

Accredited Standards Committee*
National Committee for Information Technology Standards (NCITS)

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Reply to: John Lohmeyer

To: Membership of T10

From: Ralph Weber, Secretary T10
John Lohmeyer, Chair T10

Subject: Minutes of T10 Plenary Meeting #20
San Diego, CA -- March 13, 1997

Agenda

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Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 1:00 p.m., Thursday March 13, 1997. He thanked Skip Jones of QLogic for hosting the meeting.

Since the last meeting, X3 has changed its name to the National Committee for Information Technology Standards (NCITS, pronounced 'insights'). 'X3T10' is now just 'T10'. NCITS standards will still carry the X3.nnn labels.

John said that NCITS Subgroup Membership forms and the T10 Mailing Subscription form were available from Larry Lamers or himself at the head table. He said that people should use the NCITS forms to insure the

NCITS Secretariat has the latest membership information. These forms should be mailed directly to the NCITS Secretariat.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated. Copies of the draft agenda and general information on T10 were made available to those attending.

2. Approval of Agenda

The draft agenda was approved with the following additions:

- 10.2.1 Changes to Stabilized Clauses in SBP-2 [Johansson]
- 10.2.2 Project Proposal for SCSI Socket/SSL Services (SSS) (97-129r2) [Parker/Lohmeyer]
- 10.2.3 Non-substantive SPC Changes [Weber]
- 10.2.4 Add Mode Page for Fibre Channel features (96-195r4) [Houlder]
- 10.2.5 World Wide Names (97-101r2) [Snively]
- 10.2.6 Proposed change in Qerr=1 Behavior in SPC-2 (96-277r2) [Weber]
- 10.2.7 SIP Message Issues (97-141r0) [Penokie]
- 10.2.8 Additional Device Types for ASC/ASCQ (97-140r0) [Penokie]
- 10.2.9 RESERVE/RELEASE Issues (97-142r1) [Penokie]
- 10.2.10 Logical Unit Response to Transceiver Mode Changes (96-270r2) [Penokie]
- 10.2.11 SMC Device IDs (97-148r1) [Oetting]
- 11.2 ISO Business [Milligan]

3. Attendance and Membership

The membership requirements were reviewed. NCITS 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 T10. The individual may vote at the second plenary meeting. Working group meetings do not count toward attendance requirements.

Organizations must also pay the NCITS Service Fee (\$300) to maintain membership. The ANSI International Program Fee (also \$300) is billed at the same time.

The Chair said he had sent letters to 18 people from 8 organizations informing them that their membership was in jeopardy due to non-attendance (see 97-003r0) and that their membership would be terminated if they did not attend this meeting. The organizations in jeopardy were: Ancot Corp.; Circuit Assembly Corp.; Honda Connectors; Oak Technology, Inc.; Panasonic Technologies, Inc.; Silicon Systems, Inc.; Sony Electronics, Inc.; and SyQuest Technology, Inc.

Ian Morrell noted that he had attended the November '96 meeting for Circuit Assembly Corp. and hence they should not have been in jeopardy. All of the other organizations except Panasonic Technologies were present. They were terminated (i.e., the principal member was changed to observer status).

The following organizations applied for and received membership or a reinstated membership at this meeting:

Cirrus Logic
Data General
Harting Electronik
Hitachi Micro Systems, Inc. (*)
Hitachi Storage Products (*)

The T10 membership during the meeting was 53 organizations up from 49 organizations last time. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current T10 membership list.

(*) The two new Hitachi memberships were discovered on the attendance sheet following the meeting. Both organizations are entitled to T10 membership per an NCITS determination that these are indeed separate organizations.

John reminded those present that NCITS fees must be paid by the end of March. Anyone with questions about their NCITS fees status should contact the NCITS secretariat.

4. Approval of Minutes - January Meeting Dallas, TX (T10/97-112r1)

The minutes were approved as written.

5. Document Distribution

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

Larry Lamers requested that all documents for the next mailing be in his hands in electronic format by 10:30 a.m. on Thursday March 20, 1997. Documents received after this time 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 T10 meets its document archiving requirements by including the NCITS Secretariat on the mailing list, documents included in the mailing must be suitable for archiving. This means that native-format electronic originals with proper identification must be submitted. Document T10/95-147 contains the list of requirements for submissions. Document T10/95-361r0 contains instructions for expeditious delivery of documents to Larry.

The electronic copies can be sent directly to Larry by email (at ljlammers@corp.adaptec.com), placed on the SCSI BBS (719-533-7950), or they can be transferred by ftp protocol to ftp.symbios.com and placed in the /pub/standards/io/incoming directory. In the latter two cases, please also send an email to Larry (at ljlammers@aol.com) informing him of the exact file name and location of the file.

As usual, minutes are also available on the SCSI BBS (719-533-7950) and will be distributed to the SCSI Reflector.

To be added to the SCSI Reflector, send an email to majordomo@symbios.com with the line 'subscribe scsi' in the message body. The NCITS Secretariat maintains a World Wide Web page at <http://www.ncits.org/>. Symbios Logic maintains a World Wide Web page on behalf of T10 at <http://www.symbios.com/x3t10/>.

The current document register is enclosure (3).

6. Call for Patents

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

A document is available from ANSI, "Procedures for the Development and Coordination of American National Standards", at no charge. This document is also on the WWW at http://www.ncits.org/help/ansi_sdo.html. Annex I contains the ANSI patent policy. Amy Marasco manages patent issues for ANSI and can be contacted at amarasco@ansi.org or 212-642-4954.

7. Review of Old Action Items

- 201) Charles Monia will discover the full terms and conditions Digital intends to apply to the patent 5,586,272, provide a letter to T10 stating a belief on the part of Digital that the patent must be infringed in order to comply with portions of SPI and stating that Digital intends to comply with the ANSI patent policy. *Complete*

- 202) John Lohmeyer will forward the SPI Amendment revision 3 to NCITS for processing toward first public review. *Complete*
- 203) Charles Monia will report the Digital instructions regarding the Flexible Disk Geometry mode page to the SBC editor by 31 January 1997. *Complete*
- 204) Gene Milligan will generate revision 8 of SBC based on the agreed resolution to the letter ballot comments. *Complete*
- 205) John Lohmeyer will forward SBC revision 8 to NCITS for processing toward first public review. *Complete*
- 206) Bob Snively will prepare SES revision 8a. *Complete*
- 207) John Lohmeyer will forward SES revision 8a to NCITS for processing toward first public review. *Complete*
- 208) Bob Snively will forward 97-101r1 to IEEE under cover of a letter authorized by the T10 chair, and copy the chair and the committee document archive. *Carryover*

8. Subgroup and/or Project Status Reports

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

John Lohmeyer said that the current T10 project status summary was included in the T10 Information Packages and will be included in the mailing as usual. John also reported that the STS project proposal was approved by NCITS, but a project number has not been assigned yet.

8.2 T10.1 Task Group Report [Lamers]

Larry Lamers, the T10.1 Chair, reported that T10.1 held a meeting in February in Austin, Texas. T10.1 plans to hold a meeting co-located with T11 in Seattle in June. Larry reported that all the active T10.1 projects are before T10 for letter ballot toward first public review. Larry noted that, as the T10.1 complete the letter ballot and public review process, T10.1 activities will be decreasing.

8.3 SPI Amendment (SPIAmnd) {Project 0855-D} [Johansson/Lamers]

John Lohmeyer reported that the SPI Amendment is in first public review, which will close on April 29, 1997. John stated that the ANSI editor comments for the SPI Amendment are completed, but Larry stated that he had not received the comments yet.

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

John Lohmeyer reported that SIP had been sent to ANSI on February 14th. He had not yet received notification of its approval.

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

Bill Dallas was not present at the meeting. The committee discussed the status of the CAM-3 project, but decided insufficient information was available. Bill should be at the next meeting and the committee deferred any action in anticipation of Bill's report at that time.

