

Accredited Standards Committee\*

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

<b>Doc. No.:</b> T10/98-234r0
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**Date:** November 12, 1998

**Reply to:** John Lohmeyer

To: T10 Membership  
From: Ralph Weber / John Lohmeyer  
Subject: T10 Plenary Meeting #29 -- November 5, 1998  
Palm Springs, CA

## Agenda

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  - 8.12 High Availability Profile (HAP) Technical Report {Project 1224-DT} [open]
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9. Old Business
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    - 10.1.1 Assign mode page code 18h to Fibre Channel LUN control page [Snively]
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- 10.2 Assign 04h as ANSI Version code for SPC-2 [Weber]
- 10.3 Make Flag bit in CDB Control byte obsolete (98-241r0) [Snively]
- 10.4 Making the Communications command set obsolete [Oetting]
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  - 12.6 IEEE P1596.8 Status
  - 12.7 T11 FC Tape [Peterson/LaFollette/Oetting]
  - 12.8 SCSI Trade Association (STA) [Jones/Aloisi]
- 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 9:05 a.m., Thursday November 5, 1998. He thanked Larry Lamers of Adaptec for hosting (and Norm Harris for organizing) 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:

- 10.1.1 Assign mode page code 18h to Fibre Channel LUN control page [Snively]
- 10.1.2 Assign ASC/ASCQ 55/03 to INSUFFICIENT RESOURCES (98-229r0) [Penokie]
- 10.1.3 Persistent Reservations Changes (98-203r9) in SPC-2 [Penokie/Snively]
- 10.2 Assign 04h as ANSI Version code for SPC-2 [Weber]
- 10.3 Make Flag bit in CDB Control byte obsolete (98-241r0) [Snively]

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

- 10.4 Making the Communications command set obsolete [Oetting]
- 12.7 T11 FC Tape [Peterson/Lafollette/Oetting]

### 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. For the purposes of letter ballot votes, a person attending their first meeting may become a voting member immediately following that meeting, provided their NCITS fees have been paid.

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

John briefly discussed the mailing fees. Complete pricing information is contained in the 1999 membership form (available at [ftp://ftp.symbios.com/t10/pub/standards/io/t10/mem\\_form.txt](ftp://ftp.symbios.com/t10/pub/standards/io/t10/mem_form.txt)).

The Chair said he had sent letters to 14 people from 8 organizations informing them that their membership was in jeopardy due to non-attendance (see 98-021r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Circuit Assembly Corp.  
Congruent Software, Inc.  
Hewlett Packard Co.  
Honda Connectors  
Mylex Corp.  
Toshiba America Electric. Company.  
UNISYS Corporation

All of the organizations were present except:

Congruent Software, Inc.

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).

The following organization requested new (or reinstated) membership at this meeting:

CMD Technology

The following organization requested new (or reinstated) membership following this meeting:

The JPM Company

The T10 membership during the meeting was 47 organizations unchanged from 47 organizations at the last meeting. Following the meeting, T10 membership increased to 48 organizations. 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 - September '98 Meeting St. Petersburg Beach, FL (T10/98-214r1)

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 Lohmeyer requested that all documents for the next mailing be in his hands in electronic format by 10:30 a.m. on Thursday November 12, 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 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/>. LSI Logic 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>.

## 6. Call for Patents

This is a regular agenda item to identify any potential patent issues with developing standards. A call was made and no one identified any patents issues.

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). Section 1.2.11 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

- 266) All project editors will return the project abstract forms regarding their project(s) to the Chair.
- 284) John Lohmeyer will investigate the status of T10 projects that have been pending publication at ANSI for several months. *Complete.*
- 285) John Lohmeyer will conduct a letter ballot on MMC-2 revision 8 for forwarding to first public review. *Complete.*
- 286) John Lohmeyer will forward EPI revision 16 to NCITS for processing toward first public review. *Complete.*
- 287) John Lohmeyer will prepare a detailed proposal for the levying and usage of the electronic service fee ASAP. *Overtaken by events.*
- 288) Gene Milligan will report the affirmative recommendation of T10 on the letter ballot for ISO/IEC DIS 14776-341, Information technology - Small Computer Interface-3 (SCSI-3) - Part 341: Controller Commands (SCSI-3 SCC) to the JTC 1 TAG. *Complete.*

- 289) The November SPI-3 Working Group will prepare an recommendation on the disposition of 98-220, changes in termination current requirements for consideration by the November plenary. *Overtaken by events.*

## **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.

John reported on the T10 status report given to NCITS at their meeting in Beaver Creek, Colorado in September.

John reported that the NCITS Secretariat has asked him to treat any action as final for the purposes of the two-week rule. Also, John reported that NCITS continues to require the chair not to reveal letter ballot votes or comments until the ballot closes, but (in a change from past T10 custom) the author of the comments or vote is allowed to distribute them as he/she sees fit. John encouraged people to send their letter ballot comments to the project editors to give them extra time to formulate proposed ballot responses, but he requested that people avoid using the T10 reflector for lobbying.

*Chair's note: The day after the T10 meeting, the NCITS Secretariat reported that the T10 Editors Fund currently contains \$25,430.00.*

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

John Lohmeyer reported the SPI Amendment is awaiting publication. John reported that the stall in publication of this document and others has become an issue. NCITS has begun considering changing away from ANSI as a standards publisher.

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

In the absence of Bill Dallas, John Lohmeyer reported on an e-mail communication with Bill. John noted that Bill continues to have management approval to work on CAM-3 under the new management at Compaq, and Bill plans to attend the next committee meeting. Bill noted to John that he plans to work on the ISO version of CAM as well as CAM-3.

### **8.4 SCSi-3 Stream Commands (SSC) Status {Project 997-D} [Peterson]**

Erich Oetting reported on the activities of the FC Tape meeting earlier in the week (minutes in T10/98-245r0 or T11/98-567v0). A new draft of SSC will be available soon. Erich recommended that a new letter ballot be conducted on the new draft of SSC for forwarding to first public and the committee agreed. While this is atypical, all agreed that the more-than one year interval since completion of the first letter ballot argues for a new letter ballot, particularly since significant features are being added.

### **8.5 SCSi-3 Medium Changer Commands (SMC) Status {Project 999-D} [Oetting]**

Erich Oetting reported that he has received the published version of SMC. John congratulated Erich on completing SMC. This item will be promoted to the published status and removed from future T10 agendas.

Erich reported an intention to write a project proposal for an SMC-2 project and volunteered to be the project editor.

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

John Lohmeyer reported that SPI-2 passed the NCITS letter ballot and is going to BSR for approval later this month.

