

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

**Doc. No.:** T10/97-139r0

**Date:** March 18, 1997

**Project:**

**Ref. Doc.:**

**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

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**Agenda**

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  - 8.10 SCSI-3 Medium Changer Commands (SMC) Status {Project 999-D} [Oetting]
  - 8.11 SCSI-3 Controller Commands (SCC) Status {Project 1047-D} [Penokie]
  - 8.12 Multimedia Command Set (MMC) Status {Project 1048-D} [Roberts]
  - 8.13 SCSI Parallel Interface - 2 (SPI-2) {Project 1142-D} [Ham]
  - 8.14 SCSI Enhanced Parallel Interface (EPI) Technical Report {Project 1143-D} [Ham]
  - 8.15 SCSI Fibre Channel Protocol - 2 (FCP-2) {Project 1144-D} [Snively]
  - 8.16 Boot Considerations Technical Report {Project 1154-DT} [Lamers]
  - 8.17 Serial Bus Protocol - 2 (SBP-2) {Project 1155-D} [Johansson]
  - 8.18 SCSI Architecture Model - 2 (SAM-2) {Project 1157-D} [Monia]
  - 8.19 SCSI-3 Enclosure Commands (SES) {Project 1212-D} [Snively]
  - 8.20 High Availability Profile (HAP) Technical Report {Project 1224-DT} [Hagerman]
  - 8.21 SCSI Controller Commands - 2 (SCC-2) {Project 1225-D} [Penokie]
  - 8.22 Multimedia Command Set - 2 (MMC-2) Status {Project 1228-D} [Roberts]
  - 8.23 SCSI Primary Commands - 2 (SPC-2) Status {Project 1236-D} [Weber]

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**NCITS Secretariat, Information Technology Industry Council (ITI)**

1250 Eye Street NW, Suite 200, Washington, DC 20005-3922

Email: ncits@itic.nw.dc.us Telephone: 202-737-8888 FAX: 202-638-4922

- 8.24 SCSI-3 Transport over SBP-2 Status (STS) {Project xxxx-D} [Johansson]
- 9. Old Business
  - 9.1 READ ELEMENT STATUS and Reservation Conflicts (96-267r2) [Basham/Oetting]
- 10. New Business
  - 10.1 Results of letter ballots (96-046 -- -048) on forwarding SSA documents to 1PR
  - 10.2 Actions on Working Group Recommendations
    - 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 (97-141r2) [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]
  - 10.3 Deletion of SCAM from SPI-2 and HAP [Milligan]
  - 10.4 Recommendation to Withdraw ANSI X3.268 (SBP) [Johansson]
- 11. ISO
  - 11.1 ISO Report [Milligan]
  - 11.2 ISO Business [Milligan]
- 12. Liaison Reports
  - 12.1 T11 Liaison Report [Cummings]
  - 12.2 T13 Liaison Report [Milligan]
  - 12.3 SFF Industry Group [Allan]
  - 12.4 IEEE 1394 [Johansson]
  - 12.5 IEEE P1285 Status
  - 12.6 IEEE P1596.8 Status
  - 12.7 SCSI Trade Association (STA) [Jones/Grantham]
- 13. Review of Action Items
- 14. Meeting Schedule
  - 14.1 Authorization of Working Group Meetings
- 15. Adjournment

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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.adapte.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](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](mailto: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 14<sup>th</sup>. 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 4<sup>th</sup> 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 6<sup>th</sup>. 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 18<sup>th</sup>. 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 29<sup>th</sup>. 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. Ed Gardner requested that, based on the comments resolution, his No vote 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 moved that the motion to not include SCAM in the named T10 projects be placed on the table. 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. Describing his no vote, Ed Gardner stated that this motion makes sense if it is intended to prohibit any and all implementations of SBP. 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 HLSGC 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 SPI 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 SPI 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 23<sup>rd</sup> (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 offered no reason for the lack of 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		
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 Design	P	Mr. Edward A. Gardner	1			



*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 Axx.*

*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 SPI 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)

<b>Monday 5/5</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
		+=====+												
		SPI-2 Working Group											(20)	
		+=====+												
		SBP-2 Working Group											(25)	
		+-----+												
		Fibre Channel WG											(40)	
		+-----+												
<b>Tuesday 5/6</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>		
		+=====+												
		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)	
		+-----+												
<b>Wednesday 5/7</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>		
		+=====+												
		SCSI-3 WG											(40)	
		+=====+												



**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

For more information about T10 activities, please contact the following people:

Activity	Contact	Telephone/Email
CAM-3	Bill Dallas	(603) 881-2508 dallas@wasted.enet.dec.com
EPI & SPI-2	Bill Ham	(508) 841-2629 ham@subsys.enet.dec.com
FCP, FCP-2	Robert Snively	(415) 336-5332 Bob.Snively@eng.sun.com
GPP	Gary Stephens	(602) 321-1725 6363897@mcimail.com
SAM & SAM-2	Charles Monia	(508) 841-6757 charles.monia@shr.mts.dec.com
SBC	Gene Milligan	(405) 324-3070 gene_milligan@notes.seagate.com
SBP, MMC, MMC-2	Ron Roberts	(916) 677-5714 rkroberts@aol.com
SBP-2	Pete McLean	(303) 678-2149 pete_mclean@mactor.com
	or Peter Johansson	(510) 531-5472 pjohansson@aol.com
SIP, SCC, SCC-2	George Penokie	(507) 253-5208 gop@rchvmp3.vnet.ibm.com
SMC	Erich Oetting	(303) 673-2178 Erich_Oetting@Stortek.com
SPC, SPC-2	Ralph Weber	(972) 503-3205 x228 roweber@acm.org
SSA-PH1, -PH2, -TL1, -TL2	Larry Lamers	(408) 957-7817 ljlammers@aol.com
SSA-S2P & -S3P	John Scheible	(512) 823-8208 Scheible@vnet.ibm.com
SSC	Edward Lappin	(303) 938-8055 tlappin@worldnet.att.net
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.