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

Ron Roberts reported that SBP is approved and published. (Also see item 10.4.)

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

John Lohmeyer reported that SPC completed second public review on March 4th and the document is ready to start NCITS letter ballot. He noted that later in this meeting (see 10.2.3) action is planned to make a small number of non-substantive corrections in SPC.

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

Gene Milligan reported that SBC is out, or soon will be out, for first public review.

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

John Lohmeyer reported that he will be issuing a letter ballot for first public review of SSC shortly after this meeting. Ted Lappin will be at the next meeting, and John expressed the hope that Ted can deal with the letter ballot comments at that time.

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

Erich Oetting reported on the recent SSC/SMC Working Group meeting (minutes in 97-154). He noted that the SSC/SMC Working Group recommended a proposal for inclusion in SMC, and that the committee will be asked to act on the recommendation later in this meeting (see 10.2.11).

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

John Lohmeyer reported that SCC was approved by BSR on February 6th. George reported that he has not received a copy of SCC yet.

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

Ron Roberts reported on the comments resolution for first public review of MMC. He reviewed the comments resolution document 97-152, developed by the MMC working group. Ron reported that no pre-edit comments have been received from the ANSI editor.

Gene Milligan moved that T10 accept the comments resolution document (97-152) and that MMC rev 10 be forwarded to NCITS for processing toward second public review. Devon Worrell seconded the motion. The committee discussed whether the comments resolutions were or were not substantive. The motion passed 40:0:0:13=53.

John Lohmeyer took an action item to forward MMC rev 10 NCITS for processing toward second public review. John Lohmeyer took an action item to respond to those who commented during the first public review of MMC.

8.13 SCSI Parallel Interface - 2 (SPI-2) {Project 1142-D} [Ham]

Bill Ham reported that Adaptec presented data on LVD technology, which is the primary topic of a working group meeting on April 18th. Larry Lamers reported that SPI-2 has been converted to FrameMaker, several integration issues have been resolved, and a few integration issues still need work. Minutes of the SPI-2 Working Group meeting can be found in 97-137.

8.14 SCSI Enhanced Parallel Interface (EPI) Technical Report {Project 1143-D} [Ham]

Bill Ham reported that EPI rev 8 has been available electronically since January and will be in the next committee mailing. Bill also reported on the EPI development activities held in the general SCSI Working Group (minutes in 97-138).

8.15 SCSI Fibre Channel Protocol - 2 (FCP-2) {Project 1144-D} [Snively]

Bob Snively reported that no work has been done on FCP-2.

8.16 Boot Considerations Technical Report {Project 1154-DT} [Lamers]

John Lohmeyer reported that the NCITS letter ballot concerning the withdrawal of the project closed this past Monday. No information was available concerning the results of the ballot.

8.17 Serial Bus Protocol - 2 (SBP-2) {Project 1155-D} [Johansson]

Pete McLean reported on the activities of the SBP-2 Working Group (minutes 97-149). He stated that the working group has a goal of forwarding SBP-2 to first public review in July.

8.18 SCSI Architecture Model - 2 (SAM-2) {Project 1157-D} [Monia]

Charles Monia reported that a new rev of the document will be in the next committee mailing. He gave a brief description of the changes.

8.19 SCSI-3 Enclosure Commands (SES) {Project 1212-D} [Snively]

John Lohmeyer reported that the first public review of SES closes on April 29th. Bob Snively reported on efforts to coordinate SES with SAF-TE and develop a profile of SES that could be called SAF-TE 2.

8.20 High Availability Profile (HAP) Technical Report {Project 1224-DT} [Hagerman]

Doug Hagerman reported on his efforts to resolve some terminology issues. He stated that a new draft HAP will be in the next committee mailing.

8.21 SCSI Controller Commands - 2 (SCC-2) {Project 1225-D} [Penokie]

George Penokie reported on the recent SCC-2 Working Group meeting (minutes in 97-147). He announced that the working group has decided to hold another meeting during the May meeting week. He stated that rev 0 of SCC-2 will be in the next committee mailing.

8.22 Multimedia Command Set - 2 (MMC-2) Status {Project 1228-D} [Roberts]

Ron Roberts reported on the recent MMC-2 Working Group meeting (minutes 97-153).

8.23 SCSI Primary Commands - 2 (SPC-2) Status {Project 1236-D} [Weber]

Ralph Weber reported that no progress has been made on converting SPC-2 to FrameMaker.

8.24 SCSI-3 Transport over SBP-2 Status (STS) {Project xxxx-D} [Johansson]

John Lohmeyer reported that the project has been approved, but a project number has not been assigned yet. Peter Johansson reported that the first draft of STS is available electronically in the SBP-2 directory on the FTP site. He noted that the sense data format has been changed in STS and asked that the committee review it carefully. Peter noted that the first draft of STS will be in the next committee mailing.

9. Old Business

9.1 READ ELEMENT STATUS and Reservation Conflicts (96-267r2) [Basham/Oetting]

Action on this item was deferred to the May meeting.

10. New Business

10.1 Results of letter ballots (96-046 -- -048) on forwarding SSA documents to 1PR

Larry Lamers noted that the first generation SSA documents are all approved and published.

John Lohmeyer reported that the results for the T10 letter ballot regarding SSA-PH2 (96-046) can be found in 97-011. Larry Lamers reviewed the comments resolution document (97-130r0). On behalf of T10.1, Larry Lamers moved that 97-130r0 be accepted as resolving the letter ballot comments for SSA-PH2 and that SSA-PH2 rev 5 (rev 4 revised as per the comments resolutions in 97-130r0) be forwarded to NCITS for further processing toward first public review. The motion passed 40:0:0:13=53. Ed Gardner requested that, based on the comments resolution, his No vote on the SSA-PH2 letter ballot be changed to Yes.

John Lohmeyer took an action item to forward SSA-PH2 rev 5 to NCITS for further processing toward first public review.

John Lohmeyer reported that the results for the T10 letter ballot regarding SSA-TL2 (96-047) can be found in 97-012. Larry Lamers reviewed the comments resolution document (97-131r0). The committee requested changes in the comments resolution document, producing 97-131r1. On behalf of T10.1, Larry Lamers moved that 97-131r1 be accepted as resolving the letter ballot comments for SSA-TL2 and that SSA-TL2 rev 5a (rev 4 revised as per the comments resolutions in 97-131r1) be forwarded to NCITS for further processing toward first public review. The motion passed 40:0:0:13=53. Gene Milligan and Ed Gardner requested that, based on the comments resolution, their No votes on the SSA-TL2 letter ballot be changed to Yes.

John Lohmeyer took an action item to forward SSA-TL2 rev 5a to NCITS for further processing toward first public review.

John Lohmeyer reported that the results for the T10 letter ballot regarding SSA-S3P (96-048) can be found in 97-013. Larry Lamers reviewed the comments resolution document (97-132r0). On behalf of T10.1, Larry Lamers moved that 97-132r0 be accepted as resolving the letter ballot comments for SSA-S3P and that SSA-S3P rev 5 (rev 4 revised as per the comments resolutions in 97-132r0) be forwarded to NCITS for further processing toward first public review. The motion passed 40:0:0:13=53. Gene Milligan and Ed Gardner requested that, based on the comments resolution, their No votes on the SSA-S3P letter ballot be changed to Yes.

John Lohmeyer took an action item to forward SSA-S3P rev 5 to NCITS for further processing toward first public review.

10.2 Actions on Working Group Recommendations

10.2.1 Changes to Stabilized Clauses in SBP-2 [Johansson]

Peter Johansson moved that T10 accept the recommendation of the SBP-2 ad hoc working group to incorporate the changes in 97-128r2, 97-133r0, 97-134-r1 and 97-136r0 into the previously stabilized portions of SBP-2. Ed Gardner seconded the motion.

Peter explained that:

- 97-128r2 expands the status code values available to report 1394 transport errors;
- 97-133r0 fixes self-contradictory explanations of REQUEST ABORTED;
- 97-134r1 changes the initial state of the UNSOLICITED_STATUS_ENABLE CSR; and
- 97-136r0 adds a table to explain target reset states in more detail.

