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

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 Date:
 May 13, 1998

 Reply to:
 John Lohmeyer

To:T10 MembershipFrom:Ralph Weber / John LohmeyerSubject:T10 Plenary Meeting #26 -- May 7, 1998Colorado Springs, CO

# Agenda

- 1. Opening Remarks
- 2. Approval of Agenda
- 3. Attendance and Membership
- 4. Approval of Minutes March '98 Meeting San Diego, CA (T10/98-127r1)
- 5. Document Distribution
- 6. Call for Patents
- 7. Review of Old Action Items
- 8. Project Status Reports
  - 8.1 Project Status Summary and NCITS/OMC Liaison [Lohmeyer]
  - 8.2 SPI Amendment (SPIAmnd) {Project 0855-D} [Johansson/Lamers]
  - 8.3 SCSI Common Access Method 3 (CAM-3) Status {Project 990-D} [Dallas]
  - 8.4 SCSI-3 Block Commands (SBC) Status {Project 996-D} [Milligan]
  - 8.5 SCSI-3 Stream Commands (SSC) Status {Project 997-D} [Stephens]
  - 8.6 SCSI-3 Medium Changer Commands (SMC) Status {Project 999-D} [Oetting]
  - 8.7 Multimedia Command Set (MMC) Status {Project 1048-D} [Roberts]
  - 8.8 SCSI Parallel Interface 2 (SPI-2) {Project 1142-D} [Ham/Penokie]
  - 8.9 SCSI Enhanced Parallel Interface (EPI) Technical Report {Project 1143-D} [Ham]
  - 8.10 SCSI Fibre Channel Protocol 2 (FCP-2) {Project 1144-D} [Snively]
  - 8.11 Serial Bus Protocol 2 (SBP-2) {Project 1155-D} [Johansson]
  - 8.12 SCSI Architecture Model 2 (SAM-2) {Project 1157-D} [Weber]
  - 8.13 SCSI-3 Enclosure Commands (SES) {Project 1212-D} [Snively]
  - 8.14 High Availability Profile (HAP) Technical Report {Project 1224-DT} [Hagerman]
  - 8.15 SCSI Controller Commands 2 (SCC-2) {Project 1225-D} [Penokie]
  - 8.16 Multimedia Command Set 2 (MMC-2) Status {Project 1228-D} [Roberts]
  - 8.17 SCSI Primary Commands 2 (SPC-2) Status {Project 1236-D} [Weber]
  - 8.18 Reduced Block Commands (RBC) {Project 1240-D} [Bryan]
  - 8.19 SCSI Socket/SSL Services Command Set (SSS) {Project 1246-D} [Parker]
  - 8.20 SCSI Parallel Interface 3 (SPI-3) {Project 1302-D} [Penokie]
  - 8.21 SCSI Enclosure Profile (SEP) Technical Report {Project 1303-DT} [Weber]
- 9. Old Business
  - 9.1 Resolution of SBP-2 Letter Ballot Comments [Johansson]
  - 9.2 Recommendation that ESDI (X3.170 and X3.170a) be withdrawn [Milligan]
  - 9.3 SCSI-2 Revision [Milligan]
- 10. New Business
  - 10.1 Project Proposal for Isochronous Serial Bus Protocol (ISP) (98-137r0) [Finch]
  - 10.2 Actions on Working Group Recommendations

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1250 Eve Street NW. Suite 200. Washington. DC 20005-3922

- 10.2.1 Add PLPB feature to mode page 19h (98-106r1) [Houlder]
- 10.2.2 Making the Terminate Task Management Function Obsolete [Snively]
- 10.2.3 New Log Page Requirements (98-128r2) [Snively]
- 10.2.4 Persistent Reservations clarifications for SPC-2 (98-124r2) [Snively]
- 10.3 Making Extent Reservations Obsolete [Snively]
- 10.4 Making the Change Definition Command Obsolete [Snively]
- 11. ISO
  - 11.1 ISO Report [Milligan]
  - 11.2 ISO Business [Milligan]
    - 11.2.1 Instructions to ISO/IEC JTC 1/SC 25/WG 4 Delegation [Milligan]
    - 11.2.2 Comment Resolution on SPI
    - 11.2.3Comment Resolution on Fast-20
    - 11.2.4 Comment Resolution on SAM
    - 11.2.5 Comment Resolution on FCP or SCC
- 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 Copy Protection Technical Working Group (CPTWG) [Worrell]
  - 12.6 IEEE P1285 Status
  - 12.7 IEEE P1596.8 Status
  - 12.8 SCSI Trade Association (STA) [Jones/Grantham]
- 13. Review of Action Items
- 14. Meeting Schedule
  - 14.1 Authorization of Working Group Meetings
- 15. Adjournment

# **Results of Meeting**

## 1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Thursday May 7, 1998. He thanked Symbios for hosting the meeting.

John said that NCITS Subgroup Membership forms and the T10 Mailing Subscription form were available on the document 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/changes:

- 10.2.1 Add PLPB feature to mode page 19h (98-106r1) [Houlder]
- 10.2.2 Making the Terminate Task Management Function Obsolete [Snively]
- 10.2.3 New Log Page Requirements (98-128r2) [Snively]
- 10.2.4 Persistent Reservations clarifications for SPC-2 (98-124r2) [Snively]
- 10.3 Making Extent Reservations Obsolete [Snively]
- 10.4 Making the Change Definition Command Obsolete [Snively]

The following agenda items were added or revised during the course of the meeting:

11.2.1 Instructions to ISO/IEC JTC 1/SC 25/WG 4 Delegation [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. Alternatively, organizations may join T10 with the experimental Organizational Membership; this membership option costs \$2500 and includes one principal member, any number of alternates, and either two CD-ROM mailings or one CD\_Access mailing.

John briefly discussed the mailing fees. Complete pricing information is contained in the 1998 membership form (available at ftp://ftp.symbios.com/t10/pub/standards/io/t10/mem\_form.txt).

The Chair said he had sent letters to 7 people from 4 organizations informing them that their membership was in jeopardy due to non-attendance (see 98-003r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Ancot Corp. Distributed Processing Technology FSI Consulting Services SyQuest Technology, Inc.

All of the organizations were present except:

#### **FSI** Consulting Services

They were terminated due to lack of attendance (i.e., the principal member was changed to observer status and the first alternate member, if any, was dropped; additional alternates, if any, were changed to observers).

No organizations requested new membership at this meeting.

The T10 membership during the meeting was 51 organizations down from 52 organizations last time. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current T10 membership list.

## 4. Approval of Minutes - March '98 Meeting San Diego, CA (T10/98-127r1)

The minutes were approved as written.

## 5. Document Distribution

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

John reminded the committee that George Penokie has assumed the position of vice-chair, replacing Larry Lamers, who resigned at the last meeting. However, John will take over the tasks of assigning document numbers and preparing mailings. John asked the committee members to request document numbers from himself. The process of producing mailings and maintaining web sites was discussed.

John Lohmeyer requested that all documents for the next mailing be in his hands in electronic format by 10:30 a.m. on Thursday May 14, 1998. Documents received after this time will go into a subsequent mailing.

John reminded the committee of the requirements for document submission. Since T10 meets its document retention requirements by preparing mailings, documents included in the mailing must be suitable for archiving. This means that native-format and/or Portable Document Format (PDF) electronic originals with proper identification must be submitted.

The electronic copies can be sent directly to John by e-mail (at lohmeyer@ix.netcom.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 e-mail to John informing him of the file name and location of the file.

As usual, minutes are also available on the SCSI BBS (719-533-7950), the T10 World Wide Web page (see below), and will be distributed to the T10 Reflector.

To be added to the T10 Reflector, send an e-mail to majordomo@symbios.com with the line 'subscribe t10' in the message body. The NCITS Secretariat maintains a World Wide Web page at http://www.ncits.org/. Symbios maintains a World Wide Web page on behalf of T10 at http://www.symbios.com/t10/.

The current document register is enclosure (3). The T10 document register is also available on the SCSI BBS in file DR.TXT and at ftp://ftp.symbios.com/pub/standards/io/t10/dr.txt.

John Lohmeyer noted and Dal Allan concurred that the copyright notice appearing on the T10 mailing CD label does not apply to the drafts and documents contained thereon. Dal reported that a more appropriate notice will appear on the next T10 mailing CD label and that the copyright electronic information on the CD is already correct.

## 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. Section 1.2.11 contains the ANSI patent policy. Amy Marasco manages patent issues for ANSI and can be contacted at amarasco@ansi.org or 212-642-4954.

John reported that he had verified the above information, as requested during the last meeting.

## 7. Review of Old Action Items

- 261) John Lohmeyer will verify the ANSI patent policy URL shown in the committee minutes. Complete.
- 262) John Lohmeyer will forward the T10 file retention policy to NCITS for approval. *Complete*.
- 263) Gene Milligan will report on how handle the normative reference to ESDI in SCSI-2. Overtaken by events
- 264) John Lohmeyer will forward SPI-2 revision 20 to NCITS for further processing towards first public review. *Complete.* (Due to an editorial problem revision 20a was forwarded.)

## 8. 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.

NCITS is in the process of updating their web site format. They will be needing short abstracts for all active projects. Gene Milligan reported that a specific form must be used to provide the project abstract. John Lohmeyer took an action item provide the project abstract form to all project editors. John asked all project editors to send the completed project abstract forms to him.

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

John Lohmeyer reported that the SPI Amendment is at BSR and should finish processing for publication soon.

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

In the absence of Bill Dallas, no report was made.

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

Gene Milligan reported that he has not received a review copy of SBC. John asked Gene Milligan to watch for a review copy of SBC and noted that ANSI should be contacted if a review copy does not arrive soon.

## 8.5 SCSI-3 Stream Commands (SSC) Status {Project 997-D} [Stephens]

The problems completing the public review SSC revision were discussed. Gene Milligan moved that T10 cancel the SSC project unless a technical editor is identified by the July Plenary meeting. Bob Snively seconded the motion. After a brief discussion, Gene Milligan moved to table the motion. Peter Johanssan seconded the motion to table. The motion to table passed unanimously.

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

Erich Oetting reported that SMC is almost published. He noted that minor glitches have been found in table listing the commands applicable to SMC devices. Since SMC is almost published, no action was taken.

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

John Lohmeyer reported that MMC is in publication phase.

## 8.8 SCSI Parallel Interface - 2 (SPI-2) {Project 1142-D} [Ham/Penokie]

John Lohmeyer reported that the public review of SPI-2 closes July 7, 1998.

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

John Lohmeyer reported that EPI revision 14 was reviewed in the working group (minutes in 98-147). An editor's meeting has been scheduled for June 12, 1998. John is making arrangements for the meeting room and teleconference access.

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

Bob Snively reported that he is accumulating lists of proposed and approved changes for FCP-2. He reported that making the list is his only current activity.

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

Peter Johansson made an oral report to the committee and provided the following electronic report for the minutes.

Since the March T10 plenary in San Diego, CA, the SBP-2 ad hoc working group has met once, May 6, 1998 in Colorado Springs, CO (minutes in 98-168). Most of the meeting was devoted to remaining SBP-2 letter ballot comment resolution, with the following results:

- In resolution of comments submitted during the T10 letter ballot, the CLEAR TASK SET and TERMINATE TASK functions have been removed and the definition of the q bit in the Logical\_Unit\_Number entry has been deleted.
- The removal of the isochronous portions of SBP-2 (approved by the T10 plenary in November) was reviewed for accuracy.
- The recommendations of T10/98-121r2, which permit a target to retain target resources for more than one second after a bus reset, have been incorporated. The working group considers this a timely modification to SBP-2 since it extends the usefulness of the protocol to a larger class of devices and has no impact on existing implementations.
- A review of SBP-2 Draft 3d revealed minor editorial improvements.

As a consequence of these action, the working group recommends, by a vote of 13:0, to the T10 plenary that SBP-2 Draft 4 be forwarded to NCITS for further processing (public review). With this action, comments received during the letter ballot of SBP-2 are fully resolved.

In addition to the above, the working group discussed a project proposal for isochronous extensions to SBP-2. There was consensus that it is at present premature to act upon this project proposal and the working group recommends to the plenary that it be deleted from the plenary agenda.

No future meetings of the SBP-2 ad hoc working group are planned. The need for such meetings, if any, will be addressed upon completion of the NCITS public review period.

#### 8.12 SCSI Architecture Model - 2 (SAM-2) {Project 1157-D} [Weber]

Ralph Weber reported that two revisions of SAM-2 have been prepared since the last meeting. Editorial issues for SAM-2 were discussed and resolved at the working group meeting (minutes in 98-147). Revision 6, containing all the changes agreed at the working group meeting will be prepared in time for the mailing. Revision 7 will be prepared in time for the July meeting and will have all the object notation replaced by equivalent English text.

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

John Lohmeyer reported that SES should go to ANSI BSR within the next few weeks.

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

Doug Hagerman reported that no progress has been made on HAP.

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

John Lohmeyer reported that the NCITS letter ballot on forwarding SCC-2 closes on June 2, 1998.

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

Ron Roberts reported that hacking continues on MMC-2, putting the Mt. Fuji documents in MMC-2.

Ron announced the following document revision schedule. Revision 6a to the FTP site by May 15, 1998. Revision 7 by June 9, 1998. Revision 8 to plenary for letter ballot in September.