## Meeting Attendees -- Enclosure (1)

Name	S	Organization	Electronic Mail Address
Mr. Norm Harris	P	Adaptec, Inc.	nharri s@eng. adaptec. com
Mr. Lawrence J. Lamers	A	Adaptec, Inc.	ljl amers@aol. com
Mr. Charles Brill	P	AMP, Inc.	cebrill@amp. com
Mr. Michael Wingard	P	Amphenol Interconnect	mi kwi ngard@aol. com
Mr. Gary Porter	A	Ancot Corp.	garyp@ancot. com
Mr. Ron Roberts	A	Apple Computer	rkr oberts@aol. com
Mr. Douglas Wagner	P	Berg Electronics	jpxw76a@prodi gy. com
Mr. Richard Wagner	P	Cable Design Technologies	rwagner@montrose- cdt. com
Mr. Gerry Johnsen	P	Ciprico Inc.	gerry@ci pri co. com
Mr. Ian Morrell	P	Circuit Assembly Corp.	i anm@ca- onl i ne. com
Mr. Ken Wolfgang	P	Cirrus Logic Inc.	kenw@colorado. ci rrus. com
Mr. Edward Haske	P	CMD Technology	haske@cmd
Mr. Peter Johansson	P	Congruent Software, Inc.	pj ohansson@aol. com
Mr. Michael Smith	P	Dallas Semiconductor	mi ke. smi th@dal semi. com
Mr. Greg McSorley	P	Data General / Clariion	greg_ mcsorl ey@dg. ceo. dg. com
Mr. Charles Monia	P	Digital Equipment Corp.	charles. moni a@shr. mts. dec. com
Dr. William Ham	A#	Digital Equipment Corp.	ham@subsys. enet. dec. com
Mr. Douglas Hagerman	A#	Digital Equipment Corp.	hagerman@starch. enet. dec. com
Mr. Robert Reisch	P	Eastman Kodak Co.	reisch@kodak. com
Mr. I. Dal Allan	P	ENDL	dal_ allan@mcimail. com
Ms. Constance Kephart	P	Exabyte Corp.	conni ek@exabyte. com
Mr. Joel Urban	P	Harting Elektronik	
Ms. Martina Kuhlmeier	A	Harting Elektronik Inc.	marti naku@aol. com
Mr. J. R. Sims	P	Hewlett Packard Co.	robsi ms@depeche. l vld. hp. com
Mr. Nedi Nadershahi	P	Hitachi Micro Systems, Inc.	nnadersh@hmsi. com
Mr. Anthony Yang	P	Hitachi Storage Products	yang_ a@hal sp. hi tachi. com
Mr. Thomas J. Kulesza	P	Honda Connectors	mhotro@interaccess. com
Mr. George Penokie	P	IBM Corp.	gop@rchvmp3. vnet. i bm. com
Mr. Dan Colegrove	A#	IBM Corp.	col egrove@vnet. i bm. com
Mr. Dennis Moore	P	KnowledgeTek, Inc.	dmoore@netcom. com
Mr. Louis Grantham	A	Linfinity Micro	lgdatcom@i x. netcom. com
Mr. Robert Bellino	P	Madison Cable Corp.	robert_ bell i no@madi sonusa. ccmail. compuserve. com
Mr. Pete McLean	P	Maxtor Corp.	pete_ mclean@maxtor. com
Mr. Jay Neer	A	Molex Inc.	jneer@molex. com
Mr. Robin Freeze	P	Oak Technology, Inc.	Robi nF@oaktech. com
Mr. Edward A. Gardner	P	Ophi dian Designs	gardner@acm. org
Mr. Dan Davies	O	Overland Data Inc.	ddavi es@ovrl and. com
Mr. William P. McFerrin	P	Philips Key Modules	BMcFerrin@aol. com
Mr. Skip Jones	P	QLogic Corp.	sk_ jones@ql c. com
Mr. Mark Evans	A	Quantum Corp.	mevans@qntm. com
Mr. Gene Milligan	P	Seagate Technology	Gene_ Mi lli gan@notes. seagate. com
Mr. Dave Guss	P	Silicon Systems, Inc.	dave. guss@tus. ssi 1. com
Mr. Dennis Pak	P	Sony Electronics, Inc.	denni s_ pak@asd. sel. sony. com
Mr. Harvey Waltersdorf	V	Specialty Electronics	hwal tersdorf@sec- intl. com
Mr. Erich Oetting	P	Storage Technology Corp.	erich_ oetting@stortek. com

Mr. Robert N. Snively	P	Sun Microsystems Computer Co	bob.snively@eng.sun.com
Mr. John Lohmeyer	P	Symbios Logic Inc.	john.lohmeyer@symbios.com
Mr. Ralph O. Weber	A	Symbios Logic Inc.	roweber@acm.org
Mr. Brian McKean	A	SyQuest Technology, Inc.	brian.mckean@syquest.com
Mr. Pete Tobias	P	Tandem Computers	tobias_pete@tandem.com
Mr. Kenneth J. Hallam	P	UNISYS Corporation	ken.hallam@mv.unisys.com
Mr. Paul D. Aloisi	P	Unitrode Corporation	aloisi@unitrode.com
Mr. Jeffrey L. Williams	P	Western Digital Corporation	jwilliam@wdroc.wdc.com
Mr. Devon Worrell	A	Western Digital Corporation	worrell@dt.wdc.com
Mr. Doug Piper	P	Woven Electronics	doug.piper@internetmci.com
Mr. Arnold Limjoco	O	Yamaichi Electronics	arnold.l@yeu.com

56 People Present

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



## Mar 18, 1997 - T10 Attendance Database - Enclosure (2)

Mr. Norm Harris (P)  
 Adaptec, Inc.  
 691 S. Milpitas Blvd.  
 Milpitas, CA 95035  
 Ph: (408) 957-2230  
 FX: (408) 957-7145  
 Em: nharris@eng.adaptec.com

Mr. Tak Asami (A#)  
 Adaptec, Inc.  
 9701 Jeronimo Rd.  
 Irvine, CA 92718  
 Ph: (714) 455-8100 x2011  
 FX: (714) 455-8102  
 Em: asami@itc.adaptec.com

Mr. Lawrence J. Lamers (A)  
 Adaptec, Inc.  
 691 S. Milpitas Blvd.  
 Milpitas, CA 95035  
 Ph: (408) 957-7817  
 FX: (408) 957-7193  
 Em: ljlammers@aol.com

Mr. Kevin Calvert (O)  
 Adaptec, Inc.  
 9701 Jeronimo  
 Irvine, CA 92618  
 Ph: (714) 455-8350  
 FX: (714) 455-8103  
 Em: KCalvert@corp.adaptec.com

Mr. Ajay Malik (O)  
 Adaptec, Inc.  
 691 S. Milpitas Blvd.  
 Milpitas, CA 95035  
 Ph: (408) 945-8600 x2178  
 FX:  
 Em: ajay\_malik@corp.adaptec.com

Mr. Erik Falk (O)  
 ADIC  
 POB 2996  
 Redmond, WA 98073-2996  
 Ph: (206) 881-8004  
 FX: (206) 881-2296  
 Em:

Mr. Ron Apt (O)  
 Advanced Micro Devices  
 One AMD Place MS 59  
 P. O. Box 3453  
 Sunnyvale, CA 94088-3453  
 Ph: (408) 749-2578  
 FX: (408) 774-8449  
 Em: Ronald.Apt@amd.com

Mr. Fernando L. Podio (L)  
 AIIM C21 Chair  
 NIST  
 Bldg. 225, Room A61  
 Gaithersburg, MD 20899  
 Ph: (301) 975-2947  
 FX: (301) 216-1369  
 Em: fernando@pegasus.ncsl.nist.gov

Mr. Edward Fong (P)  
 Amdahl Corp.  
 1250 E. Arques Ave. MS 193  
 Sunnyvale, CA 94088-3470  
 Ph: (408) 944-3780  
 FX: (408) 943-6620  
 Em: esf10@amail.amdahl.com

Mr. Peter Haas (A)  
 Amdahl Corp.  
 1250 E Arques Avenue, MS 312  
 Sunnyvale, CA 94088-3470  
 Ph: (408) 944-5119  
 FX: (408) 733-2377  
 Em:

Mr. Jerrie L. Allen (O)  
 Amdahl Corp.  
 1250 E Arques Ave. MS 312  
 POB 3470  
 Sunnyvale, CA 94088-3470  
 Ph: (408) 944-3712  
 FX: (408) 943-6620  
 Em: Jerrie.Allen@cccmsv.amdahl.com

Mr. Kent Manabe (O)  
 America Kotobuki Electronics  
 100 Century Center Ct. #310  
 San Jose, CA 95112  
 Ph: (408) 441-9232  
 FX: (408) 441-9246  
 Em: manabe@ix.netcom.com

Mr. Charles Brill (P)  
 AMP, Inc.