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

John Lohmeyer reported that EPI is close to publication. Questions were raised regarding whether a public review will be conducted on EPI and whether EPI will be an ANSI Technical Report or an NCITS Technical Report.

By calling the NCITS office, John was able to report that EPI is on track to be an NCITS Technical Report and no public review is needed.

Contrary to committee recollections, GPP also was published as an NCITS Technical Report. The only difference between an ANSI Technical Report and an NCITS Technical report is the letters 'ANSI' appear in the title and there are several additional processing steps by the NCITS Secretariat to earn these letters; both are sold by ANSI and both deny being an ANSI standard.

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

Bob Snively reported that the first draft of FCP-2 will be in the next committee mailing. He also described the delta document for FCP to FCP-2 changes, 97-266r3.

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

Pete McLean reported that SBP-2 completed public review and no comments were received. John Lohmeyer reported that SBP-2 is the subject of an NCITS letter ballot and the ballot closes on 10 November 1998.

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

Ralph Weber reported that no progress has been made on a new revision of SAM-2. He stated plans to make a SAM-2 revision prior to the March meeting week, but after the next committee mailing.

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

Bob Snively reported that the ANSI editors have not contacted him regarding publication of SES. Bob will check his e-mail and contact John if the e-mail reveals no activity at ANSI.

**8.12 High Availability Profile (HAP) Technical Report {Project 1224-DT} [open]**

Bob Snively moved that T10 recommend to NCITS that project 1224-DT be terminated. Dal Allan seconded the motion. John Lohmeyer noted that no one has volunteered to be the HAP project editor in the six weeks since the vacancy was announced. The motion passed 28:0:19=47. John Lohmeyer took an action item to notify NCITS that T10 has recommended that project 1224-DT be terminated.

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

George Penokie reported that he has not been contacted regarding the ANSI publication of SCC-2. The committee discussed how long ANSI has taken to publish SCC-2. *Chair's note: The next week George was contacted by ANSI regarding publication of the SCC-2 standard.*

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

Ron Roberts reported that the letter ballot comments on MMC-2 are still being processed. He requested time during the next meeting week to finish resolving the comments. Ron reported on the planned MMC-2 working group meeting schedule. See meeting schedule in agenda item 14.

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

Ralph Weber reported that SPC-2 revision 5, containing all T10 approved changes was distributed in the last committee mailing. Also, revision 6, containing changes approved at this meeting, will be created for distribution in the next committee mailing.

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

Pete McLean reported that all the 286 letter ballot comments on RBC have been resolved. The comments resolution document is 98-222. New revisions of RBC and the resolution document will be available prior to the next committee meeting. The committee was encouraged to review the new RBC revision, since the letter ballot comments have produced substantial structural changes. Pete informed the committee that a forwarding motion will be requested at the March meeting.

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

In the absence of Keith Parker, John Lohmeyer reported that SSS revision 0 was provided prior to the last committee meeting. In an e-mail message to John, Keith expressed a commitment to attend the March committee meeting.

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

George Penokie reported that SPI-3 revision 1 (containing all T10 approved changes) was provided prior to this meeting. George reported on the activities of the SPI-3 working group (minutes in 98-232). He indicated that an editing meeting is being considered for later this day. George described plans to produce a revision 2 in time for the next working group meeting, but not in time for the next committee mailing.

George reviewed the working group discussion of 32-bit support in SPI-3 and noted that a straw poll favored removing 32-bit support entirely 16:6. Dal Allan moved that all discussion of 32-bit parallel support be made obsolete in SPI-3. Mark Evans seconded the motion. The motion passed 29:0:2:16=47.

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

Ralph Weber reported no progress on this project. He recommended that in March 1999 T10 entertain a motion to recommend that the project be terminated unless some interest has been shown by then.

### **9. Old Business**

#### **9.1 Resolution of RBC Letter Ballot comments**

Pete McLean requested that formal resolution of the RBC letter ballot comments be deferred to the March meeting.

#### **9.2 Single-Ended Termination Change (98-220r0) [Grantham]**

Louis Grantham and Paul Aloisi requested that action on this topic be deferred to the March meeting. *Secretary's note: The SPI-3 Working Group minutes show that Louis and Paul have agreed to bring a joint proposal for changes in single-ended termination to the next meeting.*

### **9.3 T10 Electronic Services (web and ftp site) [Lohmeyer]**

Based on John's report on the resolution of LSI support for the T10 web and ftp site, the only open issue was the question of whether T10 should request the Secretariat to collect an electronic service fee. Dal Allan noted that levying the fee in 1999 could be useful in providing support to STA for equipment purchases to support the T10 web site.

The committee discussed the relationship of the electronic service fee and the editing fee. Also discussed were questions of how the editor's fee and electronic service fee might be spent. John Lohmeyer stated his belief that NCITS prohibits using fee monies for capital purchases. John said that the current T10 editor's fund contains more than sufficient funds to purchase a server should NCITS reconsider its position on this topic.

John described the long-term NCITS goal of providing electronic services to all their sub-committees. However, T10 is too large to be an early beneficiary of such support. The NCITS plan is to include such services within the current fee structure. Given that the NCITS Secretariat has been quite responsive to previous needs, Dal agreed that consideration of an electronic service fee could be deferred until such time as we see a clear need to levy it.

## **10. New Business**

### **10.1 Actions on Working Group Recommendations**

#### **10.1.1 Assign mode page code 18h to Fibre Channel LUN control page [Snively]**

Bob Snively moved that mode page code 18h be assigned to a Fibre Channel LUN control mode page in SPC-2. Erich Oetting seconded the motion. It was noted that the additional mode page is required based on restrictions on the LUN/target usage of the Fibre Channel port control mode page (19h). Thus, page 19h can only be issued to LUN 0 and affects all LUNs accessed via the port for LUN 0. The new page (18h) will be used for controls that affect only the LUN to which the MODE SELECT command is sent. The Command Reference Number control is an example of such a control. The motion passed 30:0:0:17=47.

#### **10.1.2 Assign ASC/ASCQ 55/03 to INSUFFICIENT RESOURCES (98-229r1) [Penokie]**

Based on the 15:0:2 recommendation of the working group, George Penokie moved that 98-229r1 (98-229r0 as revised) be accepted for inclusion in SPC-2. Bob Snively seconded the motion. The motion passed 30:0:0:17=47.

#### **10.1.3 Persistent Reservations Changes (98-203r9) in SPC-2 [Penokie/Snively]**

Based on the unanimous recommendation of the working group, George Penokie moved that 98-203r9 be accepted for inclusion in SPC-2. Bob Snively seconded the motion. Bob noted that the proposed persistent reservations definition is a proper subset of the persistent reservations defined in SPC. Ron Roberts asked if the changes to the PREVENT/ALLOW command are a subset. Bob noted that those changes are in addition to the SPC definition. The motion passed 33:0:0:14=47.