Ron reported that the meeting schedule for the MMC-2 working group is:

- June 9 and 10, 1998 in Tustin, CA (near Irvine) hosted by SSI
- No meeting in July
- August 4 and 5, 1998 in Longomont, CO hosted by Philips
- September 15 and 16 in St. Petersburg, FL.

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

Ralph Weber reported that all known approved proposals have been incorporated in SPC-2 revision 2.

Ralph Weber moved that type code 0Fh be assigned in SPC-2 to ISO/IEC 14776-381 "SCSI Specification for Optical Card Reader/Writer". Gene Milligan second the motion. The motion passed unanimously.

#### 8.18 Reduced Block Commands (RBC) {Project 1240-D} [Bryan]

Pete McLean reported on the activities of the RBC working group meeting (minutes in 98-167). He stated that the meeting concluded with no outstanding technical issues. He informed the committee that forwarding activities for RBC will begin in July or September.

#### 8.19 SCSI Socket/SSL Services Command Set (SSS) {Project 1246-D} [Parker]

In the absence of Keith Parker, no report was made.

#### 8.20 SCSI Parallel Interface - 3 (SPI-3) {Project 1302-D} [Penokie]

George Penokie reported on the activities of the SPI-3 working group (minutes in 98-146). He noted that no draft revision of SPI-3 has been created yet, and he is waiting for a critical mass of approved changes. George noted that two working groups have been proposed for May 22, 1998 and June 19, 1998.

Gene Milligan moved that the chair be instructed to notify the T10 Reflector that T10 is planning to remove all HVD discussion from SPI-3. John Lohmeyer seconded the motion. The motion passed unanimously. John Lohmeyer took action item to notify the T10 Reflector that T10 is planning to remove all HVD discussion from SPI-3.

## 8.21 SCSI Enclosure Profile (SEP) Technical Report {Project 1303-DT} [Weber]

Ralph Weber reported no activity on this project.

## 9. Old Business

#### 9.1 Resolution of SBP-2 Letter Ballot Comments [Johansson]

Based on the unanimous working group recommendation, Peter Johansson moved that T10 forward SBP-2 revision 4 to NCITS for further processing for first public review, and that SBP-2 revision 4 be accepted as resolving the letter ballot comments. Steve Finch seconded the motion. The motion passed 30:0:0:21=51. Based on the successful resolution of his letter ballot comments, Steve Finch asked that his negative letter ballot vote be changed to an affirmative vote.

Peter Johansson took an action item to prepare SBP-2 revision 4 for public review. John Lohmeyer took an action item to forward SBP-2 revision 4 to NCITS for processing toward first public review.

#### 9.2 Recommendation that ESDI (X3.170 and X3.170a) be withdrawn [Milligan]

John reported on the motion deferred from the March meeting:

"Gene Milligan moved that X3.170 and X3.170a be withdrawn. Erich Oetting seconded the motion. Gene Milligan moved that consideration be deferred to the May meeting. Larry Lamers seconded the motion to defer. The motion to defer passed 32:3:0:17=52."

Gene Milligan noted that no implementations he is aware of use the ESDI synchronize spindle referenced by SCSI-2. So, the issue of a SCSI-2 reference to a withdrawn standard should be considered moot.

The motion passed on a roll-call vote of 34:0:0:17=51.

The details of the roll call vote were as follows:

Organization	Nam	e	Yes	No	Abs	NP
Adaptec, Inc.	Mr.	Lawrence J. Lamer	1			
AMP, Inc.	Mr.	Scott Lindstrom	1			
Amphenol Interconnect						1
Ancot Corp.	Mr.	Bart Raudebaugh	1			
Apple Computer	Mr.	Ron Roberts	1			
Berg Electronics	Mr.	Douglas Wagner	1			
Cable Design Technologies						1
Ciprico Inc.						1
Circuit Assembly Corp.						1
Compaq Computer Corp.	Mr.	Robert C. Elliott	1			
Congruent Software, Inc.	Mr.	Peter Johansson	1			
Dallas Semiconductor						1
Data General / Clariion	Mr.	Greg McSorley	1			
Digital Equipment Corp.	Mr.	Douglas Hagerman	1			
Diogenes SCSI						1
Distributed Processing Tech.	Mr.	Roger Cummings	1			
Eastman Kodak Co.	Mr.	Keith Freeberg	1			
ENDL	Mr.	I. Dal Allan	1			
Exabyte Corp.	Mr.	Tom Jackson	1			
Fujitsu (FCPA)	Mr.	Don Vohar	1			
Harting, Inc. of N. America						
Hewlett Packard Co.		J. R. Sims	1			
Hitachi Cable Manchester,Inc						1
Hitachi Storage Products						1
Honda Connectors						1
IBM Corp.						1

Iomega Corp. KnowledgeTek, Inc.	Mr.	Tim Bradshaw	1			1
Linfinity Micro	Mr	Dean Wallace	1			-
LSI Logic Corp.		Alan Littlewood	1			
Madison Cable Corp.						1
Maxtor Corp.	Mr.	Pete McLean	1			
Methode Electronics, Inc.						1
Molex Inc.						1
Mylex Corp.						1
Ophidian Designs	Mr.	Edward A. Gardner	1			
Philips Electronics	Mr.	William P. McFerr	1			
QLogic Corp.	Mr.	Skip Jones	1			
Quantum Corp.	Mr.	Mark Evans	1			
Seagate Technology	Mr.	Gene Milligan	1			
Silicon Systems, Inc.	Mr.	Dave Guss	1			
Sony Electronics, Inc.	Mr.	Janek Rebalski	1			
Storage Technology Corp.	Mr.	Erich Oetting	1			
Sun Microsystems Computer Co	Mr.	Robert N. Snively	1			
Symbios, Inc.	Mr.	John Lohmeyer	1			
SyQuest Technology, Inc.	Ms.	Randi Mitchem	1			
Toshiba America Elec. Comp.						1
UNISYS Corporation						1
Unitrode Corporation	Mr.	Paul D. Aloisi	1			
Western Digital Corporation	Mr.	Jeffrey L. Willia	1			
Woven Electronics	Mr.	Doug Piper	1			
			34	0	0	17 = 51
			JI	0	0	±, – JI

John Lohmeyer took an action item to notify NCITS that T10 has recommended the withdrawal of X3.170 and X3.170a.

## 9.3 SCSI-2 Revision [Milligan]

The committee agreed that no effort to revise SCSI-2 should be undertaken until the standard comes up for its fiveyear review. The matter of the reference to the withdrawn ESDI was added to the list of issues to be considered during the review. Document 94-143 contains a list of know issues with SCSI-2.

## 10. New Business

#### 10.1 Project Proposal for Isochronous Serial Bus Protocol (ISP) (98-137r0) [Finch]

Steve Finch reported on the history of the Isochronous Serial Bus Protocol project proposal. He described concerns that T10 might not be the correct location for work on isochronous storage devices. He indicated that the 1394 trade association or the audio-visual working group might be more appropriate locations for work on isochronous storage devices. Steve asked that this item be deleted from this and future agenda.

#### **10.2 Actions on Working Group Recommendations**

#### 10.2.1 Add PLPB feature to mode page 19h (98-106r1) [Houlder]

Bob Snively moved that T10 accept 98-106r1 for inclusion in FCP-2. Dal Allan seconded the motion. It was noted that the working group unanimously recommended approval. The motion passed unanimously.

#### 10.2.2 Making the Terminate Task Management Function Obsolete [Snively]

Citing rejected Gene Milligan comment number 127 from the SPI-2 forwarding letter ballot and review (98-108r2), Bob Snively moved that the Terminate Task task management function be made obsolete in SAM-2, SPC-2, SPI-3, FCP-2, and other SCSI standards that have not been forwarded. Peter Johansson seconded the motion. Ralph Weber reported that the working group unanimously recommended the change. The motion passed unanimously.

#### 10.2.3 New Log Page Requirements (98-128r2) [Snively]

Bob Snively reviewed the content of the proposals. Based on the unanimous recommendation of the working group, Bob Snively moved that 98-128r2 be approved for inclusion in SPC-2. George Penokie seconded the motion. The motion passed 27:0:2:12=51.

#### 10.2.4 Persistent Reservations clarifications for SPC-2 (98-124r2) [Snively]

Bob Snively described the proposal as group corrections discovered during implementation of persistent reservations. Based on the unanimous recommendation of the working group, Bob Snively moved that 98-124r2 be approved for inclusion in SPC-2. Paul Aloisi seconded the motion. The motion passed unanimously.

#### 10.3 Making Extent Reservations Obsolete [Snively]

In the absence of any objections, T10 assigned the Chair an action item to notify the T10 Reflector that T10 intends to make extent reservations obsolete for both Reserve and Persistent Reserve commands in SPC-2.

#### 10.4 Making the Change Definition Command Obsolete [Snively]

In the absence of any objections, T10 assigned the Chair an action item to notify the T10 Reflector that T10 intends to make the Change Definition command obsolete in SPC-2.

## 11. ISO

## 11.1 ISO Report [Milligan]

T10 ISO Summary 5/98

The bulk of the report will be sent out by reflector and/or ftp.

- Assignment of Device Type 0Fh for OMC Reader/Writers and request for T10 review of 98-151r0 draft from Japan.
- SPI CD comment resolution and DIS text still needed.
- Fast-20 CD comment resolution and DIS text still needed.
- SAM DIS comment resolution and IS text still needed.
- SSC editor needed.
- SPI-2 NWIP and CD submitted for processing.
- SBP-2 awaiting draft for submitting NWIP and CD.
- SES NWIP and CD submitted for processing.
- SCC-2 NWIP and CD submitted for processing.
- NCITS has appointed Gary Robinson Liaison to T10, T11, T12, and T13.
- ISO/IEC is publishing a T12 >900 page standard on CD-ROM no paper.
- JTC 1 TAG has nominated Tom Frost of Lucent for Chair of ISO/IEC JTC 1
- SC 25/WG 4 meeting 5/25 5/27; joint SC 25/WG 4 and SC 26 meeting 5/28; and SC 25 plenary 5/29. 1394 is
  on the agenda of the joint meeting.

- NCITS has formed a new Technical Committee to be the TAG for SC 22 Java Study Group. Formation meeting 5/21.
- JTC 1 N 5180, JTC 1 Policy on Electronic Document Distribution Using the World Wide Web
- The US TAG for the committee on multi media standards IEC TC100 Advisory Group on Strategy (AGS) has a call out for Chairman and US representative.
- An appeal has been submitted due to an apparent loss of the Brazil vote to provide resources for the following projects:
  - SCSI-3 SIP (JTC1 N5107 / N5208), project 25.13.11.04,
  - SCSI-3 SPC (JTC1 N5108 / N5209), project 25.13.11.03,
  - SCSI-3 SBC (JTC1 N5095 / N5207), project 25.13.11.10 which resulted in the NWI failing.

## 11.2 ISO Business [Milligan]

## 11.2.1 Instructions to ISO/IEC JTC 1/SC 25/WG 4 Delegation [Milligan]

Roger Cummings moved that T10 instruct its delegation to ISO/IEC JTC 1/SC 25/WG 4 to: 1) Promote the adoption of T10 developed standards as international and EC standards, 2) Provide the Optical Memory Card Reader/Writer device type code, 3) Take under advisement the Optical Memory Card Reader/Writer comments from the working group and T10 Reflector. Bob Snively seconded the motion. The motion passed unanimously.

## 11.2.2 Comment Resolution on SPI

This item was discussed in the ISO report.

## 11.2.3 Comment Resolution on Fast-20

This item was discussed in the ISO report.

## 11.2.4 Comment Resolution on SAM

This item was discussed in the ISO report.

## 11.2.5 Comment Resolution on FCP or SCC

This item was discussed in the ISO report.

## 12. Liaison Reports

## 12.1 T11 Liaison Report [Cummings]

Roger Cummings presented an oral report to the committee and provided the following electronic report for the minutes.

79 people attended the April T11 Plenary. Optivision, Systran and TI lost membership. Pathlight Technology & Troika Networks were added as new member organizations. The membership of T11 is now 80 organizations. The total attendance for the T11 week was 142 people.

Two new T11 Task Groups were established during the April T11 Plenary week, as follows:

- a) T11.3 (Interconnection Schemes) Chair Rich Taborek (G2 Networks) Vice-Chair Jeff Stai (Brocade) Initial membership of 46 organizations
- b) T11.4 (Protocol Mappings)
   Chair Ed Lee (EMF Associates)
   Vice-Chair Kumar Malavalli (Brocade)
   Initial membership of 43 organizations

Four new project proposals were announced as approved. They were:

a) FC-10KCR (1300-D) b) FC-AL-3 (1304-D) c) FC-SW-2 (1305-D) d) FC-PI'98 (1306-D)

It was also agreed to change the name of FC-PI'98 to FC-PI.

The FC-TAPE & FC-MJS-2 projects were reported to be approved, but numbers have yet been assigned.

First Public Reviews on Revised HIPPI-FP & FC-SW were reported to have closed with no comments submitted. Management Reviews on these projects will occur at the next OMC meeting.