Mr. Bob Whiteman (A)  
 AMP, Inc.

Mail Stop 210-20  
P. O. Box 3608  
Harrisburg, PA 17105  
Ph: (717) 592-6198  
FX: (717) 558-6179  
Em: cebrill@amp.com

P. O. Box 3608 M/S 26-17  
Harrisburg, PA 17105  
Ph: (717) 780-7481  
FX: (717) 780-7375  
Em:

Mr. Bob Atkinson (O)  
AMP, Inc.  
PO Box 3608  
Harrisburg, PA 17105  
Ph: (717) 780-4274  
FX: (717) 780-4113  
Em: rdatkins@amp.com

Mr. John Fulponi (O)  
AMP, Inc.  
3705 Paxton Street  
Harrisburg, PA \_\_\_\_\_  
Ph: (717) 780-6160  
FX: (717) 780-6735  
Em: JAFulpon@amp.com

Mr. Geoff Zech (O)  
AMP, Inc.  
449 Eisenhower Blvd.  
Harrisburg, PA 17111  
Ph: (717) 780-6572  
FX: (717) 780-4508  
Em: ghzech@amp.com

Mr. Michael Wingard (P)  
Amphenol Interconnect  
20 Valley St.  
Endicott, NY 13760  
Ph: (607) 786-4241  
FX: (607) 786-4311  
Em: mi kwi ngard@aol.com

Mr. Carl Booth (O)  
Amphenol/Spectra-Strip  
720 Sherman Ave.  
Hamden, CT 06514  
Ph: (203) 287-7455  
FX: (203) 281-5872  
Em: 7480559@mcimail.com

Mr. Jan V. Dedek (P)  
Ancot Corp.  
115 Constitution Dr.  
Menlo Park, CA 94025  
Ph: (415) 322-5322  
FX: (415) 322-0455  
Em: dedek@ancot.com

Mr. Gary Porter (A)  
Ancot Corp.  
115 Constitution Dr.  
Menlo Park, CA 94025  
Ph: (415) 322-5322  
FX: (415) 322-0455  
Em: garyp@ancot.com

Mr. Dave Holzer (P)  
Apple Computer  
3535 Monroe St., MS 69-G  
Santa Clara, CA 95051  
Ph: (408) 974-9314  
FX: (408) 974-2898  
Em: dholzer@apple.com

Mr. Mike Eneboe (A#)  
Apple Computer  
1 Infinite Loop, MS: 60-I0  
Cupertino, CA 95014  
Ph: (408) 974-0615  
FX: (408) 974-6615  
Em: Mike\_Eneboe@quickmail.apple.com

Mr. Ron Roberts (A)  
Apple Computer  
3535 Monroe St. MS: 69-G  
Santa Clara, CA 95051  
Ph: (916) 677-5714  
FX: (916) 677-1218  
Em: rkroberts@aol.com

Mr. Chris Brown (O)  
Apple Computer, Inc.  
3535 Monroe St., MS: 69-B  
Santa Clara, CA 95051  
Ph: (408) 862-3159  
FX: (408) 974-5713

Mr. Joe Lawlor (O)  
AT&T  
1100 E. Warrenville Rd.  
Rm 2A-429  
Naperville, IL 60566  
Ph: (708) 979-0133

Em: brown.c@applelink.apple.com

FX: (708) 979-0291

Em:

Mr. Chris Nieves (O)  
Auspex Systems  
5200 Great America Pkwy.  
Santa Clara, CA 95054  
Ph: (408) 986-2087  
FX: (408) 986-2364  
Em: cnieves@auspex.com

Mr. Douglas Wagner (P)  
Berg Electronics  
472 Delwood Ct.  
Newbury Park, CA 91320-4819  
Ph: (805) 498-0325  
FX: (805) 498-0325  
Em: jpxw76a@prodi gy.com

Mr. Jim Koser (A)  
Berg Electronics  
825 Old Trail Road  
Etters, PA 17319  
Ph: (717) 938-7679  
FX: (717) 938-7991  
Em: jkoser@aol.com

Mr. Dennis R. Haynes (O)  
Burr-Brown Corp.  
Mail Stop #122  
P. O. Box 11400  
Tucson, AZ 85734  
Ph: (520) 746-7262  
FX: (520) 746-7401  
Em: haynes\_dennis@bbrown.com

Mr. Clifford E. Strang Jr. (O)  
BusLogic  
4151 Burton Dr.  
Santa Clara, CA 95054  
Ph: (408) 565-6940  
FX: (408) 970-0941  
Em: skip@buslogic.com

Mr. Bob Gannon (O)  
C&M Corp.  
PO Box 348  
51 South Walnut St.  
Wauregan, CT 06387  
Ph: (203) 774-4812  
FX: (203) 774-7330  
Em: bobg848740@aol.com

Mr. Richard Wagner (P)  
Cable Design Technologies  
28 Sword Street  
Auburn, MA 01501  
Ph: (508) 791-3161  
FX: (508) 798-8353  
Em: rwagner@montrose-cdt.com

Mr. Gerry Johnsen (P)  
Ciprico Inc.  
2800 Campus Dr. Suite 60  
Plymouth, MN 55441  
Ph: (612) 551-4000  
FX: (612) 551-4002  
Em: gerry@ciprico.com

Mr. Raymond Gilson (A)  
Ciprico Inc.  
2800 Campus Drive  
Suite 60  
Plymouth, MN 55441  
Ph: (612) 551-4047  
FX: (612) 551-4002  
Em: rwg@ciprico.com

Mr. Ian Morrell (P)  
Circuit Assembly Corp.  
18 Thomas St.  
Irvine, CA 92718-2703  
Ph: (714) 855-7887  
FX: (714) 855-4298  
Em: ianm@ca-online.com

Mr. Dennis Lang (A)  
Circuit Assembly Corp.  
18 Thomas St.  
Irvine, CA 92718-2703  
Ph: (714) 855-7887  
FX: (714) 855-4298  
Em: dennisl@ca-online.com

Mr. Ken Wolfgang (P)  
Cirrus Logic Inc.  
350 Interlocken Parkway  
Broomfield, CO 80021  
Ph: (303) 460-5228 x6661  
FX:  
Em: kenw@colorado.cirrus.com

Mr. Ben Chang (O)

Mr. Florey Lin (O)

Cirrus Logic Inc.  
3100 W. Warren Ave.  
Fremont, Ca 94538  
Ph: (510) 226-2394  
FX:  
Em: ben@corp.cirrus.com