#### **10.2 Assign 04h as ANSI Version code for SPC-2 [Weber]**

Ralph Weber moved that code 04h be assigned to SPC-2 (this standard) in the ANSI Version field of the standard Inquiry data in SPC-2. George Penokie seconded the motion. The motion passed 33:0:0:14=47.

#### **10.3 Make Flag bit in CDB Control byte obsolete (98-241r0) [Snively]**

Bob Snively described history and usage of the Flag bit in the CDB Control byte. He noted that the usage of the Flag bit has become nil and that the bit causes problems in FCP-2. He stated an intention to make a motion whose



effect will be to obsolete the Flag bit in SAM-2 and FCP-2 at the March meeting. He requested that notification of any objections to the action be sent to the T10 reflector.

Bob Snively took an action item to notify the T10 reflector of his proposal to make the Flag bit obsolete.

#### **10.4 Making the Communications command set obsolete [Oetting]**

Erich Oetting reported on a request from the SSC comments resolution review that the Communications command set be made obsolete in SSC. John Lohmeyer described an admittedly old implementation of the Communications command set known to him. Ralph Weber noted that making the communications command set obsolete would put it in the same state as the Graphics command set; SCSI-2 would be the only document of reference for both.

Erich Oetting took an action item to notify the T10 reflector of the SSC working group proposal to make the Communications command set obsolete.

## **11. ISO**

### **11.1 ISO Report [Milligan]**

Gene Milligan presented an oral report to the committee and provided the following electronic report for the minutes:

Voting on ISO/IEC DIS 14165-111 FC-PH started 98-05-14 and terminates 98-11-14. The T11 recommended vote with DAM-2 has been submitted.

IEC TC 100 has circulated a draft standard on safety requirements for multimedia and similar equipment.

Don Tolmie completed the resolution of DIS 14165-211 FC-FP, DIS 11518-8 HIPPI ATM, and DIS 11518-9 HIPPI Serial comments and the editor's report along with the final International Standard text has been provided to the SC 25 Secretariat for publication of the standard.

Draft 5 of the Cooperative Agreement Between ISO/IEC JTC1/SC 24 and the World Wide Web Consortium (W3C) concerning the development of standards has been distributed. The purpose of this document is to establish the detailed procedures whereby ISO/IEC JTC1/SC 24 and the W3C will cooperate to continue the development of a series of ISO/IEC standards based on the work of the Consortia, including the PNG (Portable Network Graphics) Specification.

The US National Body voted to APPROVE JTC 1 N 5180 - JTC 1 Policy on Electronic Document Distribution Using the WWW, with comments.

Summary of Voting on JTC 1 N 5281, Proposal For a New Work Item on DVD Read-Only Disk File System Specifications (Technical Report type 3) Passed with five Y on Q3.

A project JTC 1 N 5154, ISO/IEC DTR 10000-1 - Information Technology - Framework and Taxonomy of International Standardized Profiles-Part1:General Principles and Documentation Framework has been approved.

### **11.2 ISO Business [Milligan]**

Gene Milligan reported that there is no ISO business to be conducted at this meeting.

## 12. Liaison Reports

### 12.1 T11 Liaison Report [Cummings]

John Lohmeyer reported that no one currently chairs T11. This was viewed as the most likely reason for the absence of a liaison report. John briefly described the process by which a new chair will be chosen, which is still under way.

### 12.2 T13 Liaison Report [Milligan]

Gene Milligan presented an oral report to the committee and provided the following electronic report for the minutes:

T13 met October 27-29, 1998 in Wailea, Maui, HI.

ATA/ATAPI-4 was approved for publication on October 16, 1998. Initial discount orders are being taken by ANSI.

1394 to AT Attachment - Tailgate was approved previously for publication. Initial discount orders are being taken by ANSI.

T13 unanimously requested that a project proposal be submitted for a technical report based on the Method for Booting Reserved Area Boot Code proposal from Phoenix and GSI.

T13 is considering a project proposal for a updated BIOS technical report EDD v3.0 New Technical project proposal.

T13 reviewed the outstanding and new proposals as enumerated below. The 10/98 meeting scheduled proposal cut-off date was agreed to by unanimous consent. This means that the open proposals that may be included in ATA/ATAPI-5 beyond those already accepted for inclusion are:

D98123 Address Offset Feature	Colegrove (Note there is an alternative proposal which instead would be a Technical Report for the Method for booting the reserved area boot code - using existing SET MAX)
D98134 Error Logging	McLean
D98136 Error Logging	Colligan
D98135 SMART Extensions	Evans
D98137 SMART Extensions	Colligan
D98138 Read Return Prevention Attribute	Colligan
D98132 Identify Device Data Structure	Goodfellow
D98139 Protected Area for SET MAX	Goodfellow
D98133 Ultra DMA 66	Evans
D98109 Ultra ATA Implementation Guide	Evans

Proposals that may arise subsequent to this list along with D98115 32-bit ATA by Goodfellow will be candidates for ATA/ATAPI-6.

T13 unanimously voted that Mark Evans be requested to revise the Ultra DMA 66 proposal based on the committee discussion for the purpose of voting to include it in the ATA/ATAPI-5 draft at the December plenary.

### 12.3 SFF Industry Group [Allan]

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

The HSS (High Speed Serial) Testing SSWG (Specific Subject Working Group) which met in Toronto made solid progress and two more meetings are scheduled before T10 meets in March: December in Santa Cruz and Cupertino in January. The January meeting should be a review of the completed specification.

No more dimension issues remain on SFF-8441, so the latest revision of VHDCI (Very High Density Cable Interconnects) will be included in the next mailing for balloting. There is one dimension on VHDCI that needs confirmation by the manufacturers.

If the last figure needed to complete SFF-8451 for SCA-2 (Single Connector Attach) is received in time, the latest revision will be included in the next mailing for balloting. If the resistive material at the tip is introduced in a product the members decided it will be known as SCA-3 if a new specification is generated.

The issues on SFF-8420 for HSSDC (High Speed Serial Data Connector) raised by Jay Neer on the dimensions were partially resolved, but many still remain. Jerry Kahlic requested further details so that interoperation between single beam and dual beam designs could be assured. New figures were added to provide additional dimensioning information that are needed to do a worst case analysis.

The reflector review of the SFF-8067 changes produced additional extensions, which will be included in the next revision.