Peter reported that the recommendation of the working group was unanimously in favor of all four proposals.

The motion passed 40:0:0:13=53.

10.2.2 Project Proposal for SCSI Socket/SSL Services (SSS) (97-129r2) [Parker/Lohmeyer]

John Lohmeyer described the project proposal for a SCSI Socket/Secure Socket Layer standard. He briefly reviewed the working group discussion of the project proposal (minutes in 97-138). The committee discussed whether to vote on the project proposal now or later. Gene Milligan requested a description of the relationship between this project and the Network Connected Storage Device (NCSD) lead by Garth Gibson at Carnegie Mellon University. The committee agreed that the two projects are related but not overlapping and that NCSD should be included in liaison activity.

Bob Snively moved that 97-129r2 be accepted by T10 and forwarded to NCITS for further processing. Gene Milligan seconded the motion. The motion passed 40:0:13=53. John Lohmeyer took an action item to forward 97-129r2 to NCITS for further processing.

10.2.3 Non-substantive SPC Changes [Weber]

Ralph Weber described several non-substantive corrections that can be applied to SPC to improve it as the standard continues processing after second public review (in which no comments were received). The non-substantive corrections were as follows:

Table 21 -Peripheral device type (page 34), Code 0Ch: change the description from "Array controller device (e.g., RAID)" to "Storage array controller device (e.g., RAID)"

Correct non-existent clause references:

Change 7.22.2 to 7.21.2 on: pg 69 last line and pg 91 last line before 7.21.4

Change 7.22.3 to 7.21.3 on: pg 70 first line

Change 7.22.4 to 7.21.4 on: pg 88 list item c)

Change "extent list length" to "Parameter list length" on: pg 87 last sentence of first paragraph in 7.21.1, pg 88 first line of item a), pg 88 first line of last paragraph, pg 92 Table 72 - RESERVE(6) CDB

On page 90 last paragraph before Table 70, change "extent list length" to "length of the extent descriptors"

On page 125, Table 109, change "Page length" to "Identifier length"

On page 126 last two paragraphs, capitalize "Identifier length" and "Code value" as per their usage in table 109

Update: Vendor ID table (Annex C, Informative)

Ralph Weber moved that the changes described above be accepted as non-substantive changes to SPC, that the technical editor be instructed to prepare SPC rev 11a containing only those changes, and that SPC revision 11a be forward to NCITS to replace SPC rev 11 in the standard development process. Gary Porter seconded the motion. The motion passed 40:0:13=53.

Ralph Weber took an action item to prepare SPC rev 11a. John Lohmeyer took an action item to forward SPC rev 11a to NCITS as a replacement for SPC rev 11.

10.2.4 Add Mode Page for Fibre Channel features (96-195r4) [Houlder]

Gene Milligan moved that T10 accept the favorable working group recommendation for including 96-195r4 in FCP-2. Peter Johansson seconded the motion. The motion passed 38:1:0:14=53. Describing his reason for his no vote, Charles Monia stated that he believes that it is inappropriate to manage interconnect behavior with SCSI commands.

10.2.5 World Wide Names (97-101r2) [Snively]

Bob Snively described the process by which the world wide names description was revised and how the previous revision of the document needed improvement before being sent to IEEE. Bob Snively moved that T10 approve 97-101r2 as a replacement for 97-101r1 for forwarding to IEEE. Charles Monia seconded the motion. The motion passed 40:0:0:13=53.

Bob Snively took an action item (208 carryover) to forward 97-101r2 to IEEE under cover of a letter authorized by the T10 chair, and copy the chair and the committee document archive.

10.2.6 Proposed change in Qerr=1 Behavior in SPC-2 (96-277r2) [Weber]

Ralph Weber described working group requested revisions to 96-277r1 that resulted in r2. Ralph Weber moved that T10 accept 96-277r2 for inclusion in SPC-2 and SAM-2. Ed Gardner seconded the motion. The motion passed 39:1:0:13=53. Describing his reason for his no vote, Charles Monia expressed the concern that the proposal leaves open the possibility that some other T10 document might require an unacceptable behavior with respect to QErr and that the relationship with other documents is not clearly described in the proposed new text.

10.2.7 SIP Message Issues (97-141r2) [Penokie]

George Penokie reviewed the working group discussion of the proposal (minutes in 97-138). The committee identified typographical problems in the proposal, as presented. The committee expressed strong editorial disagreement with the wording of item b) in the disconnect privilege part of the proposal. Acceptable wording was devised and George agreed to prepare 97-141r3. George Penokie moved that T10 accept 97-141r3 (97-141r2 as revised by the committee) for inclusion in the non-stabilized clauses of SPI-2. Gary Porter seconded the motion. The motion passed 39:0:0:14=53.

10.2.8 Additional Device Types for ASC/ASCQ (97-140r0) [Penokie]

Based on the working group recommendation, George Penokie moved that T10 accept 97-140r0 for inclusion in SPC-2. Erich Oetting seconded the motion. The motion passed 39:0:0:14=53.

10.2.9 RESERVE/RELEASE Issues (97-142r1) [Penokie]

Based on the working group recommendation, George Penokie moved that T10 accept 97-142r1 for inclusion in SPC-2. Ralph Weber seconded the motion. The motion passed 39:0:0:14=53.

10.2.10 Logical Unit Response to Transceiver Mode Changes (96-270r2) [Penokie]

Based on the working group recommendation, George Penokie moved that T10 accept 96-270r2 for inclusion in the non-stabilized part of SPI-2 and SPC-2. Jeff Williams seconded the motion. The motion passed 39:0:0:14=53.

10.2.11 SMC Device IDs (97-148r1) [Oetting]

Erich Oetting described the proposal and working group requested revisions to the proposal (minutes in 97-154). Based on the working group recommendation, Erich Oetting moved that T10 accept 97-148r1 for inclusion in SMC. Ken Hallam seconded the motion. The motion passed 39:0:0:14=53.

10.3 Deletion of SCAM from SPI-2 and HAP [Milligan]

Gene Milligan reviewed the working group discussion of the proposal to delete SCAM from SPI-2 and HAP (minutes in 97-138). Gene Milligan moved that T10 retain SCAM as it is defined in the Amended SPI and not

include SCAM as it is defined in the Amended SPI in any T10 projects subsequent to SPI. George Penokie seconded the motion.

As the first person to discuss the motion, Gene Milligan gave an example of impediments to SCAM noting the popular use of the SCSI ID to avoid excessive power surges in systems which do not implement the START STOP command.

Gene then moved that the motion to not include SCAM in the named T10 projects be placed on the table. The motion was seconded. The motion to table passed 33:6.

Chair's note: The above motion will stay 'on the table' until such time as a motion to take it from the table passes by a simple majority.

10.4 Recommendation to Withdraw ANSI X3.268 (SBP) [Johansson]

Peter Johansson moved that T10 recommend that NCITS take the necessary steps to withdraw ANSI X3.268-1997 (Serial Bus Protocol). Dennis Pak seconded the motion. The committee discussed the motivations for the motion, in particular concerns about industry confusion between SBP and SBP-2. Several alternatives to the motion were recommended; including making SBP-2 a designated replacement for SBP and renaming SBP-2 something that cannot be confused with SBP.