Cirrus Logic Inc.  
3100 W. Warren Ave.  
Fremont, Ca 94538  
Ph: (510) 623-8300 x3774  
FX: (510) 226-2370  
Em: florey@corp.cirrus.com

Mr. Nicos Syrimis (O)  
Cirrus Logic Inc.  
3100 W. Fremont Ave.  
Fremont, CA 94538  
Ph: (510) 226-2153  
FX: (510) 226-2170  
Em: nicos@corp.cirrus.com

Mr. Chi Wang (O)  
Cirrus Logic Inc.  
3100 W. Warren Ave.  
Fremont, Ca 94538  
Ph: (510) 249-4278  
FX:  
Em: cwang@corp.cirrus.com

Mr. Edward Haske (P)  
CMD Technology  
1 Vanderbilt  
Irvine, CA 92718  
Ph: (714) 454-0800  
FX: (714) 455-1656  
Em: haske@cmd.com

Mr. Borden Moller (A)  
CMD Technology  
1 Vanderbilt  
Irvine, CA 92617  
Ph: (714) 454-0800  
FX:  
Em: borden@cmd.com

Mr. Roger Wang (O)  
CMD Technology  
1 Vanderbilt  
Irvine, CA 92618  
Ph: (714) 454-0800  
FX: (714) 454-0542  
Em:

Mr. Bill Galloway (O)  
Compaq Computer Corp.  
P. O. Box 692000 MD90504  
Houston, TX 77269-2000  
Ph: (713) 514-6732  
FX: (713) 514-0513  
Em: billg@bangate.compaq.com

Mr. Peter Johansson (P)  
Congruent Software, Inc.  
3998 Whittle Ave.  
Oakland, CA 94602  
Ph: (510) 531-5472  
FX: (510) 531-2942  
Em: pjohansson@aol.com

Mr. Michael Smith (P)  
Dallas Semiconductor  
4401 S. Beltwood Pkwy  
Dallas, TX 75244  
Ph: (972) 371-4457  
FX: (214) 450-3715  
Em: mike.smith@dalsemi.com

Mr. Siegfried Schmalz (A)  
Dallas Semiconductor  
4401 S. Beltwood Pkwy.  
Dallas, TX 75244  
Ph: (972) 371-3764  
FX: (972) 450-3715  
Em: schmalz@dalsemi.com

Mr. Greg McSorley (P)  
Data General / Clariion  
4400 Computer Dr.  
Westboro, MA 01580  
Ph: (508) 898-6032  
FX: (508) 898-5413  
Em: greg\_mcsorley@dgc.ceo.dg.com

Mr. Gary S. Peterson (A)  
Data General / Clariion  
Ph:  
FX:  
Em:

Mr. Rick Hardy (O)  
Denron, Inc.  
2135 Ringwood Ave.  
San Jose, CA 95131  
Ph: (408) 435-7697

FX: (408) 435-1109  
Em: rhardy@denron.com

Mr. Charles Monia (P)  
Digital Equipment Corp.  
SHR3-2/W04  
334 South Street  
Shrewsbury, MA 01545  
Ph: (508) 841-6757  
FX: (508) 841-6100  
Em: charles.monia@shr.mts.dec.com

Mr. William Dallas (A#)  
Digital Equipment Corp.  
ZK03-3/T79  
110 Spit Brook Road  
Nashua, NH 03062-2698  
Ph: (603) 881-2508  
FX: (603) 881-2257  
Em: dallas@wasted.enet.dec.com

Mr. Douglas Hagerman (A#)  
Digital Equipment Corp.  
SHR3-2/W3  
334 South Street  
Shrewsbury, MA 01545  
Ph: (508) 841-2145  
FX: (508) 841-6100  
Em: hagerman@starch.enet.dec.com

Dr. William Ham (A#)  
Digital Equipment Corp.  
SHR3-2/W04  
334 South Street  
Shrewsbury, MA 01545  
Ph: (508) 841-2629  
FX: (508) 841-5266  
Em: ham@subsys.enet.dec.com

Mr. Paul Massiglia (0)  
Digital Equipment Corp.  
301 Rockrimmon Blvd. So.  
Colorado Springs, CO 80919  
Ph: (719) 548-2440  
FX: (719) 548-2362  
Em: massiglia@genral.enet.dec.com

Mr. Stephen J. Sicola (0)  
Digital Equipment Corp.  
301 Rockrimmon Blvd. So.  
Colorado Springs, CO 80132  
Ph: (719) 548-2268  
FX: (719) 548-2541  
Em: sicola@peaks.dec.com

Ms. Kathy Straitt (0)  
Digital Equipment Corp.  
SHR3-2/C5  
334 South Street  
Shrewsbury, MA 01545-4113  
Ph: (508) 841-2003  
FX: (508) 841-5266  
Em: straitt@starch.ENET.dec.com

Mr. Roger Cummings (P)  
Distributed Processing Tech.  
140 Candace Dr.  
Maitland, FL 32751  
Ph: (407) 830-5522 x348  
FX: (407) 260-5366  
Em: cummings\_roger@dpt.com

Mr. Tom Treadway (A)  
Distributed Processing Tech.  
140 Candace Dr.  
Maitland, FL 32751  
Ph: (407) 830-5522  
FX: (407) 260-5366  
Em: Treadway@dpt.com

Mr. Robert Reisch (P)  
Eastman Kodak Co.  
460 Buffalo Road  
Rochester, NY 14652-3816  
Ph: (716) 588-0573  
FX: (716) 588-2624  
Em: reisch@kodak.com

Mr. Rick Bohn (A)  
Eastman Kodak Co.  
460 Buffalo Road  
Rochester, NY 14652-3816  
Ph: (716) 722-0997  
FX: (716) 588-2624  
Em: bohn@sector.kodak.com

Mr. James D. Converse (X0)  
Eastman Kodak Co.  
Corp. Standards X3 Chair  
343 State Street  
Rochester, NY 14650  
Ph: (716) 781-9091  
FX: (716) 724-9023  
Em: jdc@kodak.com

Mr. I. Dal Allan (P)  
ENDL  
14426 Black Walnut Ct.  
Saratoga, CA 95070  
Ph: (408) 867-6630  
FX: (408) 867-2115  
Em: dal\_allan@mci mail. com

Ms. Constance Kephart (P)  
Exabyte Corp.  
1685 38th Street  
Boulder, CO 80301  
Ph: (303) 417-7927  
FX: (303) 417-7829  
Em: conniek@exabyte. com

Mr. Gary R. Stephens (O)  
FSI Consulting Services  
1825 N. Norton  
Tucson, AZ 85719  
Ph: (520) 321-1725  
FX: (520) 321-1725  
Em: 6363897@mci mail. com

Mr. Mike Chenery (A#)  
Fujitsu  
2904 Orchard Pkwy.  
San Jose, CA 95134-2009  
Ph: (408) 894-3627  
FX: (408) 894-3904  
Em: mchenery@fcpa. fujitsu. com