SFF-8020 for ATAPI CD-ROM continues to be a popular request, although the members feel it should be Expired. It is possible that some pieces should remain available, as they are not documented elsewhere. If so, either a new revision or a new specification will be generated to retain that content.

An inquiry has been made as to SFF's willingness to distribute ATAPI DVD as SFF-8090i. If a document is received, it will be balloted to the members along with a justification as to why.

SFF-8012 for 4-pin power and SFF-8059 for the 40-pin connector are on the next ballot to be published. ATA-5 has incorporated all of the relevant SFF specifications that affect ATA, and after the latest revisions are included all requests for changes will be handled by T13.

#### **12.4 IEEE 1394 [Johansson]**

No report.

#### **12.5 IEEE P1285 Status**

No report.

#### **12.6 IEEE P1596.8 Status**

No report.

#### **12.7 T11 FC Tape [Peterson/LaFollette/Oetting]**

Erich Oetting reported that FC Tape is the subject of a letter ballot at T11. George Penokie reported that the T11 letter ballot closes on 30 November 1998.

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

Paul Aloisi made an oral report to the committee.

### **13. Review of Action Items**

- 266) All project editors will return the project abstract forms regarding their project(s) to the Chair.
- 290) Bob Snively will notify the T10 reflector of his proposal to make the Flag bit obsolete.
- 291) John Lohmeyer will notify NCITS that T10 has recommended that project 1224-DT (HAP) be terminated.
- 292) John Lohmeyer will check the ANSI publication status of SES and SCC-2.
- 293) Erich Oetting will notify the T10 reflector of the SSC working group proposal to make the Communications command set obsolete.

### **14. Meeting Schedule**

The next plenary meeting of T10 will be March 11, 1999 in Harrisburg, PA at a location to be announced, hosted by AMP, Inc. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

March '98 Meeting Map  
(11/05/98 Version)

Monday 3/8	9	10	11	12	1	2	3	4	5	6	7	8	9			
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
	Cable Perf.			Domain Validat.				FC Multispeed						(25)		
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
	Fibre Channel FC-AL-2													(40)		
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
Tuesday 3/9	9	10	11	12	1	2	3	4	5	6	7	8	9			
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	SPI-3 WG													(50)		
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	MMC-2 WG													(15)		
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	RBC WG													(15)		
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	FC-AL-2				T10/T11.3 Tape WG									(40)		
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
Wednesday 3/10	9	10	11	12	1	2	3	4	5	6	7	8	9			
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	SCSI WG (includes joint MMC-2 mtg)												(50)			
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
	MMC-2 WG													(15)		
	+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+=====+															
						SFF SSWGs			SFF							(40)
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
Thursday 3/11	9	10	11	12	1	2	3	4	5	6	7	8				
	+=====+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
	T10 Plenary				/ SCSI Harbor (*)									(60/40)		
	+=====+=====+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
							STA Marcom							(15)		
	+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+															
(*) - SCSI Harbor meeting begins 30 minutes after T10 plenary but not before 2:30 pm																
Friday 3/12	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.

Other T10-authorized meetings:

Meeting	Date		Location / Contact
T10/T11.3	12/15/98	Tue	Tucson, AZ / T11
Joint Tape WG			
Cable Perf.	12/2/98	Wed	Manchester, NH / Zane Daggett
MMC-2 WG	11/30-12/2	Mon-Wed	Irvine, CA / Ron Roberts
MMC-2 WG	1/25-27/99	Mon-Wed	Monterey, CA / Larry Lamers
SPI-3 WG	1/26-27/99	Tue-Wed	Monterey, CA / Larry Lamers
SPC-2 WG	1/28/99	Thu	Monterey, CA / Larry Lamers

## Meeting Map Abbreviation Key:

Amnd: Amendment  
 CAM: Common Access Method  
 CAM-3: Next generation CAM for SCSI-3  
 EPI: SCSI Enhanced Parallel Interface (Technical Report)  
 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)  
 Fast-80: Data Transfer at 80 Mega-transfers/second (a.k.a., Ultra3)  
 FC: Fibre Channel  
 FC-AL: Fibre Channel - Arbitrated Loop (a T11 project)  
 FCLC: Fibre Channel Loop Community (not an NCITS activity)  
 I/F: Interface  
 HAP: High Availability Profile (Technical Report)  
 LB: Letter Ballot  
 MMC-2: Multimedia Commands - 2 (CD-ROM, DVD, etc.)  
 PH: Physical (Connectors, Cables, Transceivers, etc.)  
 Plenary: Full Committee Meeting  
 RAID: Redundant Array of Independent Devices  
 RBC: Reduced Block Commands  
 SBC: SCSI-3 Block Commands  
 SBP-2: Serial Bus Protocol for IEEE 1394 (2nd generation protocol)  
 SCC-2: SCSI Controller Commands - 2 (2nd generation RAID command set)  
 SCSI: Small Computer System Interface  
 SES: SCSI Enclosure Services  
 SCSI Harbor: A STA project on defining a wrapper for SCSI devices  
 SFF: SFF Industry Group (not an NCITS activity)  
 SG: Study Group  
 SMC: SCSI-3 Medium Changer Commands  
 SPC-2: SCSI Primary Commands - 2 (2nd generation)  
 SPI-2: Second Generation SCSI Parallel Interface  
 SPI-3: Third Generation SCSI Parallel Interface  
 SSA: Serial Storage Interface  
 SSC: SCSI-3 Stream Commands (includes Tape)  
 SSWG: Specific-Subject Working Groups  
 STA: SCSI Trade Association (not an NCITS activity)  
 STA Tech: STA Technical Meeting (T10 members invited)  
 T10: Lower Level Interfaces Technical Committee  
 WG: Working Group (same as Ad Hoc Group)

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

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SBC	Gene Milligan	(405) 324-3070 gene_milligan@notes.seagate.com
MMC, MMC-2	Ron Roberts	(916) 677-5714

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SPC, SPC-2, SAM-2, SEP	Ralph Weber	(972) 503-3205 x228 roweber@acm.org
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SSA-S2P & -S3P	John Scheible	(512) 823-8208 Scheible@vnet.ibm.com
SSC	Dave Peterson	(612) 391-1008 dap@network.com
SSS	Keith Parker	(503) 255-1035 diogenes@europa.com
Other Activities	John Lohmeyer	(719) 533-7560 lohmeier@ix.netcom.com

The long-term T10 meeting week schedule is:

Date	Location	Host/Comments
-----	-----	-----
May 3-7, 1999	Manchester, NH	Hitachi Cable
Jul 12-16, 1999	Colorado Springs, CO	LSI Logic
Sep 13-17, 1999	Huntington Beach, CA	QLogic
Nov 8-12, 1999	To be determined	Adaptec
Jan 10-14, 2000	Brisbane, Australia	ENDL Pacific Technologies
Mar 6-10, 2000	RTP, NC or Dallas, TX	Unitrode
May 8-12, 2000	Manchester, NH	Hitachi Cable
Jul 10-14, 2000	Colorado Springs, CO	LSI Logic
Sep 11-15, 2000	Huntington Beach, CA	QLogic
Nov 6-10, 2000	To be determined	Adaptec

#### 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.

Jay Neer moved that T10 authorize the T10-related meetings and events in the list above. Erich Oetting seconded the motion. The motion passed 26:1:1:19=47.