On a roll-call vote, the motion passed 30:8:0:15=53. John Lohmeyer took an action item inform NCITS that T10 recommends the withdrawal ANSI X3.268-1997 (Serial Bus Protocol). The details of the roll-call vote were as follows:

Organization	Stat	Name	Yes	No	Abs	NP
Adaptec, Inc.	P	Mr. Norm Harris		1		
Amdahl Corp.						1
AMP, Inc.	P	Mr. Charles Brill		1		
Amphenol Interconnect	P	Mr. Michael Wingard		1		
Ancot Corp.	A	Mr. Gary Porter		1		
Apple Computer	A	Mr. Ron Roberts	1			
Berg Electronics						1
Cable Design Technologies	P	Mr. Richard Wagner	1			
Ciprico Inc.	P	Mr. Gerry Johnsen	1			
Circuit Assembly Corp.	P	Mr. Ian Morrell	1			
Cirrus Logic Inc.	P	Mr. Ken Wolfgang	1			
CMD Technology	P	Mr. Edward Haske	1			
Congruent Software, Inc.	P	Mr. Peter Johansson	1			
Dallas Semiconductor	P	Mr. Michael Smith	1			
Data General / Clariion	P	Mr. Greg McSorley	1			
Digital Equipment Corp.						1
Distributed Processing Tech.						1
Eastman Kodak Co.	P	Mr. Robert Reisch	1			
ENDL						1
Exabyte Corp.	P	Ms. Constance Kephart	1			
Fujitsu Computer Products, Am						1
Harting Elektronik	P	Mr. Joel Urban		1		
Hewlett Packard Co.	P	Mr. J. R. Sims	1			
Hitachi Cable Manchester, Inc	P	Mr. Zane Daggett		1		
Hitachi Micro Systems, Inc.						1
Hitachi Storage Products						1
Honda Connectors	P	Mr. Thomas J. Kulesza		1		
IBM Corp.	A#	Mr. Dan Colegrove	1			
Iomega Corp.						1
KnowledgeTek, Inc.	P	Mr. Dennis Moore	1			
Linfinity Micro	A	Mr. Louis Grantham	1			
Madison Cable Corp.						1
Maxtor Corp.	P	Mr. Pete McLean	1			
Molex Inc.	A	Mr. Jay Neer	1			
NEC Electronics, Inc.						1
Oak Technology, Inc.	P	Mr. Robin Freeze	1			

Ophi dian Designs	P	Mr. Edward A. Gardner	1				
Philips Key Modules	P	Mr. William P. McFerrin	1				
QLogic Corp.						1	
Quantum Corp.	A	Mr. Mark Evans	1				
Seagate Technology	P	Mr. Gene Milligan	1				
Silicon Systems, Inc.	P	Mr. Dave Guss	1				
Sony Electronics, Inc.	P	Mr. Dennis Pak	1				
Storage Technology Corp.	P	Mr. Erich Oetting	1				
Sun Microsystems Computer Co	P	Mr. Robert N. Snively	1				
Symbios Logic Inc.	P	Mr. John Lohmeyer	1				
SyQuest Technology, Inc.	P	Mr. Patrick Mercer	1				
Tandem Computers	P	Mr. Pete Tobias	1				
Toshiba America						1	
UNISYS Corporation						1	
Unitrode Corporation	P	Mr. Paul D. Aloisi	1				
Western Digital Corporation	P	Mr. Jeffrey L. Williams	1				
Woven Electronics						1	
			30	8	0	15	= 53

11. ISO

11.1 ISO Report [Milligan]

Gene Milligan, the T10 International Representative, provided the following electronic report:

ISO Report:

DIS 14776-411 SAM has been sent by the SC 25 Secretariat to Geneva to be issued for a DIS ballot. However he has noted some changes that were not found in the text but are in the editor s report and some other editorial requests. He suggests trying to get a revised text in time to substitute for the ballot.

JTC 1 TAG vote to Approve the U.S. submission of ANSI X3.232-1996: Information technology - SCSI-2 Common access method transport and SCSI interface module, for Fast-Track processing in JTC 1 has been issued as JTLB 1512 closing 4-7-97.

DIS 9314-4 FDDI SMF-PMD passed 22:1:2:0 with comments from Germany, Japan, and the UK.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N324) on IPI-3 Tape (CD9318-4) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N325) on HIPPI-ATM (CD11518-8, Rev 1.7) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N326) on FC-AL (CD14165-121, Rev 4.5) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N327) on FC-SB (CD14165-121, Rev 3.4) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N330) on FC-FP (CD14165-211, Rev 2.2) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N331) on HIPPI-Serial (CD11518-9, Rev 2.6) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N332) on FC-GS (CD14165-411, Rev 3.0) be in favor of approval.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N328) on FC-PH-2 (CD14165-112, Rev 7.3) be in favor of approval with numerous comments.

Recommend to JTC1 TAG that the US position on the CD letter ballot (SC 25 N329) on FC-PH-3 (CD14165-113, Rev 8.8) be in favor of approval with numerous comments.

The CD 10192-5 ballot on Information Technology Home Electronic Systems (HES) Part 5: Universal Interface class 1 failed to reach substantial support 8:5:0:7.

JTC 1 has recommended cancellation of the projects for FDDI conformance standards, EUROBUS A, IPI-3 Disk, IPI-3 Tape, IPI Enhanced PHY, HIPPI-ATM, HIPPI-SE, FC-PH, FC-FP, FC-AL, & FC-SB. The IR is in the middle of a flurry of correspondence protesting the knee jerk process that was used as an adjunct of the standards reengineering process that led to erroneous cancellation recommendations.

In this regard, those with international contacts should be soliciting more active international support if they are aware of a need for international standards.

The JTC 1 ISO high level steering group for CALS HLSSG has put out an interesting report (JT/97-0062) on Improvement of requirements responsiveness of standards bodies covering: Reengineering of JTC 1; Perceived Value/Benefits of International Standards; Options to quickly adopt existing solutions in International Standards; and Recommendations.

The US JTC 1 TAG Special Group on Functional Standardization (JTFS) was disbanded. JTFS was responsible for International Standardization Profiles (PDISP). Consequently SC TAGs (e.g. T10-12) are encouraged to establish liaison, as appropriate, with the OIW. There are no membership fees associated with participation on the OIW. Registration fees are required of meeting attendees.

Contact information for the OIW is as follows:

*Mr. Joseph Hungate
OIW Chairman
TRW Integrated Engineering Division
One Federal Systems Park Drive
Fairfax, VA 22033
Telephone: 703-803-4943
Fax: 703-803-5096
Email: joseph.i.hungate@trw.com*

At the last Meeting of JTC1/SC26, it was suggested that a microprocessor-systems standard developed by the Trade Association VITA (and bearing an ANSI designation) be Fast Tracked by the UK NB.

The DOD has requested that NCITS and the JTC 1 TAG provide reflectors with majordomo capabilities to facilitate the national and international standards process.

The Danish UNIX systems User Group (DKUUG) has offered various electronic services, free of charge, to any JTC 1 subcommittee or working group. The service includes email exploder, with automatic sequence numbering and archiving, and access to X.400 and Internet addresses; Web services, including password protected ad public areas; ftp services. At the moment SC2, SC18, SC22, SC24, SC29, SGFS, and some JTC 1 ad hoc groups are using their services. For further information the contact is keld@dkuug.dk.

Guidelines have been finalized for cooperation between ISO and the European Committee for Standardization (CEN). The cooperation provides for mutual representation at meetings, adoption of International Standards as European Standards, and adoption of European Standards as ISO standards.

There is a similar agreement between ISO/IEC JTC 1 and the European Telecommunications Standards Institute (ETSI).

11.2 ISO Business [Milligan]

Ron Roberts moved that MMC be submitted to ISO. Bob Snively seconded the motion. The motion passed 35:0:0:17=53.

George Penokie moved that SIP be submitted to ISO. Gene Milligan seconded the motion. The motion passed 36:1:0:16=53. Commenting on the reason for his no vote, George objected to the work he will have to do.

Ralph Weber moved that SPC rev 11a be submitted to ISO. Gene Milligan seconded the motion. The motion passed 35:0:0:18=53.

Gene Milligan moved that SBC be submitted to ISO. George Penokie seconded the motion. The motion passed 35:0:0:18=53.

Gene Milligan moved that the IR be instructed to submit the SCAM patent letter through the proper channels to ISO/IEC and that the IR also be instructed to supply a replacement patent statement for SPI to ISO/IEC. John Lohmeyer seconded the motion. The motion passed 36:0:0:17=53.