DPANS for the HIPPI-6400-PH & HIPPI-6400-SC projects passed compliance review at the March 1998 OMC meeting. The drafts have been assigned NCITS 323:199x and NCITS 324:199x respectively. Both drafts are in first Public Review closing on 6/9/98.

Project Proposals for FC-FS (Frame Signaling) & FC-VI (VI Architecture mapping) project proposals were forwarded by meeting votes of F46-O00-DNV34 and F50-O00- DNV30 respectively. FC-FS will continue the development of the functionality of the FC-PH standards which is not contained in FC-PI.

T11 is making good progress on electronic procedures and a high degree of automation. A first T11 electronic mailing has been distributed. Over 200 documents have been submitted to the ftp site and automatically numbered. It is now possible to change the representatives (P, A & A#) for an organization via the web page. It is also now possible for T11 meeting attendees to change their address details online. The first two electronic T11 letter ballots (on the FC-10KCR and MJS projects) are currently in progress and will close on 5/30.

The next T11 meetings will be hosted by AMP during the week of June 8-12 at the Tradewinds Hotel, 5500 Gulf Boulevard, St. Petersburg Beach, FL 33706. The telephone number is (813)367-6461, ext. 110, and the rate is \$119/night pus tax for a standard room. The cutoff date for reservations is 5/11. The Plenary meetings will be held as follows:

a) T11.1 on June 10 @ 6-9pm b) T11.2 on June 10 @ 1-6pm c) T11.3 on June 11 @ 9am-1pm d) T11.4 on June 9 @ 5-9pm e) T11 on June 11 @ 2-7pm

## 12.2 T13 Liaison Report [Milligan]

Gene Milligan reported on the activities of the most recent T13 meeting.

## 12.3 SFF Industry Group [Allan]

Dal Allan made an oral report to the committee and provided the following electronic report for the minutes.

No interim SSWGs (Specific Subject Working Group) have been held since the last T10 plenary week.

Jay Neer uncovered a missing dimension on the SCA-2 connector specification that will delay publication of SFF-8451 and that of the companion EIA version as well.

The suite of 2 1/2", 3 1/2" and 5 1/4" form factor specifications will expire because all three are EIA or about-to-be EIA standards. EIA only offers hard copy versions of standards, so the usual practice of retiring expired specifications will not be followed. The front cover will be modified to note existence of the standard, and the specification is to remain available in an electronic form.

Bill Ham reported that there will be a SSWG on high-speed serial in Harrisburg, PA. Bob Snively reported that a GBIC SSWG will be held during the July T10 meeting week.

#### 12.4 IEEE 1394 [Johansson]

Peter Johansson made an oral report to the committee and provided the following electronic report for the minutes.

The IEEE has commenced the Sponsor Ballot for draft standard IEEE P1394a. Printed copy of P1394a Draft 2.0 has been distributed to the ballot pool, which consists of slightly more than 100 participants. The ballot closes June 11, 1998, after which time the Chair will convene a Ballot Response Committee (BRC) to resolve whatever comments are submitted. If the comments result in significant technical changes, the IEEE will conduct a recirculation ballot, the result of which may be approval of the draft standard without further comment.

The most recent draft revisions are available in PDF from the FTP site, ftp://ftp.symbios.com/pub/standards/io/1394/P1394a. Meeting minutes, past drafts and other documents are also available at the FTP site.

For reflector announcements, STDS-1394@IEEE.org; subscribe by sending a message to Listserve@IEEE.org.

No future meetings of P1394a are scheduled.

P1394b, chaired by David Wooten, next meets in June 11 - 12 in St. Petersburg, FL. David has organized focused task groups to resolve issues such as long-haul cables, standard cables and their connectors, the PHY/link interface, signaling start-up protocol, steady-state protocol, protocol accelerations, data flow, encoding schemes, etc.

For reflector announcements, P1394b@Zayante.com; subscribe by automated Majordomo services at list-serve@zayante.com.

P1394.1 (bridges) is making improved progress since the conclusion of P1394a has released many of the key individuals. The next meeting of the working group is June 9 - 10, 1997, in St. Petersburg, FL. For reflector announcements, STDS-1394-1@IEEE.org; subscribe by sending a message to Listserve@IEEE.org. The FTP site is ftp://ftp.symbios.com/pub/standards/io/1394/P1394.1.

1394 cable power, both its distribution and management, continues to be an engaging problem. The work has been spun off into a separate Power Conservation working group under the aegis of the 1394 Trade Association.

The IP/1394 working group of the IETF is defining how Internet Protocol (IP) is to be carried by IEEE 1394. The reflector used is IP1394@Mailbag.Intel.com and may be subscribed, automatically, by requests directed to List-serv@Intel.com. The next meeting of the group is at the 42nd IETF Meeting in Chicago, IL, the week of August 24

- 28, 1998. In accordance with IETF culture, most of the development work is conducted via the reflector and not in face-to-face meetings.

The current draft, Draft-IETF-IP1394-IPv4-09, is available from various IETF FTP sites, one of which is ftp:// ftp.isi.edu (see 1id-abstracts.txt in the Internet-Drafts shadow directory). The document is unofficially available as a PDF file from ftp://ftp.symbios.com/pub/standards/io/IETF/IP1394.

All of the definitions for unicast IP traffic are complete and there has been one interoperability festival with participation by three vendors. All of these early implementations interoperated with each other with minor difficulty, since resolved. The working group's work is now focused on multicast and isochronous multicast (see Draft-IETF-IP1394-MCAP-00 at the FTP sites mentioned above).

Peter reported that he has requested that 1394-1995 be submitted for international standardization. He described process by which 1394-1995 and P1394a might be combined in one international standard.

Peter Johansson moved that SBP-2 revision 4 be submitted along with a new work item proposal to ISO/IEC SC 25 WG 4 for internationalization. Gene Milligan seconded the motion. 27:2:0:12=51. Ed Gardner and Dal Allan described their negative votes as being motivated by their traditional disapproval of internationalization of T10 U.S. standards.

Peter Johansson took an action item to provide electronic document source file(s) for SBP-2 to the IR. Gene Milligan took an action item to forward SBP-2 revision 4 along with a new work item proposal to ISO/IEC SC 25 WG 4.

## 12.5 Copy Protection Technical Working Group (CPTWG) [Worrell]

Steve Finch reported that the next meeting of the Copy Protection Technical Working Group is May 20, 1998 in Burbank, CA. Steve recommended that this item be removed from the agenda until the isochronous activities suggest a need for liaison.

## 12.6 IEEE P1285 Status

Peter Johansson reported that the IEEE Microprocessor Standards Committee continues to extend the allowable time for the project to complete.

#### 12.7 IEEE P1596.8 Status

Greg McSourley reported that the P1596.8 is going out for review.

## 12.8 SCSI Trade Association (STA) [Jones/Grantham]

Skip Jones reported that STA will have a meeting here today. He noted that activity is proceeding on SCSI Harbor. He described the efforts to define the migration path for parallel SCSI, i.e., life after Ultra 2, with a vote planned for July.

## 13. Review of Action Items

- 265) John Lohmeyer will provide the project abstract form to all project editors.
- 266) All project editors will return the project abstract forms regarding their project(s) to the Chair.
- 267) The SSC project editor will provide a public review revision of SSC to John Lohmeyer.
- 268) John Lohmeyer will notify the T10 Reflector that T10 is planning to remove all HVD material from SPI-3.
- 269) Ralph Weber will assign device type code 0Fh to ISO/IEC 14776-381 "SCSI Specification for Optical Card Reader/Writer" in SPC-2.
- 270) Peter Johansson will prepare SBP-2 revision 4 for public review and ISO/IEC activities.
- 271) John Lohmeyer will forward SBP-2 revision 4 to NCITS for processing toward first public review.

- 272) John Lohmeyer will notify NCITS that T10 has recommended the withdrawal of X3.170 and X3.170a.
- 273) John Lohmeyer will notify the T10 Reflector that T10 intends to make extent reservations obsolete for both Reserve and Persistent Reserve commands in SPC-2.
- 274) John Lohmeyer will notify the T10 Reflector that T10 intends to make the Change Definition command obsolete in SPC-2.
- 275) Peter Johansson will provide SBP-2 revision 4 electronic source files to the IR.
- 276) Gene Milligan will forward SBP-2 revision 4 along with a new work item proposal to ISO/IEC SC 25 WG 4.
- 277) John Lohmeyer will put out a call for an SSC technical editor.

## 14. Meeting Schedule

The next plenary meeting of T10 will be July 16, 1998 in Portland, ME at the Holiday Inn By the Bay (207-775-2311), hosted by Digital Equipment Corp. The meeting will begin at 9:00 a.m. on Thursday.

July '98 Meeting Map

The meeting list for the next plenary week is:

	(5/7/98 Version)	
Monday 7/13	9 10 11 12 1 2 3 4 5 6 7 8	9
	+=====================================	(25)
	+========+===+===++===++===++   Fibre Channel WG   ++	(40)
Tuesday 7/14	9 10 11 12 1 2 3 4 5 6 7 8	9
	+========+   SPI-3 WG	(40)
	+======+   RBC WG   +======+==+	(20)
	Fibre Channel WG T10/T11 TapeWG  ++	(40)
Wednesday 7/15	9 10 11 12 1 2 3 4 5 6 7 8	9
	SCSI WG	(40)
	+=====+=====+====+====+====+   SFF SSWGs   SFF   ++	(40)
Thursday 7/16	9 10 11 12 1 2 3 4 5 6 7 8	
	T10 Plenary / SCSI Harbor (*)	(60/40)
	+=====+==+==+==++++++++++++++++++	(15)
(*) - SCSI Harbor but not bef	meeting begins 30 minutes after T10 plenary	
Friday 7/17 8	9 10 11 12 1 2 3 4 5	
+	SCSI Trade Association (STA)	(30)

+----+

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

```
Location / Contact
Meeting
               Date
_____ ____
                                                                    _____
               5/22 09:00-17:00 Chicago, IL / Gene Milligan
SPI-3 WG
               6/19 09:00-17:00 Irvine, CA / Skip Jones
SPI-3 WG

        Spirs wg
        6/19 09:00-17:00
        Hvine, CA / Skip Jones

        EPI Edit
        6/12 09:00-14:00
        St. Petersburg Beach / Chuck Brill

        MMC-2 WG
        6/9-10 09:00-17:00
        Tustin, CA / SSI

        MMC-2 WG
        8/4-5 09:00-17:00
        Longmont, CO / Philips

Meeting Map Abbreviation Key:
Amnd: Amendment
CAM:
             Common Access Method
CAM-3: Next generation CAM for SCSI-3
Diskboys: Industry group studying disk attachment via IEEE 1394
       SCSI Enhanced Parallel Interface (Technical Report)
EPT:
Encl Profile Enclosure Profile Study Group
Fast-20: Data Transfer at 20 Mega-transfers/second (a.k.a., Ultra)
Fast-40:
             Data Transfer at 40 Mega-transfers/second (a.k.a., Ultra2)
FC:
              Fibre Channel
FC-AL:
              Fibre Channel - Arbitrated Loop (a T11 project)
FCLC:
            Fibre Channel Loop Community (not an NCITS activity)
I/F:
             Interface
Int'l SG: International Activities Study Group
HAP: High Availability Profile (Technical Report)
           Letter Ballot
LB:
MMC:
            SCSI-3 Multimedia Commands (CD-ROM)
PH:
            Physical (Connectors, Cables, Transceivers, etc.)
Plenary:Full Committee MeetingRAID:Redundant Array of Independent DevicesRBC:Reduced Block CommandsSBC:SCSI-3 Block CommandsSBP-2:Serial Bus Protocol for IEEE 1394 (2nd generation)SCC:SCSI-3 Controller Commands (RAID)
            SCSI-3 Controller Commands (RAID)
SCC:
        Small Computer System Interface
SCSI:
             SCSI Enclosure Services
SES:
SCSI Harbor: A STA project on defining a wrapper for SCSI devices
SFF: SFF Industry Group (not an NCITS activity)
SFF ATA: SFF ATA Cabling SSWG (not an NCITS activity)
         Study Group
SG:
             SCSI-3 Medium Changer Commands
SMC:
             SCSI-3 Primary Commands
SPC:
            Second Generation SCSI Parallel Interface
Third Generation SCSI Parallel Interface
SPI-2:
SPI-3:
SSA:
             Serial Storage Interface
SSC:
             SCSI-3 Stream Commands (includes Tape)
SSWGs:
            Specific-Subject Working Groups
STA:
            SCSI Trade Association (not an NCITS activity)
STA T: STA Technical Meeting (T10 members invited)
STS: SCSI Transport via SBP-2
            SCSI Transport via SBP-2
STS:
т10:
            Lower Level Interfaces Technical Committee
T10.1:
            SSA Task Group of T10
            Very High Density Cabled Interconnect
VHDCT
WG:
             Working Group (same as Ad Hoc Group)
```