Mr. Andy Chen (A)  
Fujitsu Computer Prods Amer  
2904 Orchard Pkwy.  
San Jose, CA 95134-2009  
Ph: (408) 894-3840  
FX: (408) 894-3748  
Em: achen@fcpa. fujitsu. com

Mr. Robert Liu (P)  
Fujitsu Computer Products, Am  
2904 Orchard Pkwy.  
San Jose, CA 95134  
Ph: (408) 894-3790  
FX: (408) 894-3748  
Em: rliu@fcpa. fujitsu. com

Mr. Kevin R. Pokorney (A#)  
Fujitsu Computer Products, Am  
2402 Clover Basin Drive  
Longmont, CO 80503  
Ph: (303) 682-6649  
FX: (303) 682-6401  
Em: pokorney@intellistor. com

Mr. Bob Thornton (A#)  
Fujitsu Takamisawa America  
250 E. Caribbean Dr.  
Sunnyvale, CA 94089  
Ph: (408) 745-4932  
FX: (408) 745-4971  
Em: bthornto@fta. fujitsu. com

Mr. Steve Caron (O)  
Furukawa Electric  
200 Westpark Dr. Suite 190  
Peachtree City, GA 30269  
Ph: (404) 487-1234  
FX: (404) 487-9910  
Em:

Mr. Joel Urban (P)  
Harting Elektronik  
2155 Stonington Ave.  
Hoffman Estates, IL 60195  
Ph: (847) 519-7700 x280  
FX: (847) 519-7712  
Em:

Ms. Martina Kuhlmeier (A)  
Harting Elektronik Inc.  
2155 Stonington Ave. #212  
Hoffman Estates, IL 60195  
Ph: (847) 519-7700  
FX: (847) 519-7712  
Em: martinaku@aol. com

Mr. J. R. Sims (P)  
Hewlett Packard Co.  
800 S. Taft Ave.  
Loveland, CO 80537  
Ph: (970) 635-6774  
FX: (970) 635-6610  
Em: robsims@depeche. l v l d. hp. com

Mr. William Martin (A)  
Hewlett Packard Co.  
8000 Foothills Blvd MS 5601  
Roseville, CA 95747-5601

Mr. Donald C. Loughry (X0)  
Hewlett Packard Co.  
M/S 43UC X3 Vice Chair  
19420 Homestead Rd.

Ph: (916) 785-4517  
 FX: (916) 785-2875  
 Em: wrm@core.rose.hp.com

Cupertino, CA 95014  
 Ph: (408) 447-2454  
 FX: (408) 447-2247  
 Em: don\_loughry@hp6600.desk.hp.com

Mr. Pat Edsall (0)  
 Hewlett Packard Co.  
 11413 Chinden Blvd.  
 Boise, ID 83714  
 Ph: (208) 396-4804  
 FX: (208) 396-6858  
 Em: edsall@hpdmd48.boi.hp.com

Mr. Bill Hutchison (0)  
 Hewlett Packard Co.  
 P. O. Box 15  
 Boise, ID 83707-0015  
 Ph: (208) 396-3369  
 FX: (208) 396-5117  
 Em: hutch@boi.hp.com

Mr. Ruben Yomtoubian (0)  
 Hitachi America  
 3101 Tasman Dr.  
 Santa Clara, CA 95054  
 Ph: (408) 986-9770 x467  
 FX: (408) 986-1821  
 Em: r\_yomtoubian@hitachi.com

Mr. Zane Daggett (P)  
 Hitachi Cable Manchester, Inc  
 900 Holt Ave.  
 Manchester, NH 03109  
 Ph: (603) 669-4347 x236  
 FX: (603) 669-9621  
 Em: zdaggett@hcm.hitachi.com

Mr. Paul Boulay (0)  
 Hitachi Computer Products  
 3101 Tasman Drive  
 Santa Clara, CA 95054  
 Ph: (408) 986-9770 x205  
 FX: (408) 986-1821  
 Em: p\_boulay@hitachi.com

Mr. Nedi Nadershahi (P)  
 Hitachi Micro Systems, Inc.  
 179 Tasman Dr.  
 San Jose, CA 95134  
 Ph: (408) 456-2006  
 FX: (408) 433-0223  
 Em: nnadersh@hmsi.com

Mr. Anthony Yang (P)  
 Hitachi Storage Products  
 3101 Tasman Drive M/S 75  
 Santa Clara, CA 95054  
 Ph: (408) 748-2806  
 FX: (408) 235-8942  
 Em: yang\_a@hal.sp.hitachi.com

Mr. Quang Vuong (A)  
 Hitachi Storage Products  
 3101 Tasman Drive M/S 75  
 Santa Clara, CA 95054  
 Ph: (408) 748-2806  
 FX: (408) 235-8942  
 Em: vuong\_q@hal.sp.hitachi.com

Mr. Thomas J. Kulesza (P)  
 Honda Connectors  
 960 Corporate Woods Parkway  
 Vernon Hill, IL 60061  
 Ph: (847) 913-9566  
 FX: (847) 913-9587  
 Em: mhotro@interaccess.com

Mr. Terry Enright (A)  
 Honda Connectors  
 960 Corporate Woods Parkway  
 Vernon Hill, IL 60061  
 Ph: (847) 913-9566  
 FX: (847) 913-9587  
 Em:

Mr. George Penokie (P)  
 IBM Corp.  
 2B7/114-2  
 37st Highway 52 N.  
 Rochester, MN 55901-7829  
 Ph: (507) 253-5208  
 FX: (507) 253-2432  
 Em: gop@rchvmp3.vnet.ibm.com

Mr. Dan Colegrove (A#)  
 IBM Corp.  
 Dept 805/012-2  
 5600 Cottle Rd.  
 San Jose, CA 95193  
 Ph: (408) 256-1978  
 FX: (408) 256-1044  
 Em: colegrove@vnet.ibm.com

Mr. John P. Scheible (A)  
IBM Corp.  
Bldg 815 MS 4051  
11400 Burnett Rd.  
Austin, TX 78758  
Ph: (512) 823-8208  
FX: (512) 823-0758  
Em: Scheible@vnet.ibm.com

Mr. Michael A. Brewer (O)  
IBM Corp.  
74m/031-1  
9000 S. Rita Rd.  
Tucson, AZ 85744  
Ph: (520) 799-6984  
FX:  
Em: mabrewer@vnet.ibm.com

Mr. Duncan Penman (O)  
IIX Consulting  
1045 Rubis Dr.  
Sunnyvale, CA 94087  
Ph: (408) 730-2565  
FX: (408) 730-5527  
Em: penman@netcom.com

Mr. Geoffrey Barton (P)  
Iomega Corp.  
1821 West 4000 South  
Roy, UT 84067  
Ph: (801) 778-3655  
FX: (801) 778-4667  
Em: glbarton@iomega.com

Ms. Katrina Gray (L)  
ITI (X3 Secretariat)  
1250 Eye St. NW  
Suite 200  
Washington, DC 20005-3922  
Ph: (202) 626-5741  
FX: (202) 638-4922  
Em: kgray@itic.nw.dc.us

Mr. David J. Fox (O)  
JAE Electronics  
142 Technology Dr. #100  
Irvine, CA 92718-2401  
Ph: (714) 753-2600  
FX: (714) 753-2699  
Em:

Mr. Dean Wallace (P)  
Linfinity Micro  
11861 Western Ave.