Gene Milligan announced that SC25 will be meeting during the week of June 23rd (the working group will meet on June 23-26) in the vicinity of Rio de Janeiro. The notice for this meeting has not been sent yet. Gene reported that he did not know why the host, Brazil, had not yet provided a meeting venue notice.. Gene informed the committee that T10 should identify the members of its delegation at the May meeting.

Peter Johansson moved that T10 instruct the IR to take the necessary actions at SC25 to withdraw the international version of ANSI X3.268-1997 (Serial Bus Protocol). Pete McLean seconded the motion.

On a roll-call vote, the motion passed 32:7:0:14=53. The details of the roll-call vote were as follows:

Organization	Stat	Name	Yes	No	Abs	NP
Adaptec, Inc.	P	Mr. Norm Harris		1		
Amdahl Corp.						1
AMP, Inc.	P	Mr. Charles Brill		1		
Amphenol Interconnect	P	Mr. Michael Wingard		1		
Ancot Corp.	A	Mr. Gary Porter		1		
Apple Computer	A	Mr. Ron Roberts	1			
Berg Electronics						1
Cable Design Technologies	P	Mr. Richard Wagner	1			
Ciprico Inc.	P	Mr. Gerry Johnsen	1			
Circuit Assembly Corp.	P	Mr. Ian Morrell	1			
Cirrus Logic Inc.	P	Mr. Ken Wolfgang	1			
CMD Technology	P	Mr. Edward Haske	1			
Congruent Software, Inc.	P	Mr. Peter Johansson	1			
Dallas Semiconductor	P	Mr. Michael Smith	1			
Data General / Clariion	P	Mr. Greg McSorley	1			
Digital Equipment Corp.	P	Mr. Charles Monia	1			
Distributed Processing Tech.						1
Eastman Kodak Co.	P	Mr. Robert Reisch	1			
ENDL						1
Exabyte Corp.	P	Ms. Constance Kephart	1			
Fujitsu Computer Products, Am						1

Harting Elektronik	P	Mr. Joel Urban	1	1			
Hewlett Packard Co.	P	Mr. J. R. Sims	1				
Hitachi Cable Manchester, Inc	P	Mr. Zane Daggett		1			
Hitachi Micro Systems, Inc.							1
Hitachi Storage Products							1
Honda Connectors	P	Mr. Thomas J. Kulesza		1			
IBM Corp.	A#	Mr. Dan Colegrove	1				
Iomega Corp.							1
KnowledgeTek, Inc.	P	Mr. Dennis Moore	1				
Linfinity Micro	A	Mr. Louis Grantham	1				
Madison Cable Corp.							1
Maxtor Corp.	P	Mr. Pete McLean	1				
Molex Inc.	A	Mr. Jay Neer	1				
NEC Electronics, Inc.							1
Oak Technology, Inc.	P	Mr. Robin Freeze	1				
Ophidian Designs	P	Mr. Edward A. Gardner	1				
Philips Key Modules	P	Mr. William P. McFerrin	1				
QLogic Corp.							1
Quantum Corp.	A	Mr. Mark Evans	1				
Seagate Technology	P	Mr. Gene Milligan	1				
Silicon Systems, Inc.	P	Mr. Dave Guss	1				
Sony Electronics, Inc.	P	Mr. Dennis Pak	1				
Storage Technology Corp.	P	Mr. Erich Oetting	1				
Sun Microsystems Computer Co	P	Mr. Robert N. Snively	1				
Symbios Logic Inc.	P	Mr. John Lohmeyer	1				
SyQuest Technology, Inc.	P	Mr. Patrick Mercer	1				
Tandem Computers	P	Mr. Pete Tobias	1				
Toshiba America							1
UNISYS Corporation							1
Unitrode Corporation	P	Mr. Paul D. Aloisi	1				
Western Digital Corporation	P	Mr. Jeffrey L. Williams	1				
Woven Electronics							1
			32	7	0	14	= 53

12. Liaison Reports

12.1 T11 Liaison Report [Cummings]

Roger Cummings, T11 Chair, was unable to attend but provided the following electronic report:

X3T11 LIAISON REPORT to X3T10 & X3T12

X3T11 met on February 5, 1997 with 139 people in attendance. Silicon Systems lost membership. Arxcel Technologies, Framatome Connectors USA, Fujikura Technologies USA & US Conec were added as a new member organizations. CDT returned as a member organization. The membership of X3T11 is now 79 organizations.

It was reported that HIPPI-PH had completed reaffirmation as X3.183-1991[R1996]. X3 Letter Ballots on the final approvals of dpANS for the Revised HIPPI-SC, SBCON, FC-PH-2, HIPPI-ATM and HIPPI Serial projects closed on January 14, 1997, with F23-O00-A00-DNV2.

It was also reported that the following standards received final approval;

FC-LE (X3.287-1996), FC-GS (X3.288- 1996) & FC-FG (X3.289-1996)

and that a Project Proposal for a revision to ANSI X3.210-1992, HIPPI Framing Protocol (HIPPI-FP), was in X3 Letter Ballot closing March 10, 1997.

The following project proposals were approved by consent at the November OMC meeting:

NAME

1237-D FC-AV
1238-D FC-BB
1239-D FC-SB Revised

By identical rollcall votes of F66-O00-DNV11, T11 recommended that the JTC 1 TAG approve the CD Letter Ballots for IPI-3 Tape, FC-FP, FC-SB, FC-AL, HIPPI-ATM and HIPPI Serial as is, and approve the CD Letter Ballots for FC-PH-2 and FC-PH-3 with comments equivalent to those submitted during the first Public Reviews in domestic processing and identified errata. T11 also recommended by rollcall votes of F66-O00-DNV11 that the standardization activities for the international IPI-3 Disk, IPI-3 Tape, HIPPI-ATM, HIPPI Serial, FC-PH, FC-FP, FC-AL and FC-SB projects be NOT stopped or canceled.

By a vote of F60-O00-DNV19, T11 forwarded a Project Proposal for HIPPI Scheduled Transfers (HIPPI-ST) for further processing.

By a lengthy process involving several rollcall votes, T11 adopted the 3M Galaxy connector (proposed by 3M et al) for inclusion in a future FC-PH variant.

A motion to change the name of the FC Slotted Loop (FC-SL) project was withdrawn.

It was noted that a Call for Volunteers for the position of Chair, TC T11 has been issued which closes on 4/2/97. Roger Cummings indicated that he has permission from DPT to stand for Chair again.

A proposal to reorganize T11 and establish a number of Task Groups was discussed in detail, and several changes were suggested. A T11 Letter Ballot is being held on a modified reorganization proposal.

The next meeting of X3T11 is being hosted by Jeff Stai of Brocade Communications during the week of April 7, 1997 at the Hyatt, Palm Springs, CA. The phone number is 619-322-9000. The Plenary meeting is on Wednesday, April 9. Interim study and ad hoc meetings have been approved for:

HIPPI 3/4-6 San Jose, CA
FC Working Study Group 3/10-11 San Diego, CA
FC-AV 3/18 Portland, OR

as well as the usual meetings during the X3T11 Plenary week.

12.2 T13 Liaison Report [Milligan]

Gene Milligan made an oral report to the committee and provided the following electronic report::

T13 Report:

A major portion of the recent T13 ad hoc meeting addressed ATA/ATAPI-4 - Project 1153D Revision 9. As a result new protocol diagrams have been produced in Rev 10 which will be a key aspect of the 3/18-21/97 ad hoc meeting. INTRQ timing has been added.

Another topic for the ad hoc is the Set Max functionality.

The review of the Enhanced BIOS Disk Drive Technical Report - Project 1226DT resulted in resolution of the Enhanced FDPT signature of A0h which has been changed to Axh.

