: C. Monia [2/15/94]
Desc: Summary of Proposed Responses to Comments on SAM, revision 12 Res: X3T9.2/94-029R0 Date: Author: C. Monia [2/15/94]
Desc: Summary of Proposed SAM responses for Working Group Discussion Res: X3T9.2/94-030R0 Date: Author: C. Monia [2/15/94] Desc: Key Issues from Review of SAM, Revision 12 Res: X3T9.2/94-031R0 Date: Auth Desc: SCSI Logical Unit Addressing Author: G. Penokie [2/15/94] Res: X3T9.2/94-032R0 Date: Author: G. Houlder [2/15/94] Desc: Message Handling Res: X3T9.2/94-033R0 Date: Author: R. Snively [2/15/94] Desc: Fibre Channel Icon Proposal X3T9.2/94-034R0 Date: Author: OMC [2/15/94] Desc: Presentation on X3 Procedures Res: Author: D. Hagerman [2/15/94] X3T9.2/94-035R0 Date: Desc: Project Proposal for SCSI-3 Controller Commands Res: X3T9.2/94-036R0 Date: Author: Lohmeyer/Harris [2/15/94] Desc: Project Proposal for Multi-Media Command Set X3T9.2/94-037R0 Date: 1/14/94 Author: D. Pak [2/15/94] Desc: Liason Report - P1285 - January '94 Res: $\tt X3T9.2/94-038R0$ Date: 1/20/94 Author: P. Aloisi [2/15/94] Desc: Proposed changes to SPI Res: X3T9.2/94-039R0 Date: 1/13/94 Author: D. Arnold [2/15/94] Desc: Call for Volunteers - X3T10 Res: X3T9.2/94-040R0 Date: 12/10/93 Author: G. Penokie [2/15/94] Desc: SCSI Disk Array Model Res: X3T9.2/94-041R0 Date: 12/12/93 Author: G. Penokie [2/15/94] Desc: SDA States and Types Res: Date: 12/10/93 Author: G. Penokie [2/15/94] Desc: SDA Commands & Mode Pages Res: X3T9.2/94-043R0 Date: 1/24/94 Desc: Results of 1/11/94 SAM WG Review

Date: 1/24/94 Author: C. Monia [2/15/94]

Date: 1/24/94 Author: J. Lohmever [2/15/94]

X3T9.2/94-044R0

Res:

Desc: Letter Ballot on FCP