#### 15. Adjournment

The meeting was adjourned at 12:07 p.m. on Thursday November 5, 1998.

## Meeting Attendees -- Enclosure (1)

Name	S	Organization	Electronic Mail Address
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52 People Present

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

T10 Attendance Database on 1998/11/11 at 15:02:35 -- Enclosure (2)

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T10 Document Database on 1998/11/11 at 15:02:00 -- 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 May '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			
T10/98-008R0	Date: 1998/05/13	Author: J. Lohmeyer	Mailing: 1998_2
Agenda for T10 Meeting #27 (July '98)			
T10/98-009R0	Date: 1998/05/13	Author: J. Lohmeyer	Mailing: 1998_2
T10 Project Summary - May '98			
T10/98-009R1	Date: 1998/05/20	Author: J. Lohmeyer	Mailing: 1998_2
T10 Project Summary - May '98			
T10/98-010R0	Date: 1998/05/13	Author: J. Lohmeyer	Mailing: 1998_2
Jeopardy letter for Jul '98 meeting			
T10/98-011R0	Date: 1998/07/20	Author: J. Lohmeyer	Mailing: 1998_3
Agenda for T10 Meeting #28 (Sept '98)			
T10/98-012R0	Date: 1998/07/20	Author: J. Lohmeyer	Mailing: 1998_3
T10 Project Summary - Jul '98			
T10/98-013R0	Date: 1998/07/20	Author: J. Lohmeyer	Mailing: 1998_3
Jeopardy letter for Sep '98 meeting			
T10/98-014R0	Date: 1998/07/22	Author: J. Lohmeyer	Mailing: 1998_3
Letter Ballot on forwarding EPI to 1PR			
T10/98-015R0	Date: 1998/07/31	Author: J. Lohmeyer	Mailing: 1998_4
Letter Ballot on forwarding RBC to 1PR			
T10/98-016R0	Date: 1998/08/26	Author: J. Lohmeyer	Mailing: 1998_4
Results of letter ballot 98-014 on forwarding EPI			
T10/98-017R0	Date: 1998/09/05	Author: J. Lohmeyer	Mailing: 1998_4
Results of letter ballot 98-015 on forwarding RBC			
T10/98-018R0	Date: 1998/08/27	Author: J. Lohmeyer	Mailing: 1998_4
T10 Annual Report for 1997/1998			

T10/98-019R0 Date: 1998/09/24 Author: J. Lohmeyer Mailing: 1998\_4  
Agenda for T10 Meeting #29 (Nov '98)

T10/98-020R0 Date: 1998/09/24 Author: J. Lohmeyer Mailing: 1998\_4  
T10 Project Summary - Sep '98

T10/98-021R0 Date: 1998/09/24 Author: J. Lohmeyer Mailing: 1998\_4  
Jeopardy letter for Nov '98 meeting

T10/98-022R0 Date: 1998/09/24 Author: J. Lohmeyer Mailing: 1998\_4  
Letter Ballot on forwarding MMC-2 to first public review

T10/98-023R0 Date: 1998/10/27 Author: J. Lohmeyer Mailing: 1998\_5  
Results of letter ballot 98-022 on forwarding MMC-2

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

T10/98-112R1 Date: 1998/07/15 Author: T. Coughlan Mailing: 1998\_4  
Writable Device Identifiers

T10/98-112R2 Date: 1998/09/11 Author: T. Coughlan Mailing: 1998\_4  
Writable Device Identifiers

T10/98-112R3 Date: 1998/09/16 Author: T. Coughlan Mailing: 1998\_4  
Writable Device Identifiers

T10/98-112R4 Date: 1998/09/17 Author: T. Coughlan Mailing: 1998\_4  
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?

T10/98-121R0 Date: 1998/02/20 Author: Greg Shue Mailing: 1998\_1

## Serial Bus Protocol 2 - Programmable Reconnect Interval Extension

T10/98-121R1 Date: 1998/03/30 Author: Greg Shue Mailing: 1998\_1  
Serial 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: 1998/05/01 Author: Robert Snively Mailing: 1998\_2  
SPC-2, Persistent Reservation: Additional proposed corrections

T10/98-124R2 Date: 1998/05/15 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  
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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  
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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 - 3/19/98

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: 1998/05/15 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 Persistent 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

T10/98-145R1 Date: 1998/07/04 Author: R. Weber Mailing: 1998\_3  
Discovering If This Is SES Port A or Port B

T10/98-146R0 Date: 1998/05/12 Author: Lohmeyer/Weber Mailing: 1998\_2  
Minutes of SPI-3 Working Group - 5/98

T10/98-146R1 Date: 1998/05/18 Author: Lohmeyer/Weber Mailing: 1998\_2  
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T10/98-146R2 Date: 1998/05/19 Author: Lohmeyer/Weber Mailing: 1998\_2  
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T10/98-146R3 Date: 1998/05/20 Author: Lohmeyer/Weber Mailing: 1998\_2  
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T10/98-147R0 Date: 1998/05/12 Author: Weber/Lohmeyer Mailing: 1998\_2  
Minutes of SCSI Working Group - 5/98

T10/98-147R1 Date: 1998/05/18 Author: Weber/Lohmeyer Mailing: 1998\_2  
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T10/98-148R0 Date: 1998/05/13 Author: Weber/Lohmeyer Mailing: 1998\_2  
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T10/98-148R1 Date: 1998/05/18 Author: Weber/Lohmeyer Mailing: 1998\_2  
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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

T10/98-152R0 Date: 1998/04/29 Author: Gene Milligan Mailing: 1998\_2  
Presentation on Fast-80

T10/98-153R0 Date: 1998/05/02 Author: Gene Milligan Mailing: 1998\_2  
Fast-80 details

T10/98-153R1 Date: 1998/05/15 Author: Gene Milligan Mailing: 1998\_2  
Fast-80 details