The project proposal for a Tailgate standard passed 20:1:0:8. The proposal for the proposed standard is D97107r0

A proposal, associated with the SFF 80 line cable, is being considered that would connect PDIAG only between device 0 and device 1 and not connected it to the host. The corresponding host pin would be grounded to allow the host to detect whether the cable was the new 80 style or the current 40 style. CSEL would also be changed to eliminate the stub with device 0 only configurations.

An ad hoc on Tailgate was held jointly with the T10 SBP-2 ad hoc March 10-11, 1997 in San Diego, CA hosted by QLogic.

T13 Meeting Schedule

The next plenary meeting of T13 will be April 25, 1997 at the Western Digital facility, in Irvine, CA hosted by Western Digital.

The next ad hoc meeting for all projects will be March 18-21, 1997 at the Seagate facility hosted by Seagate. The long term meeting schedule is:

The subsequent working group meeting will be April 23-24, 1997 at the Western Digital facility, in Irvine, CA hosted by Western Digital.

<i>Date</i>	<i>Location</i>	<i>Host</i>	<i>Contact</i>
<i>January 22-24, 1997 *</i>	<i>San Jose, CA</i>	<i>Seagate</i>	<i>Marc Noblitt</i>
<i>February 18-21, 1997</i>	<i>Ft. Collins, CO</i>	<i>Symbios Logic</i>	<i>Mike Winchell</i>
<i>March 18-21, 1997</i>	<i>San Jose, CA</i>	<i>Seagate</i>	<i>Marc Noblitt</i>
<i>April 23-25, 1997 *</i>	<i>Irvine, CA</i>	<i>Western Digital</i>	<i>Tom Hanan</i>
<i>May 21-23, 1997</i>	<i>Estes Park, CO</i>	<i>Seagate</i>	<i>Marc Noblitt</i>
<i>June 18-20, 1997</i>	<i>Irvine, CA</i>	<i>Western Digital</i>	<i>Tom Hanan</i>
<i>July 23-25, 1997 *</i>	<i>San Jose, CA</i>	<i>Seagate</i>	<i>Marc Noblitt</i>
<i>August 20-22, 1997</i>	<i>Longmont, CA</i>	<i>SSI/TI</i>	<i>Yogi Schaffner</i>
<i>September 24-26, 1997</i>	<i>Irvine, CA</i>	<i>Phoenix Technologies</i>	<i>Curtis Stevens</i>
<i>October 22-24, 1997*</i>	<i>TBD, HI</i>	<i>Quantum</i>	<i>Mark Evans</i>
<i>December 3-5, 1997</i>	<i>Irvine, CA</i>	<i>Western Digital</i>	<i>Tom Hanan</i>
<i>January 21-23, 1998*</i>	<i>San Jose, CA</i>	<i>Seagate</i>	<i>Marc Noblitt</i>
<i>February 18-20, 1998</i>	<i>Colorado</i>	<i>Symbios Logic (?)</i>	<i>Mike Winchell</i>
<i>March 25-27, 1998</i>		<i>Maxtor (?)</i>	<i>Pete McLean</i>
<i>April 15-17, 1998 *</i>	<i>Irvine, CA</i>	<i>Western Digital</i>	<i>Tom Hanan</i>
<i>May 20-22, 1998</i>			
<i>June 17-19, 1998</i>	<i>Irvine, CA</i>	<i>Western Digital</i>	<i>Tom Hanan</i>
<i>July 22-24, 1997 *</i>			

** Plenary on Friday*

12.3 SFF Industry Group [Allan]

Dal Allan provided the following electronic report:

The SFF SSWG met on March 12, and addressed two new issues which had been brought to SFF attention, and made decisions on existing activities.

- An interoperability issue exists between an SCA-2 connector on a drive mating to an SCA receptacle on the backplane causing intermittent contact at an OEM. A SSWG is scheduled for 3/26-27 to ascertain whether this is a cabinet/drive tray integration problem, a connector not-to-spec problem or a deficiency in the SFF-8451 specification. It is hoped that the OEM will provide hardware for group analysis.

- A proposal from Compaq and Berg to define an 80-conductor cable designed for improved signal characteristics was discussed and met with positive response. The connectors used will be color-coded to discretely identify host, Device 0 and Device 1 and the assembly will be visually distinct from existing ATA cables. A new connector which permits mass termination of hi-density cable was presented by Circuit Assembly.

- Both versions of the VHDCI over-under configuration will be defined in Rev 2. This will be the only footprint with a second alternative.

12.4 IEEE 1394 [Johansson]

Peter Johansson made an oral report to the committee and provided the following electronic report:

Since the last T10 meeting, the IEEE P1394a Working Group has met twice: January 16 in Houston, TX, and February 5 - 6 in Bothell, WA.

At the Houston meeting the first significant draft of P1394a was available for review. Principal discussion topics were the 4-pin connector and cable, the standardization of the PHY/LINK interface and the proposed PHY arbitration enhancements.

For those unfamiliar with the background of the PHY enhancements, Bill Duckwall has made a white-paper available that is a useful companion document to the P1394a draft supplement.

The Bothell meeting continued a critical review of the proposed PHY enhancements. Additional topics introduced were the notion of a suspend / resume mode (critical for mobile applications which are very power sensitive), incompatibility between existing PHY implementations with respect to speed signaling and P1394a desiderata from the OpenHCI development group.

The next meeting of IEEE P1394a is in San Jose, CA, on March 17 and 18. There is a European meeting scheduled for April 16, 1997, in Eindhoven, Netherlands. Additional meetings have not yet been scheduled.

The reflector used by the working group is P1394@Sun.com. This reflector is not automated but is maintained by Bob.Snively@Sun.com.

The FTP site used by the working group is ftp.symbios.com:/pub/standards/io/1394.

For additional information, please contact the IEEE P1394a Working Group chair, Peter Johansson, who may be reached by EMail at pjohansson@aol.com.

12.5 IEEE P1285 Status

No report was available.

12.6 IEEE P1596.8 Status

Gene Milligan reported that he has not heard about any activity in IEEE P1596.8.

12.7 SCSI Trade Association (STA) [Jones/Grantham]

Louis Grantham, Linfinity Microelectronics, made an oral report to the committee and provided the following electronic report:

STA meetings have been moved to Fridays of the T10 week so the next meeting is tomorrow at this hotel. Articles are written for each Computer Technology Review issue and other publications on SCSI technologies and applications. A successful Ultra SCSI Seminar was presented in Japan in February. Louis passed around a copy of the presentation material. The STA Technical Liaison Committee met yesterday and received input from T10 members. This meeting has been moved to Thursday morning before T10 plenary starting in May.

13. Review of Action Items

- 208) Bob Snively will forward 97-101r2 to IEEE under cover of a letter authorized by the T10 chair, and copy the chair and the committee document archive.
- 209) Larry Lamers will update the SPI Amendment patent statement based on the declaration by Digital.
- 210) John Lohmeyer will forward MMC rev 10 NCITS for processing toward second public review.
- 211) John Lohmeyer will respond to those who commented during the first public review of MMC.
- 212) John Lohmeyer will forward SSA-PH2 rev 5 to NCITS for further processing toward first public review.
- 213) John Lohmeyer will forward SSA-TL2 rev 5a to NCITS for further processing toward first public review.
- 214) John Lohmeyer will forward SSA-S3P rev 5 to NCITS for further processing toward first public review.
- 215) John Lohmeyer will forward 97-129r2 (the SSS project proposal) to NCITS for further processing.
- 216) Ralph Weber will prepare SPC rev 11a.
- 217) John Lohmeyer will forward SPC rev 11a to NCITS as a replacement for SPC rev 11.
- 218) John Lohmeyer will inform NCITS that T10 recommends the withdrawal ANSI X3.268-1997 (Serial Bus Protocol).
- 219) Gene Milligan will submit MMC to ISO.
- 220) Gene Milligan will submit SPI to ISO
- 221) Gene Milligan will submit SPC rev 11a to ISO
- 222) Gene Milligan will submit SBC to ISO.
- 223) Gene Milligan will submit the SCAM patent letter through the proper channels to ISO/IEC and supply a replacement patent statement for SPI to ISO/IEC.
- 224) Gene Milligan will take the necessary actions at SC25 to withdraw the international version of ANSI X3.268-1997 (Serial Bus Protocol).