Mr. Robert Basham (O)  
IBM Corp.  
65U/031-Z  
9000 S. Rita Rd.  
Tucson, AZ 85744  
Ph: (520) 799-4923  
FX:  
Em: robbyb@vnet.ibm.com

Mr. Lee Jesionowski (O)  
IBM Corp.  
64N/031-Z  
9000 S. Rita Rd.  
Tucson, AZ 85744  
Ph: (520) 799-5984  
FX: (520) 799-2408  
Em: jez@vnet.ibm.com

Mr. David Lawson (O)  
Interphase Corp.  
13800 Senlac  
Dallas, TX 75234-8823  
Ph: (214) 919-9000  
FX: (214) 919-9200  
Em: lawson@iphase.com

Mr. Pat LaVarre (A)  
Iomega Corp.  
1821 West Iomega Way  
Roy, UT 84067  
Ph: (801) 778-4402  
FX: (801) 778-4667  
Em: p.lavarre@ieee.org

Mr. David H. Shaff (O)  
JAE  
2857 NE 26 Street  
Ft. Lauderdale, FL 33305  
Ph: (305) 563-3484  
FX: (305) 563-3507  
Em:

Mr. Dennis Moore (P)  
KnowledgeTek, Inc.  
7230 West 119th Pl, Suite C  
Broomfield, CO 80020  
Ph: (303) 465-1800  
FX: (303) 426-1350  
Em: dmoore@netcom.com

Mr. Louis Grantham (A)  
Linfinity Micro  
101 W. McDermott



Garden Grove, CA 92641  
Ph: (714) 898-8121  
FX: (714) 893-2570  
Em: 75671.3443@compuserve.com

Allen, TX 75013  
Ph: (972) 396-7002  
FX: (972) 396-7533  
Em: lgdatcom@ix.netcom.com

Mr. Alan Littlewood (0)  
LSI Logic  
1525 McCarhy Blvd.  
San Jose, CA 95035  
Ph: (408) 433-7765  
FX:  
Em: alanl@lsil.com

Mr. Wayne E. Werner (0)  
Lucent Technologies  
1247 S. Cedar Crest Blvd.  
Allentown, PA 18103  
Ph: (610) 712-2234  
FX:  
Em: wewerner@lucent.com

Mr. Robert Bellino (P)  
Madison Cable Corp.  
125 Goddard Memorial Dr.  
Worcester, MA 01603  
Ph: (508) 752-7320  
FX: (508) 752-4230  
Em:  
robert\_bellino@madisonusa.ccm ail.com

Mr. Chuck Grant (A)  
Madison Cable Corp.  
125 Goddard Memorial Drive  
Worcester, MA 01603  
Ph: (508) 752-2884 x725  
FX: (508) 752-4230  
Em:  
charles\_grant@madisonusa.ccm ail.com

Ms. Donna Pope (0)  
Maxoptix Corp.  
2520 Junction Ave.  
San Jose, CA 95134  
Ph: (408) 954-9700 x315  
FX: (408) 954-9711  
Em:

Mr. Pete McLean (P)  
Maxtor Corp.  
2190 Miller Dr.  
Longmont, CO 80501  
Ph: (303) 678-2149  
FX: (303) 678-2165  
Em: pete\_mclean@maxtor.com

Mr. LeRoy Leach (0)  
Maxtor Corp.  
2190 Miller Dr.  
Longmont, CO 80501-6744  
Ph: (303) 678-2828  
FX: (303) 678-2308  
Em: leroy\_leach@maxtor.com

Mr. John Cannon (0)  
Methode Electronics, Inc.  
7444 West Wilson Ave  
Chicago, IL 60656  
Ph: (708) 867-9600  
FX: (708) 867-9130  
Em:

Mr. Chris Nieves (0)  
Micropolis Corp.  
21211 Nordhoff St.  
Chatsworth, CA 91311  
Ph: (818) 718-5163  
FX: (818) 718-5352  
Em: Chris\_Nieves@microp.com

Mr. Michael Aarons (0)  
Mitsumi (Alpha Peripherals)  
16842 Von Karman Ave.  
Suite 100  
Irvine, CA 92714  
Ph: (714) 263-6414  
FX: (714) 263-6416  
Em: m\_aarons@cerf.net

Mr. Joe Dambach (P)  
Molex Inc.  
2222 Wellington Court  
Lisle, IL 60532  
Ph: (708) 527-4546  
FX: (708) 969-1352  
Em: jdambach@molex.com

Mr. Jay Neer (A)  
Molex Inc.  
399 W. Camino Gardens Blvd.  
Suite 103  
Boca Raton, FL 33432  
Ph: (561) 447-2907  
FX: (561) 447-2908

Em: jneer@molex.com

Mr. E. Jake Berzon (P)  
NEC Electronics, Inc.  
2880 Scott Blvd. MS SC2200  
Santa Clara, CA 95052-8062  
Ph: (408) 588-5408  
FX: (408) 588-5464  
Em: jberzon@asic.mtv.nec.com

Mr. Chris D'Iorio (O)  
NEC Technologies  
1255 Michael Dr.  
Wood Dale, IL 60191  
Ph: (708) 238-7799  
FX: (708) 860-7794  
Em: CD-iorio@nectech.com

Mr. Son Ho (O)  
Neomagic Corp.  
3260 Jay St.  
Santa Clara, CA 95056  
Ph: (408) 988-7020  
FX: (408) 988-7032  
Em: sho@neomagic.com

Mr. Peter Gossler (O)  
NSM Jukebox GmbH  
1M Tiergarten 20-30  
Bingen 55411 Germany  
Ph: +49 6721 964-394  
FX: +49 6721 407-414  
Em: PeterGossler@nsm.com

Mr. Robin Freeze (P)  
Oak Technology, Inc.  
139 Kifer Court  
Sunnyvale, CA 94086  
Ph: (408) 523-6652  
FX:  
Em: RobinF@oaktech.com

Mr. Lam Dang (A#)  
Oak Technology, Inc.  
139 Kifer Court  
Sunnyvale, CA 94086  
Ph: (408) 523-6643  
FX:  
Em: LamD@oaktech.com

Mr. Tony Lee (A)  
Oak Technology, Inc.  
139 Kifer Court  
Sunnyvale, CA 94086  
Ph: (408) 523-6665  
FX:  
Em: TonyL@oaktech.com

Mr. Edward A. Gardner (P)  
Ophidian Designs  
1262 Hofstead Terrace  
Colorado Springs, CO 80907  
Ph: (719) 593-8866  
FX: (719) 593-8989  
Em: gardner@acm.org

Mr. Dan Davies (O)  
Overland Data Inc.  
8975 Balboa Ave.  
San Diego, CA 92123-1599  
Ph: (619) 571-5555 x213  
FX: (619) 571-3664  
Em: ddavies@ovrland.com