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

Activity	Contact	Telephone/Email
САМ-3	Bill Dallas	(603) 881-2508
		dallas@zk3.dec.com
EPI	Bill Ham	(508) 841-2629
		bill.ham@digital.com
FCP, FCP-2, SES	Robert Snively	(415) 336-5332
		Bob.Snively@eng.sun.com
GPP & SSC	Gary Stephens	(602) 321-1725
		6363897@mcimail.com
НАР	Doug Hagerman	(508) 841-2145
		douglas.hagerman@digital.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 or RBC	Pete McLean	(303) 678-2149
		pete_mclean@maxtor.com
SBP-2	Peter Johansson	(510) 531-5472
		pjohansson@aol.com
RBC	Michael Bryan	(303) 684-1407
		mike_bryan@notes.seagate.com
SCC-2, SPI-2, SPI-3	George Penokie	(507) 253-5208
		gop@us.ibm.com
SMC	Erich Oetting	(303) 673-2178
		Erich_Oetting@Stortek.com
SPC, SPC-2, SAM-2, SEP	Ralph Weber	(972) 503-3205 x228
		roweber@acm.org
SSA-PH1,-PH2,-TL1,-TL2	Larry Lamers	
		ljlamers@ix.netcom.com
SSA-S2P & -S3P	John Scheible	(512) 823-8208
		Scheible@vnet.ibm.com
SSS	Keith Parker	(503) 255-1035
		diogenes@europa.com
Other Activities	John Lohmeyer	(719) 533-7560
		lohmeyer@ix.netcom.com

## The long-term T10 meeting week schedule is:

Date	Location	Host/Comments
		· · · ·
Mar 16-20, 1998	San Diego, CA	QLogic
May 4-8, 1998	Colorado Springs, CO	Symbios
Jul 13-17, 1998	Portland, ME	Digital
Sep 14-18, 1998	St. Petersburg Beach, FL	AMP
Nov 2-6, 1998	Palm Springs, CA	Adaptec
Mar 8-12, 1999	Sarasota, FL	AMP
May 3-7, 1999	Manchester, NH	Hitachi Cable
Jul 12-16, 1999	Colorado Springs, CO	Symbios
Sep 13-17, 1999	Huntington Beach, CA	QLogic
Nov 8-12, 1999	Palm Springs, CA	Adaptec
Proposed 2000 Dat	es:	
Jan 10-14, 2000	(just in case we decide to	re-instate January meetings)
Mar 6-10, 2000		
May 8-12, 2000		

Jul 10-14, 2000 Sep 11-15, 2000 Nov 6-10, 2000

John Lohmeyer asked that volunteers to host 2000 meetings respond to him by email stating which month(s) and location(s) they are willing to host.

John Lohmeyer moved that T10 raise its maximum room night cost (including tax and parking) from \$125 to \$140. Roger Cummings seconded the motion. The motion passed unanimously.

#### 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. Ad hoc groups should strive to achieve consensus prior to bringing issues to T10.

Roger Cummings moved that T10 authorize the T10-related meetings and events in the list above. Peter Johansson seconded the motion. The motion passed unanimously.

## 15. Adjournment

The meeting was adjourned at 12:50 p.m. on Thursday May 7, 1998.

Meeting Attendees -- Enclosure (1)

Name	S 	Organization	Electronic Mail Address
Mr. Lawrence J. Lamers	Ρ	Adaptec, Inc.	ljlamers@ix.netcom.com
Mr. Scott Lindstrom	0	AMP, Inc.	slindstr@amp.com
Mr. Bart Raudebaugh	А	Ancot Corp.	bart@ancot.com
Mr. Ron Roberts	А	Apple Computer	rkroberts@aol.com
Mr. Douglas Wagner	Ρ	Berg Electronics	wagnerdl@bergelect.com
Mr. Ian Morrell	Ρ	Circuit Assembly Corp.	ianm@ca-online.com
Mr. Gyo Shinozaki	V	Circuit Assembly Corp.	gyos@circuitassembly.com
Mr. Robert C. Elliott	Ρ	Compaq Computer Corp.	Robert.Elliott@compaq.com
Mr. Peter Johansson	Ρ	Congruent Software, Inc.	pjohansson@aol.com
Mr. Charles Tashbook	P	Dallas Semiconductor	charles.tashbook@dalsemi. com
Mr. Greg McSorley	Ρ	Data General / Clariion	greg_mcsorley@dg.com
Mr. Douglas Hagerman	P	Digital Equipment Corp.	douglas.hagerman@digital. com
Mr. Sid Snyder	A#	Digital Equipment Corp.	sid.snyder@digital.com
Mr. Roger Cummings	P	Distributed Processing Tech.	cummings_roger@dpt.com
Mr. Keith Freeberg	A#	Eastman Kodak Co.	freeburg@kodak.com
Mr. I. Dal Allan	Ρ	ENDL	dal_allan@mcimail.com
Mr. Tom Jackson	А	Exabyte Corp.	thomasj@exabyte.com
Mr. Don Vohar	А	Fujitsu (FCPA)	dvohar@fcpa.fujitsu.com
Mr. Marcos Barrionuevo	Ρ	Harting, Inc. of N.	Marcos.Barrionuevo@
		America	harting.com
Mr. J. R. Sims	P	Hewlett Packard Co.	robsims@hootie.lvld.hp. com
Mr. Thomas J. Kulesza	P	Honda Connectors	tkulesza@hondaconnectors. com
Mr. George Penokie	Ρ	IBM Corp.	gop@us.ibm.com
Mr. Dan Colegrove	A#	IBM Corp.	colegrov@us.ibm.com
Mr. Tim Bradshaw	Ρ	Iomega Corp.	bradshat@iomega.com
Mr. Hayden Smith	0	Lasercard Systems Corp.	hsmith@lasercard.com
Mr. Dean Wallace	Ρ	Linfinity Micro	75671.3443@compuserve.com
Mr. Alan Littlewood	Ρ	LSI Logic Corp.	alanl@lsil.com
Mr. Chuck Grant	A	Madison Cable Corp.	charles_grant@madisonusa. ccmail.compuserve.com
Mr. Pete McLean	Ρ	Maxtor Corp	pete_mclean@maxtor.com
Mr. Bob Masterson	P P	Maxtor Corp. Methode Electronics, Inc.	
Mr. Jay Neer	F A	Molex Inc.	jneer@molex.com
Mr. Edward A. Gardner	P	Ophidian Designs	
Mr. William P.	P		eag@ophidian.com BMcFerrin@aol.com
Mr. William P. McFerrin	r	Philips Electronics	DACK CITINGAOI.COM
Mr. Skip Jones	Ρ	QLogic Corp.	sk_jones@qlc.com
Mr. Mark Evans	Ā	Quantum Corp.	mark.evans@quantum.com
Mr. Gene Milligan	P	Seagate Technology	Gene_Milligan@notes.
-			seagate.com
Mr. Dave Guss	P	Silicon Systems, Inc.	dave.guss@tus.ssil.com
Mr. Stephen G. Finch	A	Silicon Systems, Inc.	steve.finch@tus.ssil.com
Mr. Janek Rebalski	A	Sony Electronics, Inc.	janek_rebalski@asd.sel. sony.com
Mr. Erich Oetting	Ρ	Storage Technology Corp.	erich_oetting@stortek.com
Mr. Robert N. Snively	Ρ	Sun Microsystems	bob.snively@sun.com
	_	Computer Co	
Mr. John Lohmeyer	P	Symbios, Inc.	lohmeyer@ix.netcom.com
Mr. Dave Evans		Symbios, Inc.	dephoto@goldrush.com
Mr. Ralph O. Weber	A	Symbios, Inc.	roweber@acm.org

Ms. Randi Mitchem	A#	SyQuest Technology, Inc.	randi.mitchen@syquest.com
Mr. Dave Wehrman	0	UNISYS Corporation	dave.wehrman2@unisys.com
Mr. Paul D. Aloisi	Ρ	Unitrode Corporation	aloisi@unitrode.com
Mr. Jeffrey L.	Ρ	Western Digital	Jeffrey.L.Williams@wdc.
Williams		Corporation	com
Mr. Doug Piper	Ρ	Woven Electronics	doug.piper@internetmci.
			com

49 People Present

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

T10 Attendance Database on 1998/05/13 at 10:34:55 -- Enclosure (2)

Mr. Daniel Weng (O) Acard Technology Corp. IF NO 6 Wu Hsing Street Taipei Taiwan ROC		886-2-3773357 886-2-7374916
Mr. Lawrence J. Lamers (P) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035	Fax:	(408) 957-7817 (408) 957-7193 ljlamers@ix.netcom.com
Mr. Tak Asami (A#) Adaptec, Inc. 9701 Jeronimo Rd. Irvine, CA 92718	Fax:	(714) 455-8201 (714) 455-8102 asami@itc.adaptec.com
Mr. Vincent Bastiani (A#) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035	Fax:	(408) 957-7153 bastiani@corp.adaptec.com
<pre>Mr. Wally Bridgewater (A#) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035</pre>	Fax:	(408) 945-8600 wally@eng.adaptec.com
Mr. Mark Delsman (A#) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035	Fax:	(408) 957-5661 mdelsman@corp.adaptec.com
Mr. Norm Harris (A) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035	Fax:	(408) 957-2230 (408) 957-7145 nharris@corp.adaptec.com
Mr. Richard Moore (A#) Adaptec, Inc. 2801 McGaw Irvine, CA 92714	Fax:	(714) 455-8326 richard_moore@corp.adaptec.com
Mr. Tom Schneider (A#) Adaptec, Inc. 9701 Jeronimo Irvine, CA	Fax:	(714) 455-8266 (714) 455-8102 schneid@itc.adaptec.com
Mr. Erik Falk (O) ADIC POB 2996		(206) 881-8004 (206) 881-2296

Redmond, WA 98073-2996 Mr. Steven P. Ego (0) Phone: (512) 258-2303 Aeronics Inc Eax: (512) 258-4392 Aeronics Inc. Fax: (512) 258-4392 12741 Research Blvd #500 Email: Austin, TX 78759 Mr. Kent Manabe (O)Phone: (408) 441-9232America Kotobuki ElectronicsFax: (408) 441-9246100 Century Center Ct. #310Email: manabe@ix.netcom.com San Jose, CA 95112 Mr. Charles Brill (P) Phone: (717) 810-4642 AMP, Inc. Fax: (717) 558-6179 Mail Stop 210-20 Email: cebrill@amp.com P. O. Box 3608 Harrisburg, PA 17105 Mr. Bob Atkinson (0) Phone: (717) 780-4274 AMP, Inc. Fax: (717) 780-4113 PO Box 3608 Email: rdatkins@amp.com Harrisburg, PA 17105 Mr. Scott Lindstrom (0) Phone: (704) 824-6352 Fax: (704) 824-6268 AMP, Inc. 603 Groves Street Email: slindstr@amp.com Lowell, NC 28098 
 Ms. Bonnie Rose
 (0)
 Phone:
 (416)
 291-4401
 x2239

 Amphenol Canada Corp
 Fax:
 (416)
 292-0647
 Amphenol Canada Corp. Fax: (416) 292-0647 20 Melford Dr. Email: brose@cosmosgroup.com Scarboraugh, Ontario Canada M1B 2X6 Mr. Michael Wingard (P) Phone: (607) 786-4241 Amphenol Interconnect Fax: (607) 786-4311 20 Valley St. Email: mikwingard@aol.com Endicott, NY 13760 Mr. Bill Mable (A) Phone: (607) 786-4236 Amphenol Interconnect Fax: (607) 786-4311 20 Valley St. Email: bmable@spectra.net Endicott, NY 13760 Mr. Carl Booth (O) Amphenol/Spectra-Strip Phone: (203) 287-7455 Fax: (203) 281-5872 Email: 7480559@mcimail.com 720 Sherman Ave. Hamden, CT 06514 Mr. Gary Porter (P) Phone: (415) 322-5322 Ancot Corp. Fax: (415) 322-0455

115 Constitution Dr. Menlo Park, CA 94025	Email: garyp@ancot.com
Mr. Bart Raudebaugh (A) Ancot Corp. 115 Constitution Dr. Menlo Park, CA 94025	Phone: (415) 322-5322 Fax: (415) 322-0455 Email: bart@ancot.com
Mr. Harlan Andrews (P) Apple Computer 6 Infinite Loop MS 306-2MS Cupertino, CA. 95014	Phone: (408) 974-6430 Fax: (408) 862-7577 Email: hea@apple.com
Mr. Ron Roberts (A) Apple Computer 3535 Monroe St. MS:69-G Santa Clara, CA 95051	Phone: (530) 677-5714 Fax: (530) 677-1218 Email: rkroberts@aol.com
Mr. James R. Bergsten (O) Ark Research Corp. 1190 Saratoga Ave. #110 San Jose, CA 95129-3433	Phone: (408) 260-5900 Fax: (408) 260-5908 Email: bergsten@arkres.com
Ms. Brigitte Tiszauer (O) ATG Cygnet Inc. 2560 Junction Ave. San Jose, CA 95134-1902	Phone: (408) 383-2198 Fax: Email:
Mr. Douglas Wagner (P) Berg Electronics 472 Delwood Ct. Newbury Park, CA 91320-4819	Phone: (805) 498-0325 Fax: (805) 498-0325 Email: wagnerdl@bergelect.com
Mr. Edward Cady (A#) Berg Electronics 15005 NW Timmerman Road Forest Grove, OR 97116	Phone: (503) 359-4556 Fax: (503) 359-9273 Email: edcady@aol.com
Mr. Jim Koser (A) Berg Electronics 825 Old Trail Road Etters, PA 17319	Phone: (717) 938-7679 Fax: (717) 938-7991 Email:
Mr. Philippe Schreck (O) Bull S.A. Rue Jean Jaures 78340 Les Clayes Sous Bois France	Phone: 33-130806179 Fax: 30-807285 Email:
Mr. Bob Gannon (O)	Phone: (860) 774-4812