14. Meeting Schedule

The next plenary meeting of T10 will be May 8, 1997 in Natick, MA at the Holiday Inn Crowne Plaza (508- 653-8800), hosted by Digital Equipment Corp. The meeting will begin at 1:00 p.m. on Thursday.

The meeting list for the next plenary week is:

May '97 Meeting Map
(3/18/97 Version)

Monday 5/5	8	9	10	11	12	1	2	3	4	5	6	7	8	9
	+=====+													
		SPI-2 Working Group											(20)	
	+=====+													
		SBP-2 Working Group											(25)	
	+-----+-----+													
		Fibre Channel WG										FC Hub Profile		(40)
	+-----+-----+													

Tuesday 5/6	9	10	11	12	1	2	3	4	5	6	7	8		
	+-----+													
	SCSI-3 WG (EPI topics are Tuesday am)												(40)	
	+-----+													
	MMC WG												(20)	
	+-----+													
	SCC-2 WG												(10)	
	+-----+													
	SBP-2 Working Group												(25)	
	+-----+													
	Fibre Channel WG												(40)	
	+-----+													
Wednesday 5/7	9	10	11	12	1	2	3	4	5	6	7	8		
	+-----+													
	SCSI-3 WG												(40)	
	+-----+													
	MMC Working Group												(20)	
	+-----+													
	SFF SSWGs SFF												(40)	
	+-----+													
Thursday 5/8	8	9	10	11	12	1	2	3	4	5	6	7	8	
	+-----+													
	T10 Plenary Meeting												(70)	
	+-----+													
	SSC/SMC WG												(15)	
	+-----+													
	STA Tech												(25)	
	+-----+													
Friday 5/9	8	9	10	11	12	1	2	3	4	5				
	+-----+													
	SCSI Trade Association (STA)												(30)	
	+-----+													

Meetings marked with == are T10-authorized meetings.
 Meetings marked with -- are authorized by other groups and may change without notice.

Meeting Map Abbreviation Key:

- Anmd:** Amendment
- CAM:** Common Access Method
- CAM-3:** Next generation CAM for SCSI-3
- Diskboys:** Industry group studying disk attachment via IEEE 1394
- EPI:** SCSI Enhanced Parallel Interface (Technical Report)
- Fast-20:** Data Transfer at 20 Mega-transfers/second (a. k. a. , Ultra)
- Fast-40:** Data Transfer at 40 Mega-transfers/second (a. k. a. , Ultra2)
- FC:** Fibre Channel
- FC-AL:** Fibre Channel - Arbitrated Loop (a T11 project)
- FCLC:** Fibre Channel Loop Community (not an NCITS activity)
- I/F:** Interface
- HAP:** High Availability Profile (Technical Report)

LB: Letter Ballot
MMC: SCSI-3 Multimedia Commands (CD-ROM)
PH: Physical (Connectors, Cables, Transceivers, etc.)
Plenary: Full Committee Meeting
RAB: RAID Advisory Board (not an NCITS activity)
RAID: Redundant Array of Independent Devices
SBC: SCSI-3 Block Commands
SBP: SCSI-3 Serial Bus Protocol
SBP-2: Serial Bus Protocol for IEEE 1394 (2nd generation)
SCC: SCSI-3 Controller Commands (RAID)
SCSI: Small Computer System Interface
SES: SCSI Enclosure Services
SPC: SCSI-3 Primary Commands
STA: SCSI Trade Association (not an NCITS activity)
STA Tech: STA Technical Meeting (T10 members invited)
STS: SCSI Transport via SBP-2
SFF: SFF Industry Group (not an NCITS activity)
SG: Study Group
SMC: SCSI-3 Medium Changer Commands
SPI-2: Second Generation SCSI-3 Parallel Interface
SSA: Serial Storage Interface
SSC: SCSI-3 Stream Commands (includes Tape)
SSWGs: Specific-Subject Working Groups
T10: Lower Level Interfaces Technical Committee
T10.1: SSA Task Group of T10
VHDCI Very High Density Cabled Interconnect
WG: Working Group (same as Ad Hoc Group)

Several other T10 events are also planned:

Event	Date(s)	Location/contact
SPI-2 Working Group	4/18/97	San Jose, CA / Norm Harris
SBP-2 Working Group	4/10-11/97	San Jose, CA / Curtis Stevens

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Other Activities	John Lohmeyer	(719) 533-7560 john.lohmeyer@symbios.com

Norm Harris moved that the dates for the March 1998 meeting be changed from March 9-13, 1998 to March 16-20, 1998. Charles Monia seconded the motion. The motion passed unanimously.

The long-term T10 meeting week schedule is:

Date	Location	Host/Comments
Jan 6-10, 1997	Dallas, TX	Quantum
Mar 10-14, 1997	San Diego, CA	QLogic
May 5-9, 1997	Natick, MA (near Boston)	Digital
Jul 14-18, 1997	Colorado Springs, CO	Symbios Logic
Sep 8-12, 1997	Nashua, NH	Unitrode
Nov 3-7, 1997	Palm Springs, CA	Adaptec
Jan 5-9, 1998	Dallas, TX	Quantum/Location might change
Mar 16-20, 1998	San Diego, CA	QLogic/dates changed
May 4-8, 1998	Colorado Springs, CO	Symbios Logic
Jul 13-17, 1998	Portland, ME	Digital
Sep 14-18, 1998	St. Petersburg Beach, FL	AMP
Nov 2-6, 1998	Palm Springs, CA	Adaptec/dates changed

Proposed 1999 dates – we are requesting volunteers to host.

Date	Location	Host/Comments
Jan 11-15, 1999		
Mar 8-12, 1999		
May 3-7, 1999		
Jul 12-16, 1999		
Sep 13-17, 1999		
Nov 8-12, 1999		

14.1 Authorization of Working Group Meetings

John noted that the working group meetings are required to operate under the same voting procedures as does T10 (that is, one vote per organization) and the results of a working group are not binding on the parent committee. This later requirement is why we have traditionally only used non-binding straw polls in working group meetings. Any issue where the voting rules would make a difference should be deferred to the plenary group. Nonetheless, task groups and ad hoc groups should strive to achieve consensus prior to bringing issues to T10.

Mark Evans moved that T10 authorize the T10-related meetings and events in the list above. Norm Harris seconded the motion. The motion passed unanimously.

15. Adjournment

The meeting was adjourned at 5:33 p.m. on Thursday March 13, 1997.

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Status Key: P - Principal
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 L - Liaison
 V - Visitor

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Mar 18, 1997 - T10 Document Register - Enclosure (3)

X3T10/97-001R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
Agenda for X3T10 Meeting #20 (Mar '97)

X3T10/97-002R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
X3T10 Project Summary - Jan '97

X3T10/97-003R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
Jeopardy letter for Mar '97 meeting

X3T10/97-004R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
Results of X3T10/96-045 Letter Ballot

X3T10/97-005R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
Response to IPR Comment #1 on X3. 301-199x (SPC)

X3T10/97-006R0 Date: 11/22/96 Author: J. Lohmeyer [SY-97-01]
Response to IPR Comment #2 on X3. 301-199x (SPC)

X3T10/97-007R1 Date: 3/10/97 Author: J. Garner [SY-97-02]
Second Call for Volunteers - Chairman T10

X3T10/97-008R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
Agenda for X3T10 Meeting #21 (May '97)

X3T10/97-009R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
T10 Project Summary - Mar '97

X3T10/97-010R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
Jeopardy letter for May '97 meeting

X3T10/97-011R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
Results of T10/96-046 Letter Ballot on forwarding SSA-PH2 to IPR

X3T10/97-012R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
Results of T10/96-047 Letter Ballot on forwarding SSA-TL2 to IPR