T10/98-153R2 Date: 1998/06/17 Author: Gene Milligan Mailing: 1998\_3  
Proposal for the Fast 80 Specifications in the SPI-3 Standard

T10/98-153R3 Date: 1998/07/10 Author: Gene Milligan Mailing: 1998\_3  
Proposal for the Fast 80 Specifications in the SPI-3 Standard

T10/98-153R4 Date: 1998/08/23 Author: Gene Milligan Mailing: 1998\_4  
Proposal for the Fast 80 Specifications in the SPI-3 Standard

T10/98-153R5 Date: 1998/09/11 Author: Gene Milligan Mailing: 1998\_4  
Proposal for the Fast 80 Specifications in the SPI-3 Standard

T10/98-153R6 Date: 1998/09/15 Author: Gene Milligan Mailing: 1998\_4  
Proposal for the Fast 80 Specifications in the SPI-3 Standard

T10/98-154R0 Date: 1998/05/04 Author: Bruce Leshay Mailing: 1998\_2  
CRC Proposal

T10/98-155R0 Date: 1998/05/04 Author: Richard Uber Mailing: 1998\_2  
Hot Swap Technical Issues

T10/98-156R0 Date: 1998/05/04 Author: Wally Bridgewater Mailing: 1998\_2  
Full Length Cable & 15 Loads, 3 Point Plan

T10/98-157R0 Date: 1998/05/04 Author: James McGrath Mailing: 1998\_2

## Testing for Old Expanders

T10/98-158R0 Date: 1998/05/04 Author: James McGrath Mailing: 1998\_2  
Communicating with New Expanders

T10/98-159R0 Date: 1998/05/04 Author: George Penokie Mailing: 1998\_2  
Presentation on QAS Timing

T10/98-159R1 Date: 1998/06/19 Author: George Penokie Mailing: 1998\_3  
Presentation on QAS Timing

T10/98-160R0 Date: 1998/05/02 Author: Dan Smith Mailing: 1998\_2  
Leading Pulse Tests Using Ultra2 REQ Signal

T10/98-161R0 Date: 1998/05/04 Author: Dan Smith Mailing: 1998\_2  
Cable Skew Tests Using Ultra2 Data Signals

T10/98-162R0 Date: 1998/05/04 Author: Dan Smith Mailing: 1998\_2  
Setup and Hold Tests Using Ultra2 Data/REQ Signals

T10/98-163R0 Date: 1998/05/05 Author: Gerry Houlder Mailing: 1998\_2  
SCSI Extensions for Network Attached Storage

T10/98-164R0 Date: 1998/05/19 Author: Robert Snively Mailing: 1998\_2  
Command behavior under reservations

T10/98-164R1 Date: 1998/07/24 Author: Robert Snively Mailing: 1998\_3  
Command behavior under reservations

T10/98-165R0 Date: 1998/05/05 Author: Neil Wanamaker Mailing: 1998\_2  
FCP-2 Enhancements for Tape

T10/98-165R1 Date: 1998/05/05 Author: Neil Wanamaker Mailing: 1998\_2  
FCP-2 Enhancements for Tape

T10/98-165R3 Date: 1998/07/14 Author: Neil Wanamaker Mailing: 1998\_3  
FCP-2 Enhancements for Tape

T10/98-166R0 Date: 1998/05/05 Author: Dave Guss Mailing: 1998\_2  
REQ-ACK Counting

T10/98-167R0 Date: 1998/05/05 Author: Pete Mclean Mailing: 1998\_2  
Minutes of RBC Working Group - 5/5/98

T10/98-168R0 Date: 1998/05/06 Author: Pete Mclean Mailing: 1998\_2  
Minutes of SBP-2 Working Group - 5/6/98

T10/98-169R0 Date: 1998/05/06 Author: Rob Sims Mailing: 1998\_2  
GET CONFIGURATION Overview

T10/98-170R0 Date: 1997/12/04 Author: Rob Sims Mailing: 1998\_2  
Proposal for additions to SPC

T10/98-171R0 Date: 1998/05/23 Author: Peter Johansson Mailing: 1998\_4  
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: 1998/05/16 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

T10/98-175R0 Date: 1998/05/19 Author: Robert Snively Mailing: 1998\_2  
Proposal to obsolete CHANGE DEFINITION command in SPC-2

T10/98-176R0 Date: 1998/05/19 Author: Jim McGrath Mailing: 1998\_2  
Proposal for Parallel SCSI: Domain Validation

T10/98-176R1 Date: 1998/05/21 Author: Jim McGrath Mailing: 1998\_2  
Proposal for Parallel SCSI: Domain Validation

T10/98-176R2 Date: 1998/06/02 Author: Jim McGrath Mailing: 1998\_3  
Proposal for Parallel SCSI: Domain Validation

T10/98-176R3 Date: 1998/06/09 Author: Jim McGrath Mailing: 1998\_3  
Proposal for Parallel SCSI: Domain Validation

T10/98-177R0 Date: 1998/05/19 Author: Jim McGrath Mailing: 1998\_2  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R1 Date: 1998/06/02 Author: Jim McGrath Mailing: 1998\_3  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R2 Date: 1998/06/08 Author: Jim McGrath Mailing: 1998\_3  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R3 Date: 1998/07/11 Author: Jim McGrath Mailing: 1998\_3  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R4 Date: 1998/08/17 Author: Jim McGrath Mailing: 1998\_4  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R5 Date: 1998/09/11 Author: Jim McGrath Mailing: 1998\_4  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-177R6 Date: 1998/09/15 Author: Jim McGrath Mailing: 1998\_4  
Proposal for Parallel SCSI: Increase Transfer Rate and Improve Error Detection

T10/98-178R0 Date: 1998/05/19 Author: Erich Oetting Mailing: 1998\_2  
Known defects in SMC (T10/0999-D Rev 10a)

T10/98-178R1 Date: 1998/07/16 Author: Erich Oetting Mailing: 1998\_3  
Known defects in SMC (T10/0999-D Rev 10a)

T10/98-179R0 Date: 1998/05/22 Author: J. Lohmeyer Mailing: 1998\_3  
Minutes of SPI-3 Working Group - May 22, 1998

T10/98-180R0 Date: 1998/05/13 Author: George Penokie Mailing: 1998\_3  
Parallel Protocol Requests

T10/98-180R1 Date: 1998/05/13 Author: George Penokie Mailing: 1998\_3  
Parallel Protocol Requests

T10/98-180R2 Date: 1998/07/16 Author: George Penokie Mailing: 1998\_3  
Parallel Protocol Requests

T10/98-180R3 Date: 1998/07/16 Author: George Penokie Mailing: 1998\_4  
Parallel Protocol Requests