Mr. Earl J. Perera (O)  
P. E. Logic Corp.  
22695 Old Canal Rd.  
Yorba Linda, CA 92687  
Ph: (714) 282-6188  
FX: (714) 282-6199  
Em:

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

Mr. William P. McFerrin (P)  
Philips Key Modules  
1860 Lefthand Circle  
Longmont, CO 80501  
Ph: (303) 651-5408  
FX: (303) 682-3029  
Em: BMcFerrin@aol.com

Mr. David A. Pohm (A)  
Philips Key Modules

Mr. Sunil Nethisinghe (O)  
Philips Semiconductors MS 52

1860 Lefthand Circle.  
Longmont, CO 80501CO 80907  
Ph: (303) 651-5409  
FX: (303) 682-3029  
Em: dapohm@aol.com

811 E. Arques Ave.  
Sunnyvale, CA 94088  
Ph: (408) 991-4540  
FX: (408) 991-4500  
Em: nethisi n@scs.philips.com

Mr. Mehran Ramezani (O)  
Phoenix Technologies Ltd.  
2575 McCabe Way  
Irvine, CA 92714  
Ph: (714) 224-8260  
FX: (714) 251-2924  
Em: mehran\_ramezani@ptltd.com

Mr. Param Panesar (O)  
Pioneer Research  
1745 Berkekey St.  
Santa Monica, CA 90404  
Ph: (310) 829-6751  
FX: (310) 453-3929  
Em:

Mr. Marco Antonio Scocco (O)  
Pirelli Cabos S/A  
Engenharia De Telecomunicacoes  
Av Pirelli 1100-Bairro Eden  
18103-000 Sorocaba SP Brazil  
Ph:  
FX:  
Em:

Mr. Skip Jones (P)  
QLogic Corp.  
3545 Harbor Blvd.  
Costa Mesa, CA 92626  
Ph: (714) 668-5058  
FX: (714) 688-5008  
Em: sk\_jones@qlc.com

Mr. Ting Li Chan (A)  
QLogic Corp.  
3545 Harbor Blvd.  
P. O. Box 6725  
Costa Mesa, CA 92626  
Ph: (714) 668-5058  
FX: (714) 688-5008  
Em: t\_chan@qlc.com

Mr. James McGrath (P)  
Quantum Corp.  
500 McCarthy Blvd.  
Milpitas, CA 95035  
Ph: (408) 894-4504  
FX: (408) 894-6375  
Em: JMCGRATH@QNTM.COM

Mr. Mark Evans (A)  
Quantum Corp.  
500 McCarthy Blvd.  
Milpitas, CA 95035  
Ph: (408) 894-4019  
FX: (408) 894-4990  
Em: mevans@qntm.com

Mr. John A. Fobel (O)  
Rancho Technology, Inc.  
10783 Bell Court  
Rancho Cucamonga, CA 91730  
Ph: (909) 987-3966  
FX: (909) 989-2365  
Em: johnf@rancho.com

Dr. Tetsuro Motoyama (O)  
Ricoh Corporation  
3001 Orchard Parkway  
San Jose, CA 95134-2088  
Ph: (408) 954-5445  
FX: (408) 432-8398  
Em: motoyama@str.ricoh.com

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

Mr. Gene Milligan (P)  
Seagate Technology  
MS OKM 251  
P. O. Box 12313  
Oklahoma City, OK 73157  
Ph: (405) 324-3070

Mr. Gerald Houlder (A)  
Seagate Technology  
MPS043  
8001 E. Bloomington Freeway  
Bloomington, MN 55420-1094  
Ph: (612) 806-2869

FX: (405) 324-3794

Em: Gene\_Milligan@notes.seagate.com

Mr. Paul Entzel (0)

Seagate Technology  
1650 Sunflower Ave.  
Costa Mesa, CA 92626  
Ph: (714) 966-2204  
FX: (714) 966-5577  
Em: paul.entzel@conner.com

FX: (612) 806-2708

Em: Gerry\_Houlder@notes.seagate.com

Mr. Edward Hoskins (0)

Seagate Technology  
2655 Park Center Dr.  
Simi Valley, CA 93065  
Ph: (805) 582-3821  
FX: (805) 583-1493  
Em: ed\_hoskins@notes.seagate.com

Mr. Joseph Wach (0)

Seagate Technology  
2400 Trade Centre  
Longmont, CO 80503  
Ph: (303) 682-8387  
FX: (303) 682-8787  
Em: Joe.Wach@conner.com

Mr. Ron Werbow (0)

Seagate Technology  
2655 Park Center Dr.  
Simi Valley, CA 93065  
Ph: (805) 582-3815  
FX: (805) 583-1493  
Em: ron\_werbow@notes.seagate.com

Mr. James Whitworth (0)

Seagate Technology  
2911 Zanker Rd.  
San Jose, CA 95134  
Ph: (408) 456-3694  
FX: (408) 456-3309  
Em: James\_A\_Whitworth@notes.seagate.com

Dr. Colin Whitby-Stevens (0)

SGS-Thomson/INMDS  
1000, Aztec West  
Almondsbury,  
Bristol, BS12 4SQ UK  
Ph: +44 454 611 500  
FX: +44 454 619 796  
Em: colinws@bristol.st.com

Mr. Dave Guss (P)

Silicon Systems, Inc.  
14351 Myford Rd.  
Tustin, CA 92780  
Ph: (714) 573-6824  
FX: (714) 573-6916  
Em: dave.guss@tus.ssi1.com

Mr. Stephen G. Finch (A)

Silicon Systems, Inc.  
14351 Myford Road  
Tustin, CA 92780-7022  
Ph: (714) 573-6808  
FX: (714) 573-6916  
Em: steve.finch@tus.ssi1.com

Mr. James Ryland (X0)

Social Security Admin  
NCC Room 5110 OMC liaison  
6201 Security Blvd.  
Baltimore, MD 21234-0001  
Ph: (410) 965-2166  
FX: (410) 966-1893  
Em: JRYLAND@SSA.SSW.DHHS.GOV

Mr. David Deming (0)

Solution Technology  
P.O. Box 104  
Boulder Creek, CA 95006  
Ph: (408) 338-4285  
FX: (408) 338-4374  
Em:

Mr. Dennis Pak (P)

Sony Electronics, Inc.  
3300 Zanker Rd. MS# SJ-3B2  
San Jose, CA 95134  
Ph: (408) 955-5247  
FX: (408) 955-5066  
Em: dennis\_pak@asd.sel.sony.com

Mr. Erich Oetting (P)

Storage Technology Corp.  
2270 South 88th St.  
Louisville, CO 80028-0268  
Ph: (303) 673-2178  
FX: (303) 673-8196  
Em: erich\_oetting@stortek.com

Mr. Doug Charnley (A)

Mr. Robert N. Snively (P)

Storage Technology Corp.  
2270 South 88th St. MS 0211  
Louisville, CO 80028-0211  
Ph: (303) 661-7271  
FX: (303) 673-8196  
Em: doug\_chnley@stortek.com

Sun Microsystems Computer Co  
Mail Stop UMPK 12-204  
2550 Garcia Avenue  
Mountain View, CA 94043-1100  
Ph: (415) 786-6694  
FX: (415) 786-6458  
Em: bob.snively@eng.sun.com