C&M Corp. PO Box 348 51 South Walnut St. Wauregan, CT 06387	Fax: (860) 774-7330 Email: rgannon@cm-corp.com
Mr. Richard Wagner (P) Cable Design Technologies 28 Sword Street Auburn, MA 01501	Phone: (508) 791-3161 Fax: (508) 798-8353 Email: rwagner@montrose-cdt.com
Mr. Joseph Merkwaz (A) Cable Design Technologies 28 Sword Street Auburn, MA 01501-0276	Phone: (508) 791-3161 Fax: (508) 798-8353 Email:
Mr. David Ruxton (O) Calluna Technology Ltd. One Blackwood Road Eastfield Glenrothes Fife KY7 4NP Scotland	Phone: 44-1592-630810 Fax: 44-1592-630920 Email:
Mr. Gerry Johnsen (P) Ciprico Inc. 2800 Campus Dr. Suite 60 Plymouth, MN 55441	Phone: (612) 551-4000 Fax: (612) 551-4002 Email: gerry@ciprico.com
Mr. Raymond Gilson (A) Ciprico Inc. 2800 Campus Drive Suite 60 Plymouth, MN 55441	Phone: (612) 551-4047 Fax: (612) 551-4002 Email: rwg@ciprico.com
Mr. Ian Morrell (P) Circuit Assembly Corp. 18 Thomas St. Irvine, CA 92718-2703	Phone: (949) 898-1780 Fax: (949) 855-4298 Email: ianm@ca-online.com
Mr. Dennis Lang (A)	Phone: (714) 855-7887

Circuit Assembly Corp. 18 Thomas St. Irvine, CA 92718-2703

Mr. Ben Chang (O) Cirrus Logic Inc. 3100 W. Warren Ave. Fremont, Ca 94538

Mr. Ken Wolfgang (O) Cirrus Logic Inc. 350 Interlocken Parkway Broomfield, CO 80021

Phone: (510) 226-2394 Fax:

Email: dennisl@ca-online.com

Email: ben@corp.cirrus.com

Fax: (714) 855-4298

Phone: (303) 460-5228 x6661 Fax: Email: kenw@colorado.cirrus.com

Mr. Edward Haske (O) CMD Technology 1 Vanderbilt Irvine, CA 92718	Phone: (714) 454-0800 Fax: (714) 455-1656 Email: haske@cmd.com
Mr. Robert C. Elliott (P) Compaq Computer Corp. MS 120810 PO Box 692000 Houston, TX 77269-2000	Phone: (281) 518-5037 Fax: (281) 518-7135 Email: Robert.Elliott@compaq.com
Mr. Bill Galloway (A) Compaq Computer Corp. P.O. Box 692000 M090504 Houston, TX 77269-2000	Phone: (281) 514-6732 Fax: (281) 514-0513 Email: Bill.Galloway@compaq.com
Mr. Peter Johansson (P) Congruent Software, Inc. 3998 Whittle Ave. Oakland, CA 94602	Phone: (510) 531-5472 Fax: (510) 531-2942 Email: pjohansson@aol.com
Mr. Geoffrey Hoese (O) Crossroads Systems Inc. 6101 W. Courtyard Dr. Bldg 1 So Austin, TX 78730	Phone: (512) 349-0300 x17 Fax: (512) 349-0304 Email: gbh@crossroads.com
Mr. Charles Tashbook (P) Dallas Semiconductor 4401 S. Beltwood Pkwy. Dallas, TX 75244-3292	Phone: (972) 371-4110 Fax: (972) 371-3715 Email: charles.tashbook@dalsemi.com
Mr. Michael Smith (A) Dallas Semiconductor 4401 S. Beltwood Pkwy Dallas, TX 75244	<pre>Phone: (972) 371-4457 Fax: (214) 450-3715 Email: mike.smith@dalsemi.com</pre>
Mr. Greg McSorley (P) Data General / Clariion 4400 Computer Dr. Westboro, MA 01580	<pre>Phone: (508) 898-6032 Fax: (508) 898-5413 Email: greg_mcsorley@dg.com</pre>
Mr. Gary S. Peterson (A) Data General / Clariion MS C-33 Coslin Dr. Southboro, MA 01722	Phone: (508) 480-7150 Fax: (508) 480-7913 Email: gpeterson@clariion.com
Mr. Bill Anderson (O) DDK Electronics 3001 Oakmead Village Dr. Santa Clara, CA 95051	Phone: (408) 980-8344 Fax: (408) 980-9750 Email: w.anderson@world.att.net

Mr. James Benfer (O) Digi-Data Corp. 8580 Dorsey Run Road Jessup, MD 20794	Phone: (301) 498-0200 Fax: Email:	
Mr. Douglas Hagerman (P) Digital Equipment Corp. SHR3-2/W3 334 South Street Shrewsbury, MA 01545	Phone: (508) 841-2145 Fax: (508) 841-6100 Email: douglas.hagerman@digital.com	L
Mr. William Dallas (A#) Digital Equipment Corp. ZK03-3/T79 110 Spit Brook Road Nashua, NH 03062-2698	Phone: (603) 884-2508 Fax: (603) 884-2257 Email: dallas@zk3.dec.com	
Dr. William Ham (A#) Digital Equipment Corp. SHR3-2/W04 334 South Street Shrewsbury, MA 01545	Phone: (508) 841-2629 Fax: (508) 841-5266 Email: bill.ham@digital.com	
Mr. Sid Snyder (A#) Digital Equipment Corp. 1245 Tari Lane Colorado Springs, CO 80921	Phone: (719) 548-2837 Fax: (719) 548-2451 Email: sid.snyder@digital.com	
Ms. Kathy Straitt (A) Digital Equipment Corp. SHR3-2/C5 334 South Street Shrewsbury, MA 01545-4113	Phone: (508) 841-2003 Fax: (508) 841-5266 Email: straitt@starch.ENET.dec.com	
Mr. Stephen J. Sicola (O) Digital Equipment Corp. 301 Rockrimmon Blvd. So. Colorado Springs, CO 80132	Phone: (719) 548-2268 Fax: (719) 548-2541 Email: sicola@peaks.dec.com	
Mr. Keith W. Parker (P) Diogenes SCSI 10304 N.E. Beech St. Portland, OR 97220	Phone: (503) 255-1035 Fax: Email: diogenes@europa.com	
Mr. Roger Cummings (P) Distributed Processing Tech. 140 Candace Dr. Maitland, FL 32751	Phone: (407) 830-5522 x348 Fax: (407) 260-5366 Email: cummings_roger@dpt.com	
Mr. Mike Gerwig (A) Distributed Processing Tech. 140 Candace Dr. Maitland, FL 32751	Phone: (407) 830-5522 x380 Fax: (407) 260-5366 Email: gerwig@dpt.com	

Mr. Robert Reisch (P) Eastman Kodak Co. 460 Buffalo Road Rochester, NY 14652-3816	Fax:	(716) 588-0573 (716) 588-2624 reisch@kodak.com
Mr. Rick Bohn (A) Eastman Kodak Co. 460 Buffalo Road Rochester, NY 14652-3816	Fax:	(716) 722-0997 (716) 588-2624 bohn@sector.kodak.com
Mr. James D. Converse (XO) Eastman Kodak Co. Corp. Standards NCITS Chair 343 State Street Rochester, NY 14650	Fax:	(716) 781-9091 (716) 724-9023 jdc@kodak.com
Mr. Terry Maezawa (O) Electronic&Ind. Enterprises Suite 216 21 Eastbrook Bend Peachtree City, GA 30269	Phone: Fax: Email:	(404) 487-5815
Mr. I. Dal Allan (P) ENDL 14426 Black Walnut Ct. Saratoga, CA 95070	Fax:	(408) 867-6630 (408) 867-2115 dal_allan@mcimail.com
Ms. Constance Kephart (P) Exabyte Corp. 1685 38th Street Boulder, CO 80301	Fax:	(303) 417-7927 (303) 417-7829 conniek@exabyte.com
Mr. Tom Jackson (A) Exabyte Corp. 1685 38th Street Boulder, CO 80301	Fax:	(303) 417-7201 (303) 417-7829 thomasj@exabyte.com
Mr. Mark Hammang (A) FCPA Intellistor (Fujitsu) 2402 Clover Basin Dr. Longmont, CO 80503	Fax:	(303) 682-6575 (303) 682-6401 mhammang@intellistor.com
Mr. Gary R. Stephens (A) FSI Consulting Services 1825 N. Norton Tucson, AZ 85719	Fax:	(520) 321-1725 (520) 321-1725 6363897@mcimail.com
Mr. Gary R. Stephens (O) FSI Consulting Services 1825 N. Norton	Fax:	(520) 321-1725 (520) 321-1725 6363897@mcimail.com

Tucson, AZ 85719

Mr. Chris Nieves (P) Fujitsu 2904 Orchard Pkwy. San Jose, CA 95134-2009	Fax:	(408) 894-3556 (408) 894-3901 cnieves@fcpa.fujitsu.com
Mr. Michael Nguyen (O) Fujitsu 2904 Orchard Pkwy San Jose, CA 95134	Fax:	(408) 894-3542 (408) 894-3901 michael.nguyen@fcpa.fujitsu.com
Mr. Don Vohar (A) Fujitsu (FCPA) 2904 Orchard Pkwy. San Jose, CA 95134	Fax:	(408) 894-3840 (408) 894-3748 dvohar@fcpa.fujitsu.com
Mr. Matt Rooke (O) Fujitsu Computer Prods Amer 2904 Orchard Pkwy. San Jose, CA 95134	Fax:	(408) 894-3826 (408) 894-4009 mrooke@fcpa.fujitsu.com
Mr. Kazuo Nakashima (O) Fujitsu Computer Products,Am 2904 Orchard Parkway San Jose, CA 95134	Fax:	(408) 894-3849 (408) 894-3907 knakashima@fcpa.fujitsu.com
Mr. Kevin R. Pokorney (O) Fujitsu Computer Products,Am 2402 Clover Basin Drive Longmont, CO 80503	Fax:	(303) 682-6649 (303) 682-6401 pokorney@intellistor.com
Mr. Mike Nelson (O) Fujitsu Ltd. 2 Longwalk Road Stockley Park Uxbridge Middlesex UB11 1AB UK		81-573-4444 81-573-2643
Mr. Bob Thornton (O) Fujitsu Takamisawa America 250 E. Caribbean Dr. Sunnyvale, CA 94089	Fax:	(408) 745-4932 (408) 745-4971 bthornto@fta.fujitsu.com
Ms. Liza Hunt (XO) Global Engineering Documents 15 Inverness Way East Englewood, CO 80112-5704	Phone: Fax: Email:	
Mr. Rodger Burke (A) Harting Elektronik Inc.		(847) 741-1500 x286 (847) 741-8257

1370 Bowes Road Elgin, IL 60123	Email: Rodger.Burke@harting.com
Mr. Dominique Desourteaux (O) Harting Interface Division 181 Av des Nations BP 60086 F95972 Roissy CDG - FRANCE	Phone: 33 1 49 3834 62 Fax: 33 1 49 8904 14 Email: d.desourteaux.harting@wanadoo.fr
Mr. Marcos Barrionuevo (P) Harting, Inc. of N. America 1370 Bowes Road Elgin, IL 60123	Phone: (847) 741-1500 x280 Fax: (847) 741-8257 Email: Marcos.Barrionuevo@harting.com
Mr. Michael Weilert (O) Health Liability Mgmt. Corp. Suite 100 13738 Oxbow Road Fort Myers, FL 33905	Phone: (941) 693-2962 Fax: (941) 693-2962 Email:
Mr. Philip Facendola (O) Helix/Hitemp Cables, Inc. 20 Forge Park Franklin, MA 02038	Phone: (508) 541-2213 Fax: (508) 541-8122 Email:
Mr. J. R. Sims (P) Hewlett Packard Co. 800 S. Taft Ave. Loveland, CO 80537	Phone: (970) 635-6774 Fax: (970) 635-6610 Email: robsims@hootie.lvld.hp.com
Mr. Matt Wakeley (A) Hewlett Packard Co. 8000 Foothills Blvd. Roseville, CA 95747	Phone: (916) 785-4259 Fax: (916) 785-1997 Email:
Mr. Donald C. Loughry (XO) Hewlett Packard Co. M/S 43UC NCITS Vice Chair 19420 Homestead Rd. Cupertino, CA 95014	Phone: (408) 447-2454 Fax: (408) 447-2247 Email: don_loughry@hp6600.desk.hp.com
Mr. Brad Culp (O) Hewlett Packard Co. 700 71st. Ave. Greeley, CO 80631	Phone: (970) 350-4592 Fax: (970) 352-3524 Email: brad-culp@hp.com
Mr. Bill Hutchison (O) Hewlett Packard Co. P.O. Box 15 Boise, ID 83707-0015	Phone: (208) 396-3369 Fax: (208) 396-5117 Email: hutch@boi.hp.com
Mr. Steve Krupa (0)	Phone:

Hewlett Packard Co. Filton Road Stoke Gifford Bristol BS12 6QZ England	Fax: Email:	
Mr. Ruben Yomtoubian (O) Hitachi America 3101 Tasman Dr. Santa Clara, CA 95054	Fax:	(408) 986-9770 x467 (408) 986-1821 r_yomtoubian@hitachi.com
Mr. Zane Daggett (P) Hitachi Cable Manchester,Inc 900 Holt Ave. Manchester, NH 03109	Fax:	(603) 669-4347 x236 (603) 669-9621 zdaggett@hcm.hitachi.com
Mr. Paul Boulay (O) Hitachi Computer Systems Div 3101 Tasman Drive Santa Clara, CA 95054	Fax:	(408) 986-9770 x205 (408) 986-1821 p_boulay@hitachi.com
Mr. Hitoshi Ogawa (O) Hitachi Ltd. Systems Development Lab 292 Yoshida-Cho Yokohama-Shi 244 Japan	Fax:	1181-45881-1241 1181-45860-1674 hogawa@yokolab.sdl.hitachi.co.jp
Mr. Anthony Yang (P) Hitachi Storage Products 3101 Tasman Drive M/S 75 Santa Clara, CA 95054	Fax:	(408) 748-2806 (408) 235-8942 yang_a@halsp.hitachi.com
Mr. Quang Vuong (A) Hitachi Storage Products 3101 Tasman Drive M/S 75 Santa Clara, CA 95054	Fax:	(408) 748-2806 (408) 235-8942 vuong_q@halsp.hitachi.com
Mr. Francesco Liburdi (O) Hollingsworth Corp. 1425 Elmira St. Endicott, NY 13760	Fax:	(607) 748-0025 (607) 748-0037 liburdif@hollingsworth.com
Mr. Thomas J. Kulesza (P) Honda Connectors 960 Corporate Woods Parkway Vernon Hill, IL 60061	Fax:	(847) 913-9566 (847) 913-9587 tkulesza@hondaconnectors.com
Mr. Terry Enright (A) Honda Connectors 960 Corporate Woods Parkway Vernon Hill, IL 60061		(847) 913-9566 (847) 913-9587

Mr. George Penokie (P) Phone: (507) 253-5208 Fax: (507) 253-2880 IBM Corp. 2B7/114-2 Email: gop@us.ibm.com 37st Highway 52 N. Rochester, MN 55901-7829 Mr. Dan Colegrove (A#) Phone: (408) 256-1978 IBM Corp. Fax: (408) 256-1044 Email: colegrov@us.ibm.com LJ4/012 5600 Cottle Rd. San Jose, CA 95193 Mr. John P. Scheible (A) Phone: (512) 823-8208 Fax: (512) 823-0758 IBM Corp. Bldg 815 MS 4051 Email: Scheible@vnet.ibm.com 11400 Burnett Rd. Austin, TX 78758 Phone: (520) 799-4923 Mr. Robert Basham (0) Fax: IBM Corp. Email: robbyb@us.ibm.com 65U/031-Z 9000 S. Rita Rd. Tucson, AZ 85744 Phone: (408) 965-5016 Mr. Larry Ko (0) Initio Corp. Fax: (408) 577-0640 2188 B Del Franco Street Email: larryk@inito.com San Jose, CA 95131 Mr. Tim Bradshaw (P) Phone: (801) 778-4262 Iomega Corp. Fax: (801) 778-4170 Email: bradshat@iomega.com 1821 Iomega Way Roy, UT 84067 Mr. Darrell Redford (A) Phone: (801) 778-4432 Iomega Corp. Fax: (801) 778-4170 1821 West Iomega Way Email: redfordd@iomega.com Roy, UT 84067 

 Ms. Monica Vago (L)
 Phone: (202) 626-5739

 ITI (NCITS Secretariat)
 Fax: (202) 638-4922

 1250 Eye St. NW
 Email: mvago@itic.nw.dc.us

 Suite 200 Washington, DC 20005-3922 Mr. Don Chambers (0) Phone: (714) 753-2679 JAE Electronics Inc. Fax: Suite 100 Email: 142 Technology Drive Irvine, CA 92718-2401 ML. Dennis Moore (P)Phone: (303) 465-1800KnowledgeTek, Inc.Fax: (202) 405 7230 West 119th Pl, Suite C Email: dmoore@ix.netcom.com Broomfield, CO 80020

Mr. Hayden Smith (O) Lasercard Systems Corp. 2644 Bayshore Parkway Mountain View, CA 94043	Fax:	(650) 969-4428 (650) 967-6524 hsmith@lasercard.com
Mr. Dean Wallace (P) Linfinity Micro 11861 Western Ave. Garden Grove, CA 92641	Fax:	(714) 898-8121 (714) 893-2570 75671.3443@compuserve.com
Mr. Louis Grantham (A) Linfinity Micro 101 W. McDermott Allen, TX 75013	Fax:	(972) 396-7002 (972) 396-7533 lgrantham@linfinity.com
Mr. Alan Littlewood (P) LSI Logic Corp. 1525 McCarhy Blvd. San Jose, CA 95035	Fax:	(408) 433-7765 alanl@lsil.com
Mr. Robert Bellino (P) Madison Cable Corp. 125 Goddard Memorial Dr. Worchester, MA 01603	Fax:	(508) 752-2884 x730 (508) 752-4230 robert_bellino@madisonusa.ccmail. compuserve.com
Mr. Chuck Grant (A) Madison Cable Corp. 125 Goddard Memorial Drive Worcester, MA 01603	Fax:	(508) 752-2884 x725 (508) 752-4230 charles_grant@madisonusa.ccmail. compuserve.com
Mr. Pete McLean (P) Maxtor Corp. 2190 Miller Dr. Longmont, CO 80501	Fax:	(303) 678-2149 (303) 678-2165 pete_mclean@maxtor.com
Mr. LeRoy Leach (O) Maxtor Corp. 2190 Miller Dr. Longmont, CO 80501-6744	Fax:	(303) 678-2828 (303) 678-2308 leroy_leach@maxtor.com
Mr. Randy Banton (O) Mercury Computer 199 Riverneck Road Chelmsford, MA 01824	Phone: Fax: Email:	(508) 256-1300 x134
Mr. Bob Masterson (P) Methode Electronics, Inc.		(708) 867-9600 (708) 867-3149

7444 West Wilson Ave Chicago, IL 60656	Email:	rwmast@methode.com
Mr. Frank Samela (A) Methode Electronics, Inc. 7444 W. Wilson Ave. Chicago, IL 60148	Fax:	(708) 867-9600 (708) 867-0346 franksam@methode.com
Mr. John Cannon (O) Methode Electronics, Inc. 7444 West Wilson Ave Chicago, IL 60656		(708) 867-9600 (708) 867-9130
Mr. George Chrysanthakopoulus Microsoft 1 Microsoft Way 26N12109	Fax:	(425) 703-5715 Georgioc@microsoft.com
Redmond, WA 98052		
Mr. Devon Worrell (O)		(425) 703-8118
Microsoft 1 Microsoft Way		(415) 396-3336 DevonW@microsoft.com
Redmond, WA 98052	Fugit.	
Mr. Joe Dambach (P)	Phone:	(708) 527-4546
Molex Inc.		(708) 969-1352
2222 Wellington Court Lisle, IL 60532	Email:	jdambach@molex.com
Mr. Jay Neer (A)	Phone:	(561) 447-2907
Molex Inc.		(561) 447-2908
399 W. Camino Gardens Blvd. Suite 103 Boca Raton, FL 33432	Email:	jneer@molex.com
Mr. Ken Keller (O)	Phone:	(217) 384-8596
Motorola Inc.	Fax:	
1101 E. University Urbana, IL 61801	Email:	
Mr. Brian McKean (P)		(303) 381-4246
Mylex Corp. 4900 Pearl East Circle #104		(303) 413-0464 brianm@mylexboulder.com
Boulder, CO 80301-6108	Email.	briannenytexbourder.com
Mr. Alex Shih (A)		(510) 608-2536
Mylex Corp. 34551 Arderwood Blvd.		(510) 797-4907 alexs@mylex.com
Fremont, CA 94555-3607	Emall.	arexs@myrex.com
Mr. Tom Luan (O)	Phone:	(408) 588-5422

NEC Electronics Inc. M/S 2300 2880 Scott Blvd Santa Clara, CA 95052-8062		(408) 588-5463 tom.luan@el.nec.com
Mr. E. Jake Berzon (O) NEC Electronics, Inc. 2880 Scott Blvd. MS SC2200 Santa Clara, CA 95052-8062	Fax:	(408) 588-5408 (408) 588-5464 jberzon@asic.mtv.nec.com
Mr. Chris Smith (O) NEC Systems Laboratory Inc. 110 Rio Robles Ave. San Jose, CA 95134		(408) 434-7122 (408) 434-7119
Mr. Shinobu Yonemitsu (O) NEC Technologies Inc. Reg Manager Storage 339 North Bernardo Mountain View, Ca 94043-5223		(408) 433-1486 (408) 434-7124
Mr. Lam Dang (O) Oak Technology, Inc. 139 Kifer Court Sunnyvale, CA 94086	Fax:	(408) 523-6643 LamD@oaktech.com
Mr. Robin Freeze (O) Oak Technology, Inc. 139 Kifer Court Sunnyvale, CA 94086	Fax:	(408) 523-6652 RobinF@oaktech.com
Mr. Neil MacLean (O) Oak Technology, Inc. 139 Kifer Court Sunnyvale, CA 94086	Fax:	(408) 328-6837 (408) 774-5390 neilm@oaktech.com
Mr. Edward A. Gardner (P) Ophidian Designs 1262 Hofstead Terrace Colorado Springs, CO 80907	Fax:	(719) 593-8866 (719) 593-8989 eag@ophidian.com
Mr. Dan Davies (O) Overland Data Inc. 8975 Balboa Ave. San Diego, CA 92123-1599	Fax:	(619) 571-5555 x213 (619) 571-3664 ddavies@ovrland.com
Mr. Stephen F. Heil (O) Panasonic Technologies, Inc 2 Research Way, 3rd Floor Princeton, New Jersey 08540	Fax:	(609) 987-3948 (609) 987-0483 sfh@research.panasonic.com

Mr. George Ayer (O) Panduit Corporation 412 Rockwell Court Burr Ridge, IL 60521	Phone: (708) 887-1000 Fax: (708) 887-0230 Email:
Mr. William P. McFerrin (P) Philips Electronics 1860 Lefthand Circle Longmont, CO 80501	Phone: (303) 651-5408 Fax: (303) 682-3029 Email: BMcFerrin@aol.com
Mr. Randall C. Hines (A) Philips Electronics 1860 Lefthand Circle Longmont, CO 80501	Phone: (303) 651-5406 Fax: (303) 682-3029 Email: hinesr@worldnet.att.net
Mr. Sunil Nethisinghe (O) Philips Semiconductors MS 52 811 E. Arques Ave. Sunnyvale, CA 94088	Phone: (408) 991-4540 Fax: (408) 991-4500 Email: nethisin@scs.philips.com
Mr. Skip Jones (P) QLogic Corp. 3545 Harbor Blvd. Costa Mesa, CA 92626	Phone: (714) 668-5058 Fax: (714) 688-5008 Email: sk_jones@qlc.com
Mr. Ting Li Chan (A) QLogic Corp. 3545 Harbor Blvd. P.O. Box 6725 Costa Mesa, CA 92626	Phone: (714) 668-5058 Fax: (714) 688-5008 Email: t_chan@qlc.com
Mr. Patrick McGarrah (P) Quantum Corp. 333 South St. Shrewsbury, MA 01545	Phone: (508) 770-6364 Fax: (508) 770-2299 Email: pat.mcgarrah@quantum.com
Mr. Mark Evans (A) Quantum Corp. 500 McCarthy Blvd. Milpitas, CA 95035	Phone: (408) 894-4019 Fax: (408) 894-4990 Email: mark.evans@quantum.com
Mr. James McGrath (A#) Quantum Corp. 500 McCarthy Blvd. Milpitas, CA 95035	Phone: (408) 894-4504 Fax: (408) 894-6375 Email: JMCGRATH@QNTM.COM
Mr. John A. Fobel (O) Rancho Technology, Inc. 10783 Bell Court Rancho Cucamonga, CA 91730	Phone: (909) 987-3966 Fax: (909) 989-2365 Email: johnf@rancho.com