T10/98-180R4 Date: 1998/09/23 Author: George Penokie Mailing: 1998\_4  
Parallel Protocol Requests

T10/98-181R0 Date: 1998/05/22 Author: Vince Bastiani Mailing: 1998\_3  
Fast-80 Eye Pattern Testing

T10/98-182R0 Date: 1998/05/21 Author: Dan Smith Mailing: 1998\_3  
Ultra-3 Cable Tests

T10/98-183R0 Date: 1998/09/01 Author: Keith Parker Mailing: 1998\_4  
SSS & IP packets over SCSI

T10/98-184R0 Date: 1998/06/17 Author: Larry Lamers Mailing: 1998\_3  
Extended Modes for READ/WRITE BUFFER

T10/98-184R1 Date: 1998/09/08 Author: Larry Lamers Mailing: 1998\_4  
Extended Modes for READ/WRITE BUFFER

T10/98-184R2 Date: 1998/10/16 Author: Larry Lamers Mailing: 1998\_5  
Extended Modes for READ/WRITE BUFFER

T10/98-186R0 Date: 1998/06/04 Author: George Penokie Mailing: 1998\_3  
World Wide IDs

T10/98-187R0 Date: 1998/06/19 Author: Gerry Houlder Mailing: 1998\_3  
Considerations for mode pages common to several LUNs

T10/98-187R1 Date: 1998/09/09 Author: Gerry Houlder Mailing: 1998\_4  
Considerations for mode pages common to several LUNs

T10/98-187R2 Date: 1998/11/03 Author: Gerry Houlder Mailing: 1998\_5  
Considerations for mode pages common to several LUNs

T10/98-188R0 Date: 1998/06/26 Author: Gerry Houlder Mailing: 1998\_3  
Method for defining very long command blocks

T10/98-188R1 Date: 1998/09/09 Author: Gerry Houlder Mailing: 1998\_4  
Method for defining very long command blocks

T10/98-188R2 Date: 1998/10/05 Author: Gerry Houlder Mailing: 1998\_5  
Method for defining very long command blocks

T10/98-189R0 Date: 1998/06/16 Author: Larry Lamers Mailing: 1998\_3  
Presentation on Basic Host Initiated Validation (B-HIV)

T10/98-190R0 Date: 1998/06/19 Author: J. Lohmeyer Mailing: 1998\_3  
Minutes of SPI-3 Working Group - June 19, 1998

T10/98-191R0 Date: 1998/07/15 Author: Keith Parker Mailing: 1998\_3  
SCSI Socket Services (SSS) Review 98-07-15

T10/98-192R0 Date: 1998/06/18 Author: Richard Uber & Mailing: 1998\_3  
Duncan Penman  
Experimental Results on Fast-80 SCSI Signals

T10/98-193R0	Date: 1998/06/18	Author: Richard Uber & Duncan Penman	Mailing: 1998_3
Fast-80 Simulated Host Waveforms			
T10/98-194R0	Date: 1998/06/18	Author: Richard Uber & Duncan Penman	Mailing:
Fast-80 Target Source Waveforms			
T10/98-194R1	Date: 1998/06/18	Author: Richard Uber & Duncan Penman	Mailing: 1998_3
Fast-80 Target Source Waveforms			
T10/98-195R0	Date: 1998/06/18	Author: Richard Uber & Duncan Penman	Mailing: 1998_3
ISI Testing at 25 Meters			
T10/98-196R0	Date: 1998/06/19	Author: Vince Bastiani	Mailing: 1998_3
Fast-80 Test Data			
T10/98-197R0	Date: 1998/07/01	Author: Zane Daggett	Mailing: 1998_3
SPI-3 Concerns			
T10/98-198R0	Date: 1998/07/10	Author: Duncan Penman	Mailing: 1998_3
Fast-80 Case Study - One Bit Across a 6-device Backplane			
T10/98-199R0	Date: 1998/07/10	Author: Duncan Penman	Mailing: 1998_3
Fast-80 Case Study - Data Pattern Dependent Effects			
T10/98-200R0	Date: 1998/07/16	Author: Lohmeyer / Weber	Mailing: 1998_3
Minutes of SPI-3 Working Group - 7/14/98			
T10/98-201R0	Date: 1998/07/20	Author: Lohmeyer / Weber	Mailing: 1998_3
Minutes of SCSI Working Group - 7/15/98			
T10/98-202R0	Date: 1998/07/02	Author: Lohmeyer / Weber	Mailing: 1998_3
Minutes of T10 Plenary Meeting #27 - 7/16/98			
T10/98-202R1	Date: 1998/09/06	Author: Lohmeyer / Weber	Mailing: 1998_4
Minutes of T10 Plenary Meeting #27 - 7/16/98			
T10/98-203R0	Date: 1998/07/07	Author: George Penokie	Mailing: 1998_3
Persistent Reservations			
T10/98-203R1	Date: 1998/07/21	Author: George Penokie	Mailing: 1998_3
Persistent Reservations			
T10/98-203R2	Date: 1998/07/22	Author: George Penokie	Mailing: 1998_3
Persistent Reservations			
T10/98-203R3	Date: 1998/07/24	Author: George Penokie	Mailing: 1998_4
Persistent Reservations			
T10/98-203R4	Date: 1998/09/11	Author: George Penokie	Mailing: 1998_4
Persistent Reservations			
T10/98-203R5	Date: 1998/09/22	Author: George Penokie	Mailing: 1998_4
Persistent Reservations			
T10/98-203R6	Date: 1998/10/08	Author: George Penokie	Mailing: 1998_5

## Persistent Reservations

T10/98-203R7 Date: 1998/10/15 Author: George Penokie Mailing: 1998\_5  
Persistent Reservations

T10/98-203R8 Date: 1998/10/28 Author: George Penokie Mailing: 1998\_5  
Persistent Reservations

T10/98-203R9 Date: 1998/11/04 Author: George Penokie Mailing: 1998\_5  
Persistent Reservations

T10/98-204R0 Date: 1998/07/15 Author: George Penokie Mailing: 1998\_3  
Editorial changes in SPI-2 from Rev 20a to Rev 20b

T10/98-205R0 Date: 1998/07/14 Author: Jeff Williams Mailing: 1998\_3  
Addition of Disable Off-Line Read Scan to Information Exception Page

T10/98-205R1 Date: 1998/07/16 Author: Jeff Williams Mailing: 1998\_3  
Addition of Disable Background Scan to Information Exception Page

T10/98-205R2 Date: 1998/09/09 Author: Jeff Williams Mailing: 1998\_4  
Addition of Disable Background Scan to Information Exception Page