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

Mr. John Lohmeyer (P)  
Symbios Logic Inc.  
4420 ArrowsWest Dr.  
Colorado Springs, CO 80907  
Ph: (719) 533-7560  
FX: (719) 533-7036  
Em: john.lohmeyer@symbios.com

Mr. Rod DeKoning (A#)  
Symbios Logic Inc.  
3718 N. Rock Rd.  
Wichita, KS 67226  
Ph: (316) 636-8842  
FX: (316) 636-8889  
Em: rod.dekoning@symbios.com

Mr. Ralph O. Weber (A)  
Symbios Logic Inc.  
Suite 400  
12377 Merit Drive  
Dallas, TX 75251  
Ph: (972) 503-3205 x228  
FX: (972) 503-2258  
Em: roweber@acm.org

Mr. Patrick Mercer (P)  
SyQuest Technology, Inc.  
47071 Bayside Parkway  
Fremont, CA 94538-6517  
Ph: (510) 226-4215  
FX: (510) 226-4104  
Em: patrick.mercer@syquest.com

Mr. Brian McKean (A)  
SyQuest Technology, Inc.  
3005 Center Green Drive  
Suite 100  
Boulder, CO 80301  
Ph: (303) 938-2940  
FX: (303) 938-2987  
Em: brian.mckean@syquest.com

Mr. Pete Tobias (P)  
Tandem Computers  
Loc 100-03  
10555 Ridgeview Ct.  
Cupertino, CA 95014-0789  
Ph: (408) 285-9913  
FX: (408) 285-9924  
Em: tobias\_pete@tandem.com

Mr. Jack Shiao (O)  
Tandem Computers  
Loc 3-8  
19333 Vallco Parkway  
Cupertino, CA 95014  
Ph: (408) 285-6567  
FX: (408) 285-6230  
Em: jack@loc3.tandem.com

Mr. Bill Boyd (O)  
Texas Instruments  
MS 8218  
8360 LBJ Freeway  
Dallas, TX 75265  
Ph: (214) 997-3673  
FX: (214) 997-5962  
Em: bboy%mi mi@magic.itg.ti.com

Mr. Kevin Gingerich (O)  
Texas Instruments, Inc.  
P.O. Box 660199 M/S 8710  
Dallas, TX 75266-0199  
Ph: (214) 480-3378  
FX: (214) 480-3535  
Em: k-gingerich@ti.com

Mr. Steven Walker (O)  
Thomas & Betts  
1555 Lynnfield Rd.  
Memphis, TN 38119  
Ph: (901) 680-5992

Mr. Tokuyuki Totani (P)  
Toshiba America  
226 Airport Pkwy, Suite 310  
San Jose, CA 95110  
Ph: (408) 451-6960

FX: (901) 537-8805  
Em: walkertnb@aol.com

FX: (408) 451-9750  
Em: totani@ix.netcom.com

Mr. John Hoy (0)  
Toshiba America  
1060 Rincon Circle  
San Jose, CA 95131  
Ph: (408) 526-2528  
FX: (408) 526-2428  
Em: john.hoy@taec.com

Mr. Gary M. Watson (0)  
Trim Technologies  
350 Pilot Rd.  
Las Vegas, NV 89119  
Ph: (800) 423-2024  
FX:  
Em: trim@netcom.com

Mr. Dave Wehrman (0)  
UNISYS  
11716 Highridge  
Pinckney, MI 48169  
Ph: (313) 426-8847  
FX: (313) 426-8847  
Em: dwehrman@unsys.com

Mr. Kenneth J. Hallam (P)  
UNISYS Corporation  
MV201  
25725 Jeronimo Road  
Mission Viejo, CA 92691  
Ph: (714) 380-5115  
FX: (714) 380-5858  
Em: ken.hallam@mv.unsys.com

Mr. Arlan P. Stone (A)  
UNISYS Corporation  
MS 201  
25725 Jeronimo Rd.  
Mission Viejo, CA 92691  
Ph: (714) 380-5982  
FX: (714) 380-6099  
Em: arlan.stone@mv.unsys.com

Mr. Paul D. Aloisi (P)  
Unitrode Corporation  
MS: 84  
7 Continental Blvd  
Merrimack, NH 03054  
Ph: (603) 429-8687  
FX: (603) 429-8963  
Em: aloisi@unitrode.com

Ms. Francis Terry (A)  
Unitrode Corporation  
7 Continental Blvd  
Merrimack, NH 03054-0399  
Ph: (603) 429-8713  
FX: (603) 429-8963  
Em: terry@unitrode.com

Mr. Eric Swartz (0)  
Verisys  
2901-B Research Park Dr.  
Soquel, CA 95073  
Ph: (408) 464-4292  
FX: (408) 464-4250  
Em: eric@verisys.com

Mr. Michael G. Kaminski (0)  
Volex Inc.  
835 Sinclair Frontage Road  
Milpitas, CA 95035  
Ph: (408) 945-7766  
FX: (408) 945-4360  
Em: Mike\_Kaminski@vol ex.com

Mr. Francesco Liburdi (0)  
Wearnsi Hollingsworth  
1425 Elmira St.  
Endicott, NY 13760  
Ph: (607) 786-3721  
FX: (607) 786-3806  
Em: liburdfwh@aol.com

Mr. Jeffrey L. Williams (P)  
Western Digital Corporation  
1599 N. Broadway Ave.  
Rochester, MN 55906  
Ph: (507) 286-7589  
FX: (507) 286-7528  
Em: jwilliam@wdroc.wdc.com

Mr. Jonathan L. Hanmann (A#)  
Western Digital Corporation  
8105 Irvine Ctr. Dr.  
Irvine, CA 92618  
Ph: (714) 932-5189  
FX: (714) 932-7097  
Em: jhanmann@dt.wdc.com

**Mr. Devon Worrell (A)**  
Western Digital Corporation  
8105 Irvine Ctr. Dr.  
Irvine, CA 92618  
Ph: (714) 932-7042  
FX: (714) 932-7796  
Em: worrell@dt.wdc.com

**Mr. Carl Bonke (O)**  
Western Digital Corporation  
8105 Irvine Ctr. Dr.  
Irvine, CA 92718  
Ph: (714) 932-7622  
FX: (714) 932-7798  
Em: bonke@dt.wdc.com

**Mr. Doug Piper (P)**  
Woven Electronics  
PO Box 189  
Mauldin, SC 29662  
Ph: (803) 967-1751  
FX: (803) 963-1761  
Em: doug.piper@internetmci.com

**Mr. E. J. Mondor (A)**  
Woven Electronics  
PO Box 189  
Mauldin, SC 29662  
Ph: (803) 967-1739  
FX: (803) 963-1761  
Em: 549.9900@mci mail.com

**Mr. Arnold Limjoco (O)**  
Yamaichi Electronics  
2235 Zanker Rd.  
San Jose, CA 95131  
Ph: (408) 456-0797 x134  
FX: (408) 456-0799  
Em: arnold.l@yeu.com

## 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