Mr. Ken-Ichi Kojima (O) Sanyo Electric Co., Ltd. 180 Ohmori Anpachi-Cho Anpachi-Gun Gifu-Ken 503-01 Japan		584-64-4399 584-64-5096
Mr. Gene Milligan (P) Seagate Technology MS OKM 251 P. O. Box 12313 Oklahoma City, OK 73157	Fax:	(405) 324-3070 (405) 324-3794 Gene_Milligan@notes.seagate.com
Mr. Gerald Houlder (A) Seagate Technology MPS043 8001 E. Bloomington Freeway Bloomington, MN 55420-1094	Fax:	(612) 806-2869 (612) 806-2708 Gerry_Houlder@notes.seagate.com
Mr. Michael Bryan (O) Seagate Technology 2400 Trade Centre Longmont, CO 80503	Fax:	(303) 684-1407 (303) 684-1133 mike_bryan@notes.seagate.com
Mr. Daniel (Dan) F. Smith (O) Seagate Technology 4585 Scotts Valley Dr. Scotts Valley, CA 95066-4544	Fax:	(408) 439-7146 (408) 438-4846 daniel_f_smith@notes.seagate.com
Mr. Toshiyuki Takahara (O) Seiko Epson Corp. Corporate Res & Dev 3-3-5 Owa Suma-Shi Nagano-Ken 392 Japan		81-266-58-4241 81-226-58-1949
Mr. Alan Gits (O) Sequent Computer Systems 15450 S. Koll Parkway Beaverton, OR 97006	Phone: Fax: Email:	(503) 578-5824
Dr. Colin Whitby-Strevens (O) SGS-Thomson/INMOS 1000, Aztec West Almondsbury, Bristol, BS12 4SQ UK	Fax:	+44 454 611 500 +44 454 619 796 colinws@bristol.st.com
Mr. Siegfried Kunz (O) Siemens Nixdorf Sys Unit BS2000 BS 2000 HE PS W-8000 Munchen 83 W. Germany		98-636-46941 98-636-46999
Mr. Erhard Weiss (O) Siemens Nixdorf Depatment: SNI PC SB ESW Burgermeister-Ulrich-St	Fax:	49-821-804-3602 49-821-804-2910 weiss.abg@sni.de

## T10 Plenary Meeting #26 -- May 7, 1998

T10/98-148r0

D-86199 Augsburg Germany		
Mr. Dave Guss (P) Silicon Systems, Inc. 14351 Myford Rd. Tustin, CA 92780	Fax:	(714) 573-6824 (714) 573-6916 dave.guss@tus.ssil.com
Mr. Stephen G. Finch (A) Silicon Systems, Inc. 14351 Myford Road Tustin, CA 92780-7022	Fax:	(714) 573-6808 (714) 573-6916 steve.finch@tus.ssil.com
Mr. James Ryland (XO) Social Security Admin NCC Room 5110 OMC liaison 6201 Security Blvd. Baltimore, MD 21234-0001	Fax:	(410) 965-2166 (410) 966-1893 JRYLAND@SSA.SSW.DHHS.GOV
Mr. Dennis Pak (P) Sony Electronics, Inc. 3300 Zanker Rd. MS# SJ-3B2 San Jose, CA 95134	Fax:	(408) 955-5247 (408) 955-5066 dennis_pak@asd.sel.sony.com
Mr. Janek Rebalski (A) Sony Electronics, Inc. 3300 Zanker Rd. San Jose, CA 95134	Fax:	(415) 955-4535 (415) 955-5066 janek_rebalski@asd.sel.sony.com
Mr. Rich Wahler (O) Standard Microsystems Corp. 300 Kennedy Drive Hauppauge, NY 11788		(516) 435-6174 (516) 724-1505
Mr. Erich Oetting (P) Storage Technology Corp. 2270 South 88th St. Louisville, CO 80028-0268	Fax:	(303) 673-2178 (303) 673-8196 erich_oetting@stortek.com
Mr. Doug Charnley (A) Storage Technology Corp. 2270 South 88th St. MS 0211 Louisville, CO 80028-0211	Fax:	(303) 661-7271 (303) 673-8196 doug_charnley@stortek.com
Mr. David Peterson (O) StorageTek Network Sys. Grp 7600 Brooklyn Blvd. Brooklyn Park, MN 55428	Fax:	(612) 391-1008 (612) 391-1095 dap@network.com
Mr. Robert N. Snively (P) Sun Microsystems Computer Co Mail Stop UMPK 12-204	Fax:	(650) 786-6694 (650) 786-6458 bob.snively@sun.com

901 San Antonio Road Palo Alto, CA 94303 Mr. Vit Novak (A) Phone: (415) 336-2455 Mr. Vit Novak (A) Sun Microsystems, Inc. Mail Stop 15-46 Fax: (415) 968-4873 Email: vit.novak@sun.com 2550 Garcia Ave. Mountain View, CA 94043-1100 Mr. John Lohmeyer (P) Phone: (719) 533-7560 Symbios, Inc. Fax: (719) 533-7036 4420 ArrowsWest Dr. Email: lohmeyer@ix.netcom.com Colorado Springs, CO 80907 Mr. Charles Binford (A#) Phone: (316) 636-8566 Symbios, Inc. Fax: (316) 636-8889 Email: Charles.Binford@Symbios.com 3718 N. Rock Rd. Wichita, KS 67226-1397 Mr. Rod DeKoning (A#) Phone: (316) 636-8842 Fax: (316) 636-8889 Symbios, Inc. 3718 N. Rock Rd. Email: rod.dekoning@symbios.com Wichita, KS 67226 Mr. Dave Evans (A#) Phone: (970) 225-4823 Symbios, Inc. Fax: (970) 225-4859 2001 Danfield Ct. Email: dephoto@goldrush.com Ft. Collins, CO 80525 Mr. Ralph O. Weber (A) Phone: (972) 503-3205 x228 Symbios, Inc. Fax: (972) 503-2258 Suite 400 Email: roweber@acm.org 12377 Merit Drive Dallas, TX 75251 Mr. Graeme Weston-Lewis (A#) Phone: (970) 226-9629 Fax: (970) 226-9686 Symbios, Inc. 2001 Danfield Court Email: gwl@symbios.com Fort Collins, CO 80525 Phone: (510) 226-4215 Mr. Patrick Mercer (P) SyQuest Technology, Inc. Fax: (510) 226-4104 47071 Bayside Parkway Email: patrick.mercer@syquest.com Fremont, CA 94538-6517 
 Mr. Jeff Cousins (A)
 Phone: (303) 938-2966

 SyQuest Technology, Inc.
 Fax: (303) 938-2987
 3005 Center Green Dr. #100 Email: jeff.cousins@syquest.com Boulder, CO 80301 Mr. Erik Solhjell (O) Phone: 11-47-218-9090 Tandberg Data Fax:

A/S Email: P.O. Box 9 Korsvoll N-0808 Oslo 8 Norway Mr. Pete Tobias (A#) Phone: (408) 285-9913 Tandem, a Compaq Company Fax: (408) 285-9924 Loc 100-03 Email: tobias\_pete@tandem.com 10555 Ridgeview Ct. Cupertino, CA 95014-0789 Mr. Henry Tseng (A#) Phone: (408) 285-9819 Tandem, a Compaq Company Fax: 10555 Ridgeview Ct. Email: htseng@loc100.tandem.com Cupertino, CA 95014 Ms Yang Jiao (O) Phone: (213) 727-4836 Fax: (213) 727-4879 TEAC America Email: yjiao@teac.com 7733 Telegraph Rd. Montebello, CA 90640 Mr. Alan Wetzel (O) Phone: Texas Instruments Fax: M/S 8206 Email: PO Box 655303 Dallas, TX 75265 Mr. Kevin Gingerich (0) Phone: (972) 480-3378 Texas Instruments, Inc. Fax: (972) 480-3535 P.O. Box 660199 M/S 8710 Email: k-gingerich@ti.com Dallas, TX 75266-0199 Mr. Rick Hardy (O) Phone: (408) 435-7697 The JPM Company Fax: (408) 435-1109 2135 Ringwood Ave. Email: rhardy@jpmsj.com San Jose, CA 95131 Mr. Steven Walker (0) Phone: (901) 680-5992 Thomas & Betts Fax: (901) 537-8805 Email: walkertnb@aol.com 1555 Lynnfield Rd. Memphis, TN 38119 Phone: (714) 461-3861 Mr. Tokuyuki Totani (P) Toshiba America Elec. Comp. Fax: (714) 581-1170 35 Hammond Email: Tokuyuki.Totani@taec.toshiba.com Irvine, CA 92618-1697 Phone: (714) 380-5115 Mr. Kenneth J. Hallam (P) UNISYS Corporation Fax: (714) 380-5858 Email: ken.hallam@unisys.com MV201 25725 Jeronimo Road Mission Viejo, CA 92691 Phone: (714) 380-5982 Mr. Arlan P. Stone (A)

UNISYS Corporation MS 201 25725 Jeronemo Rd. Mission Viejo, CA 92691		(714) 380-5858 arlan.stone@unisys.com
Mr. Dave Wehrman (O) UNISYS Corporation 11716 Highridge Pinckney, MI 48169	Fax:	(313) 426-8847 (313) 426-8847 dave.wehrman2@unisys.com
Mr. Paul D. Aloisi (P) Unitrode Corporation MS: 84 7 Continental Blvd Merrimack, NH 03054	Fax:	(603) 429-8687 (603) 429-8963 aloisi@unitrode.com
Ms. Francis Terry (A) Unitrode Corporation 7 Continental Blvd Merrimack, NH 03054-0399	Fax:	(603) 429-8713 (603) 429-8963 terry@unitrode.com
Mr. Eric Swartz (O) Verisys 2901-B Research Park Dr. Soquel, CA 95073	Fax:	(408) 464-4292 (408) 464-4250 eric@verisys.com
Mr. Michael G. Kaminski (O) Volex Inc. 835 Sinclair Frontage Road Milpitas, CA 95035	Fax:	(408) 945-7766 (408) 945-4360 Mike_Kaminski@volex.com
Mr. Jeffrey L. Williams (P) Western Digital Corporation 1599 N. Broadway Ave. Rochester, MN 55906	Fax:	(507) 286-7589 (507) 286-7528 Jeffrey.L.Williams@wdc.com
Mr. Jonathan L. Hanmann (A#) Western Digital Corporation 8105 Irvine Ctr. Dr. Irvine, CA 92618	Fax:	(714) 932-5189 (714) 932-7097 jhanmann@dt.wdc.com
Mr. Gregory Kapraun (A) Western Digital Corporation 1599 N. Broadway Rochester, MN 55906	Fax:	(507) 286-7763 (507) 286-7528 Gregory.D.Kapraun@wdc.com
Ms. Vicki Pipal (O) Western Digital Corporation 1509 Broadway Rochester, MN 55906	Fax:	(507) 286-7710 pipal@wdroc.com

Mr. Doug Piper (P) Woven Electronics PO Box 189 Mauldin, SC 29662	Phone: (803) 967-1751 Fax: (803) 963-1761 Email: doug.piper@internetmci.com
Mr. E.J. Mondor (A) Woven Electronics PO Box 189 Mauldin, SC 29662	Phone: (803) 967-1739 Fax: (803) 963-1761 Email: 549.9900@mcimail.com
Mr. Michael Chalgren (O) Xiotech Corporation #200 6509 Flying Cloud Drive Eden Prairie Mn 55344	Phone: (612) 828-5984 Fax: (612) 828-5990 Email: mchalgren@xiotech.com
Mr. Arnold Limjoco (O) Yamaichi Electronics 2235 Zanker Rd. San Jose, CA 95131	Phone: (408) 456-0797 x134 Fax: (408) 456-0799 Email: arnold.l@yeu.com

T10 Document Database on 1998/05/13 at 10:34:00 -- Enclosure (3)

- T10/98-001R0 Date: 1997/12/05 Author: J. Lohmeyer Mailing: 1998\_1 Agenda for T10 Meeting #26 (May '98)
- T10/98-002R0 Date: 1997/12/05 Author: J. Lohmeyer Mailing: 1998\_1 T10 Project Summary - Mar '98
- T10/98-003R0 Date: 1997/12/05 Author: J. Lohmeyer Mailing: 1998\_1 Jeopardy letter for Mar '98 meeting
- T10/98-004R0 Date: 1997/12/05 Author: J. Lohmeyer Mailing: 1998\_1 Letter Ballot on Forwarding SPI-2 to First Public Review
- T10/98-005R0 Date: 1998/01/13 Author: J. Lohmeyer Mailing: 1998\_1 Results of letter ballot 97-038 on forwarding SBP-2
- T10/98-006R0 Date: 1998/01/13 Author: J. Lohmeyer Mailing: 1998\_1 Results of letter ballot 98-004 on forwarding SPI-2
- T10/98-007R0 Date: 1998/01/26 Author: J. Lohmeyer Mailing: 1998\_1 Ltr. to Ken Bush (Compaq) re Security Patents
- T10/98-101R0 Date: 1997/12/02 Author: Dean Wallace Mailing: 1998\_1 Universal Backplane Annex
- T10/98-102R0 Date: 1997/12/07 Author: L. Lamers Mailing: 1998\_1 Minutes of Protocol Study Group - 12/97
- T10/98-103R0 Date: 1997/12/04 Author: Craig McCombs Mailing: 1998\_1 Predicting Performance Benefits of Packtized SCSI
- T10/98-104R0 Date: 1997/12/04 Author: Drew Wilson Mailing: 1998\_1 U3 SCSI Performance
- T10/98-105R0 Date: 1997/12/05 Author: George Penokie Mailing: 1998\_1 SCSI Usable Bandwidth - Fixed Select Times; Varying Data Rate
- T10/98-106R0 Date: 1998/01/01 Author: Gerry Houlder Mailing: 1998\_1 Add PLPB feature to mode page 19h
- T10/98-106R1 Date: 1998/04/24 Author: Gerry Houlder Mailing: 1998\_2 Add PLPB feature to mode page 19h
- T10/98-107R0 Date: 1997/12/12 Author: John Lohmeyer Mailing: 1998\_1 Document Retention Policy
- T10/98-107R1 Date: 1998/03/19 Author: John Lohmeyer Mailing: 1998\_1 Document Retention Policy
- T10/98-108R0 Date: 1998/01/14 Author: George Penokie Mailing: 1998\_1 Comment resolution on SPI-2 letter ballot
- T10/98-108R1 Date: 1998/01/14 Author: George Penokie Mailing: 1998\_1 Comment resolution on SPI-2 letter ballot
- T10/98-108R2 Date: 1998/03/18 Author: George Penokie Mailing: 1998\_1 Comment resolution on SPI-2 letter ballot