X3T10/97-013R0 Date: 1/22/97 Author: J. Lohmeyer [SY-97-02]
Results of T10/96-048 Letter Ballot on forwarding SSA-S3P to IPR

X3T10/97-014R0 Date: 3/18/97 Author: J. Lohmeyer [SY-97-02]
Response to Public Review Comment #1 on X3. 304 (MMC) (see 97-127)

X3T10/97-101R0 Date: 1/2/97 Author: R. Snively []
Draft tutorial for IEEE company_id based SCSI identifiers

X3T10/97-101R1 Date: 1/2/97 Author: R. Snively [SY-97-01]
Draft tutorial for IEEE company_id based SCSI identifiers

X3T10/97-102R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 Additional Definitions

X3T10/97-103R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 DVD MODEL

X3T10/97-104R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 CD MODEL

X3T10/97-105R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 CHANGER MODEL

X3T10/97-106R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 DVD POWER MANAGEMENT

X3T10/97-107R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 FEATURE SETS

X3T10/97-108R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
MMC-2 Packet Commands for C/DVD Devices

X3T10/97-109R0 Date: 1/2/97 Author: R. Roberts [SY-97-01]
Minutes of MMC 2 Working Group - 1/97

X3T10/97-110R1 Date: 1/6/97 Author: Weber/Lohmeyer [SY-97-01]
Minutes of SPI-2 Working Group - 1/97

X3T10/97-111R1 Date: 1/6/97 Author: Weber/Lohmeyer [SY-97-01]
Minutes of SCSI Working Group - 1/97

X3T10/97-112R1 Date: 1/6/97 Author: Weber/Lohmeyer [SY-97-01]
Minutes of X3T10 Plenary Meeting #19

X3T10/97-113R0 Date: 1/6/97 Author: G. Penokie [SY-97-01]
Minutes of SCC Working Group - 1/97

X3T10/97-114R0 Date: 1/6/97 Author: B. Ham [SY-97-01]
Test Results on LVD

X3T10/97-115R0 Date: 1/6/97 Author: L. Lamers [SY-97-01]
Report on SPI-2 Editing Session

X3T10/97-116R0 Date: 1/6/97 Author: B. Ham [SY-97-02]
Bus Set Delay for Domain Expanders

X3T10/97-117R0 Date: 1/6/97 Author: R. Roberts [SY-97-01]
MMC-2 Commands specific to CD Media Only

X3T10/97-118R0 Date: 1/6/97 Author: R. Roberts [SY-97-01]
MMC-2 ATAPI Implementation Notes

X3T10/97-119R0 Date: 1/6/97 Author: R. Roberts [SY-97-01]
MMC-2 SCSI Implementation Notes

X3T10/97-120R0 Date: 1/6/97 Author: R. Roberts [SY-97-01]
MMC-2 DVD-R and DVD-RAM

X3T10/97-121R0 Date: 1/8/97 Author: D. Wallace [SY-97-02]
Annex on Universal Backplane

X3T10/97-122R0 Date: 1/8/97 Author: G. Penokie [SY-97-01]
Addressing Model for SAM-2

X3T10/97-123R0 Date: 1/8/97 Author: G. Milligan [SY-97-01]
SBC X3T10 Letter Ballot Comment Resolution

- X3T10/97-124R0 Date: 1/8/97 Author: T. Coughlan [SY-97-01]
Do Read Long and Write Long have a Secure Future?
- X3T10/97-125R1 Date: 1/9/97 Author: E. Oetting [SY-97-01]
Minutes of SCC/SMC Working Group - 1/97
- X3T10/97-126R0 Date: 1/16/97 Author: R. DeKonig [SY-97-01]
Comments on IEEE Registration
- X3T10/97-127R0 Date: 1/16/97 Author: R. Reisch [SY-97-01]
Public Review Comment #1 on X3.304 (MMC)
- X3T10/97-128R0 Date: 1/22/97 Author: P. Johansson [SY-97-02]
Transport Status for SBP-2
- X3T10/97-129R0 Date: 1/29/97 Author: Keith W. Parker [SY-97-02]
SCSI Socket/SSL Services (SSS) Command Set Proposal
- X3T10/97-129R1 Date: 1/29/97 Author: Keith W. Parker [SY-97-02]
Project Proposal for SCSI Socket/SSL Services (SSS) Command Set
- X3T10/97-130R0 Date: 2/6/97 Author: J. Scheible [SY-97-02]
Letter Ballot Comment Resolution on SSA-PH2
- X3T10/97-131R0 Date: 2/6/97 Author: J. Scheible [SY-97-02]
Letter Ballot Comment Resolution on SSA-TL2
- X3T10/97-132R0 Date: 2/6/97 Author: J. Scheible [SY-97-02]
Letter Ballot Comment Resolution on SSA-S3P
- X3T10/97-133R0 Date: 2/9/97 Author: P. Johansson [SY-97-02]
REQUEST ABORTED Response Status in SBP-2
- X3T10/97-134R0 Date: 2/9/97 Author: P. Johansson [SY-97-02]
Unsolicited Status Handshake in SBP-2
- X3T10/97-135R0 Date: 2/13/97 Author: P. McLean [SY-97-02]
Minutes of SBP-2 Working Group - 2/12-13/97
- X3T10/97-136R0 Date: 2/24/97 Author: P. Johansson [SY-97-02]
Task management event matrix
- X3T10/97-137R0 Date: 3/3/97 Author: Weber/Lohmeyer [SY-97-02]
Minutes of SPI-2 Working Group - 3/97
- X3T10/97-138R0 Date: 3/3/97 Author: Weber/Lohmeyer [SY-97-02]
Minutes of SCSI Working Group - 3/97
- X3T10/97-139R0 Date: 3/3/97 Author: Weber/Lohmeyer [SY-97-02]
Minutes of T10 Plenary Meeting #20
- X3T10/97-140R0 Date: 3/3/97 Author: G. Penokie [SY-97-02]
Additional Device Types for ASC/ASCQ
- X3T10/97-141R0 Date: 3/3/97 Author: G. Penokie [SY-97-02]
Message Issues
- X3T10/97-142R0 Date: 3/3/97 Author: G. Penokie [SY-97-02]

Reserve/Release Issues

- X3T10/97-143R0 Date: 3/5/97 Author: C. Monia [SY-97-02]
Digital Equipment Corp. SCAM Patent Disclosure
- X3T10/97-144R0 Date: 3/10/97 Author: B. Ham [SY-97-02]
LVD Hot Plugging Results - 3/10/96
- X3T10/97-145R0 Date: 3/10/97 Author: Keith W. Parker [SY-97-02]
Presentation on SCSI Socket/SSL Services
- X3T10/97-146R0 Date: 3/10/97 Author: V. Bastiani [SY-97-02]
Presentation on LVD
- X3T10/97-147R0 Date: 3/10/97 Author: G. Penokie [SY-97-02]
Minutes of SCC Working Group - 3/97
- X3T10/97-148R0 Date: 3/11/97 Author: Eric Oetting [SY-97-02]
SMC Device Identification
- X3T10/97-149R0 Date: 3/11/97 Author: P. McLean [SY-97-02]
Minutes of SBP-2 Working Group - 3/97
- X3T10/97-150R0 Date: 3/11/97 Author: J. McGrath [SY-97-02]
Parallel SCSI Performance
- X3T10/97-151R0 Date: 3/12/97 Author: C. Monia [SY-97-02]
Status of SCSI Error Recovery
- X3T10/97-152R0 Date: 3/12/97 Author: R. Roberts [SY-97-02]
MMC-1 Public Review Comments Resolution
- X3T10/97-153R0 Date: 3/12/97 Author: R. Roberts [SY-97-02]
Minutes of the MMC Working Group - 3/97
- X3T10/97-154R0 Date: 3/13/97 Author: E. Oetting [SY-97-02]
Minutes of SMC Working Group - 3/97