- T10/98-109R0 Date: 1998/01/23 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot - Revision 3
- T10/98-109R1 Date: 1998/02/28 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot - Revision 3
- T10/98-109R2 Date: 1998/03/21 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot - Revision 3
- T10/98-110R0 Date: 1998/01/15 Author: Ron Roberts Mailing: 1998\_1 Minutes of MMC-2 Working Group - 1/98
- T10/98-111R0 Date: 1998/01/19 Author: J. Lohmeyer Mailing: 1998\_1 Minutes of SPI-3 Physical SG 1/22/98
- T10/98-112R0 Date: 1998/02/02 Author: T. Coughlan Mailing: 1998\_1 Writable Device Identifiers
- T10/98-113R0 Date: 1998/01/21 Author: V. Bastiani Mailing: 1998\_1 Initial test results on dual-edge clock signals
- T10/98-114R0 Date: 1998/01/21 Author: W.C. Gintz Mailing: 1998\_1 Hot Plugging on Ultra3 Busses
- T10/98-115R0 Date: 1998/01/30 Author: Ralph Weber Mailing: 1998\_1 Sundry Minor Enhancements for SPC-2
- T10/98-115R1 Date: 1998/02/10 Author: Ralph Weber Mailing: 1998\_1 Sundry Minor Enhancements for SPC-2
- T10/98-115R3 Date: 1998/03/17 Author: Ralph Weber Mailing: 1998\_1 Sundry Minor Enhancements for SPC-2
- T10/98-116R0 Date: 1998/02/04 Author: Ron Roberts Mailing: 1998\_1 MMC-2 Features and Parameters Clause
- T10/98-117R0 Date: 1998/02/28 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot - More on Revision 3
- T10/98-117R1 Date: 1998/02/28 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot - More on Revision 3
- T10/98-118R0 Date: 1998/01/21 Author: Darrell Redford Mailing: 1998\_1 RBC Generic Command Set Issues
- T10/98-118R1 Date: 1998/03/03 Author: Darrell Redford Mailing: 1998\_1 RBC Generic Command Set Issues
- T10/98-119R0 Date: 1998/02/11 Author: Pete McLean Mailing: 1998\_1 Minutes of RBC working group - 2/98
- T10/98-120R0 Date: 1998/02/28 Author: Peter Johansson Mailing: 1998\_1 Comment Resolution on SBP-2 letter ballot: Isochronous or Not?
- T10/98-121R0Date:1998/02/20Author:Greg ShueMailing:1998\_1Serial Bus Protocol 2 Programmable Reconnect Interval Extension
- T10/98-121R1Date:1998/03/30Author:Greg ShueMailing:1998\_1Serial Bus Protocol 2 Programmable Reconnect Interval Extension

T10/98-121R2 Date: 1998/05/08 Author: Greg Shue Mailing: 1998\_2 Serial Bus Protocol 2 - Programmable Reconnect Interval Extension T10/98-122R0 Date: 1998/03/02 Author: Ron Roberts Mailing: 1998\_1 Proposal Clause 4 MMC-2 T10/98-123R0 Date: 1998/03/15 Author: Jeff Williams Mailing: 1998\_1 Removal of Tag Checking Requirement in SPI-2 T10/98-123R1 Date: 1998/03/17 Author: Jeff Williams Mailing: 1998\_1 Removal of Tag Checking Requirement in SPI-2 T10/98-124R0 Date: 1998/03/13 Author: Robert Snively Mailing: 1998\_1 SPC-2, Persistent Reservation: Additional proposed corrections T10/98-124R1 Date: 1998/03/13 Author: Robert Snively Mailing: 1998\_2 SPC-2, Persistent Reservation: Additional proposed corrections T10/98-125R0 Date: 1998/03/26 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of SPI-3 Working Group - 3/98 T10/98-125R1 Date: 1998/03/30 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of SPI-3 Working Group - 3/98 T10/98-126R0 Date: 1998/03/26 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of SCSI Working Group - 3/98 T10/98-126R1 Date: 1998/03/30 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of SCSI Working Group - 3/98 T10/98-127R0 Date: 1998/03/26 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of T10 Plenary Meeting #25 T10/98-127R1 Date: 1998/03/31 Author: Weber/Lohmeyer Mailing: 1998\_1 Minutes of T10 Plenary Meeting #25 T10/98-128R0 Date: 1998/03/13 Author: Robert Snively Mailing: 1998\_1 New Log Page Requirements T10/98-128R1 Date: 1998/04/08 Author: Robert Snively Mailing: 1998\_2 New Log Page Requirements T10/98-128R2 Date: 1998/04/08 Author: Robert Snively Mailing: 1998\_2 New Log Page Requirements T10/98-129R0 Date: 1998/03/14 Author: W.C. Gintz Mailing: 1998 1 Hot Plugging on U3 Busses (Second Report) T10/98-130R0 Date: 1998/03/18 Author: Keith Parker Mailing: 1998\_1 SCSI Socket Services (SSS) Review 98-03-18 T10/98-131R0 Date: 1998/03/16 Author: Greg Kapraun Mailing: 1998 1 0.5pF Balance Capacitance T10/98-132R0 Date: 1998/03/16 Author: W. Bridgewater Mailing: 1998\_1 Bias Reduction Proposal - 3/98 T10/98-133R0 Date: 1998/03/16 Author: Richard Moore Mailing: 1998 1 Presentation on QAS changes

- T10/98-134R0 Date: 1998/03/16 Author: Dean Wallace Mailing: 1998\_1 Termination Power Requirements
- T10/98-135R0 Date: 1998/03/19 Author: Bill Ham Mailing: 1998\_1 Section of EPI describing SCSI switches
- T10/98-136R0 Date: 1998/03/10 Author: Gene Milligan Mailing: 1998\_1 ISO/IEC 8482 issues
- T10/98-137R0 Date: 1998/03/19 Author: Steve Finch Mailing: 1998\_1 Project Proposal for Serial Bus Isochronous Protocol Standard
- T10/98-138R0 Date: 1998/03/19 Author: Pete McLean Mailing: 1998\_1 Minutes of SBP-2 Working Group - 3/98
- T10/98-139R0 Date: 1998/03/19 Author: Pete McLean Mailing: 1998\_1 Minutes of RBC Working Group - 3/98
- T10/98-140R0 Date: 1998/03/19 Author: T. Coughlan Mailing: 1998\_1 Clarification of Persistant Reservation
- T10/98-141R0 Date: 1998/03/19 Author: Ron Roberts Mailing: 1998\_1 Minutes of MMC-2 Working Group - 3/98
- T10/98-142R0 Date: 1998/03/17 Author: John Scheible Mailing: 1998\_1 Common Database Record Interchange Structure
- T10/98-143R0 Date: 1998/03/19 Author: Tom Lagatta Mailing: 1998\_1 Storage Networking Industry Association Presentation
- T10/98-144R0 Date: 1998/01/14 Author: George Penokie Mailing: 1998\_2 CRC on existing SCSI parallel protocol
- T10/98-144R1 Date: 1998/04/14 Author: George Penokie Mailing: 1998\_2 CRC on existing SCSI parallel protocol
- T10/98-145R0 Date: 1998/04/19 Author: R. Weber Mailing: 1998\_2 Which port changes for SPC-2
- T10/98-146R0 Date: 1998/05/12 Author: Lohmeyer/Weber Mailing: 1998\_2 Minutes of SPI-3 Working Group - 5/98
- T10/98-147R0 Date: 1998/05/12 Author: Weber/Lohmeyer Mailing: 1998\_2 Minutes of SCSI Working Group - 5/98
- T10/98-148R0 Date: 1998/05/12 Author: Weber/Lohmeyer Mailing: 1998\_2 Minutes of T10 Plenary Meeting #26
- T10/98-149R0 Date: 1998/04/22 Author: N. Wanamaker Mailing: 1998\_2 Tape Error Recovery in Queued Environments
- T10/98-150R0 Date: 1998/05/02 Author: Ed Gardner Mailing: 1998\_2 Simplified Parallel SCSI CRC Proposal
- T10/98-151R0 Date: 1998/05/01 Author: Hideki Hosoya Mailing: 1998\_2 Optical Memory Card Read/Write Command Set for T10 review

## T10 Plenary Meeting #26 -- May 7, 1998

T10/98-152R0 Date: 1998/04/29 Author: Gene M Presentation on Fast-80	Milligan Mailing:	1998_2
T10/98-153R0 Date: 1998/05/02 Author: Gene M Fast-80 details	Milligan Mailing:	1998_2
T10/98-154R0 Date: 1998/05/04 Author: Bruce CRC Proposal	Leshay Mailing:	1998_2
T10/98-155R0 Date: 1998/05/04 Author: Richar Hot Swap Technical Issues	rd Uber Mailing:	1998_2
T10/98-156R0 Date: 1998/05/04 Author: Wally Full Length Cable & 15 Loads, 3 Point Plan	Bridgewater Mailing:	1998_2
T10/98-157R0 Date: 1998/05/04 Author: James Testing for Old Expanders	McGrath Mailing:	1998_2
T10/98-158R0 Date: 1998/05/04 Author: James Communicating with New Expanders	McGrath Mailing:	1998_2
T10/98-159R0 Date: 1998/05/04 Author: Larry Presentation on QAS	Lamers Mailing:	1998_2
T10/98-160R0 Date: 1998/05/02 Author: Dan Sm Leading Pulse Tests Using Ultra2 REQ Signal	nith Mailing:	1998_2
T10/98-161R0 Date: 1998/05/04 Author: Dan Sm Cable Skew Tests Using Ultra2 Data Signals	nith Mailing:	1998_2
T10/98-162R0 Date: 1998/05/04 Author: Dan Sm Setup and Hold Tests Using Ultra2 Data/REQ Sign	5	1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign	5	_
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage	als	_ 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert	hals Houlder Mailing: Snively Mailing:	_ 1998_2 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert Command behavior under reservations T10/98-165R0 Date: 1998/05/05 Author: Neil W	Houlder Mailing: Snively Mailing: Vanamaker Mailing:	 1998_2 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert Command behavior under reservations T10/98-165R0 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-165R1 Date: 1998/05/05 Author: Neil W	hals Houlder Mailing: Snively Mailing: Wanamaker Mailing: Wanamaker Mailing:	 1998_2 1998_2 1998_2 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert Command behavior under reservations T10/98-165R0 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-165R1 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape	hals Houlder Mailing: Snively Mailing: Wanamaker Mailing: Wanamaker Mailing: Guss Mailing:	- 1998_2 1998_2 1998_2 1998_2 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert Command behavior under reservations T10/98-165R0 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-165R1 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-166R0 Date: 1998/05/05 Author: Dave O REQ-ACK Counting T10/98-167R0 Date: 1998/05/05 Author: Pete M	hals Houlder Mailing: Snively Mailing: Wanamaker Mailing: Wanamaker Mailing: Guss Mailing: Mclean Mailing:	- 1998_2 1998_2 1998_2 1998_2 1998_2 1998_2
Setup and Hold Tests Using Ultra2 Data/REQ Sign T10/98-163R0 Date: 1998/05/05 Author: Gerry SCSI Extensions for Network Attached Storage T10/98-164R0 Date: 1998/05/05 Author: Robert Command behavior under reservations T10/98-165R0 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-165R1 Date: 1998/05/05 Author: Neil W FCP-2 Enhancements for Tape T10/98-166R0 Date: 1998/05/05 Author: Dave O REQ-ACK Counting T10/98-167R0 Date: 1998/05/05 Author: Pete M Minutes of RBC Working Group - 5/5/98 T10/98-168R0 Date: 1998/05/06 Author: Pete M	Houlder Mailing: Houlder Mailing: Snively Mailing: Manamaker Mailing: Manamaker Mailing: Guss Mailing: Mclean Mailing:	- 1998_2 1998_2 1998_2 1998_2 1998_2 1998_2 1998_2

T10/98-171R0 Date: 1998/05/06 Author: Peter Johansson Mailing: 1998\_2 SBP-2 Document History

T10/98-172R0 Date: 1998/05/07 Author: Stewart Wyatt Mailing: 1998\_2 Minutes of Joint T10/T11.3 Meeting on Fibre Channel Tape - 5/5/98

T10/98-173R0 Date: 1998/05/11 Author: Ralph Weber Mailing: 1998\_2 SAM-2 Rev 6 Notes

T10/98-174R0 Date: 1998/05/08 Author: Hank Herrmann Mailing: 1998\_2 Dual Conductivity Contact