T10/98-206R0 Date: 1998/07/14 Author: Bob Snively Mailing: 1998\_3  
Proposal for FCP Initiator Identification during Persistent Reservations

T10/98-206R1 Date: 1998/07/23 Author: Bob Snively Mailing: 1998\_3  
Proposal for FCP Initiator Identification during Persistent Reservations

T10/98-207R0 Date: 1998/07/14 Author: Pete McLean Mailing: 1998\_3  
Minutes of RBC Working Group - July 14, 1998

T10/98-208R0 Date: 1998/06/26 Author: David B. Anderson Mailing: 1998\_3  
Object Oriented Devices: Description of Requirements

T10/98-209R0 Date: 1998/07/16 Author: Bob Snively Mailing: 1998\_5  
List of changes from FCP Rev 10 to FCP Rev 12

T10/98-210R0 Date: 1998/07/27 Author: Fred M. Mailing: 1998\_3  
Vasconcelos  
Seagate letter granting T10 permission to distribute 98-208

T10/98-211R0 Date: 1998/09/02 Author: Duncan Penman Mailing: 1998\_5  
Setup and Hold Timing Measurements

T10/98-212R0 Date: 1998/09/22 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of SPI-3 Working Group -- September 15, 1998

T10/98-212R1 Date: 1998/09/29 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of SPI-3 Working Group -- September 15, 1998

T10/98-213R0 Date: 1998/09/22 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of SCSI Working Group -- September 16, 1998

T10/98-213R1 Date: 1998/09/29 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of SCSI Working Group -- September 16, 1998

T10/98-214R0 Date: 1998/09/23 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of T10 Plenary Meeting #28 - 9/17/98

T10/98-214R1 Date: 1998/09/29 Author: Lohmeyer & Weber Mailing: 1998\_4  
Minutes of T10 Plenary Meeting #28 - 9/17/98

T10/98-215R0 Date: 1998/09/09 Author: John Lohmeyer Mailing: 1998\_4  
INQUIRY Data field to report transceiver type

T10/98-216R0 Date: 1998/09/11 Author: Keith Parker Mailing: 1998\_5  
SCSI Socket Services (SSS) Review 98-09-16

T10/98-217R0 Date: 1998/09/11 Author: Jim McGrath Mailing: 1998\_4  
Outstanding Issues in T10/98-177

T10/98-218R0 Date: 1998/09/11 Author: Jim McGrath Mailing: 1998\_4  
Ultra3: 16 vs 8 bit buses and LVD vs Single Ended Signaling

T10/98-219R0 Date: 1998/09/15 Author: Zane Daggett, Mailing: 1998\_4  
Bill Ham  
SCSI cable media performance specifications for Ultra3 and beyond

T10/98-219R1 Date: 1998/10/14 Author: Ed Armstrong, Mailing: 1998\_5  
Zane Daggett,  
Bill Ham, Martin  
Ogbuokiri  
Requirements for SPI-3 Cables

T10/98-220R0 Date: 1998/09/15 Author: Louis Grantham Mailing: 1998\_4  
Changing single-ended terminator max current from 22.4 to 24 mA

T10/98-220R1 Date: 1998/11/03 Author: Louis Grantham Mailing: 1998\_5  
Changing single-ended terminator max current from 22.4 to 24 mA

T10/98-221R0 Date: 1998/09/16 Author: Pete McLean Mailing: 1998\_4  
Minutes of RBC LB Comments Resolution Meeting - 9/15/98

T10/98-222R0 Date: 1998/09/16 Author: Pete McLean Mailing: 1998\_5  
Proposed RBC Letter Ballot Comments Resolution

T10/98-223R0 Date: 1998/09/16 Author: Bill Ham Mailing: 1998\_4  
New device type code for bridging expanders

T10/98-223R1 Date: 1998/09/16 Author: Bill Ham Mailing: 1998\_4  
New device type code for bridging expanders

T10/98-224R0 Date: 1998/09/16 Author: Kenneth W. Mailing: 1998\_4  
Preslan  
How the Global File System uses Dlock

T10/98-225R0 Date: 1998/09/12 Author: O'Keefe, Preslan, Mailing: 1998\_4  
Sabol, & Soltis  
Proposed SCSI Device Locks

T10/98-225R1 Date: 1998/10/21 Author: Gerry Houlder Mailing: 1998\_5  
Proposed SCSI Device Locks

T10/98-226R0 Date: 1998/09/17 Author: Paul Aloisi Mailing: 1998\_4  
SPI-3 single-ended termination

T10/98-226R1 Date: 1998/10/30 Author: Paul Aloisi Mailing: 1998\_5

SPI-3 single-ended termination

T10/98-227R0	Date: 1998/09/15	Author: Bill Ham	Mailing: 1998_4
Resolution of letter ballot comments relating to EPI			
T10/98-228R0	Date: 1998/10/16	Author: Larry Lamers	Mailing: 1998_5
Extended modes for Margining using READ/WRITE BUFFER			
T10/98-229R0	Date: 1998/10/20	Author: George Penokie	Mailing: 1998_5
Resource Conflict ASCQ			
T10/98-229R1	Date: 1998/11/05	Author: George Penokie	Mailing: 1998_5
Resource Conflict ASCQ			
T10/98-230R0	Date: 1998/10/13	Author: Ron Roberts	Mailing: 1998_5
Proposed resolution to MMC-2 letter ballot comments			
T10/98-231R0	Date: 1998/09/21	Author: Rob Elliott	Mailing: 1998_5
Removing 32-bit support from SPI-3			
T10/98-232R0	Date: 1998/11/10	Author: Weber & Lohmeyer	Mailing: 1998_5
Minutes of SPI-3 Working Group -- November 3, 1998			
T10/98-233R0	Date: 1998/10/20	Author: Weber & Lohmeyer	Mailing: 1998_5
Minutes of SCSI Working Group -- November 4, 1998			
T10/98-234R0	Date: 1998/10/20	Author: Weber & Lohmeyer	Mailing: 1998_5
Minutes of T10 Plenary Meeting #29 - November 5, 1998			
T10/98-235R0	Date: 1998/10/30	Author: John Lohmeyer	Mailing: 1998_5
Proposed Domain Validation Annex for SPI-3			
T10/98-236R0	Date: 1998/10/31	Author: Chandru Sippy	Mailing: 1998_5
Bus Width Determination			
T10/98-237R0	Date: 1998/10/31	Author: Chandru Sippy	Mailing: 1998_5
Packetized SCSI Issue			
T10/98-238R0	Date: 1998/10/30	Author: Vit Novak	Mailing: 1998_5
Passive Lumped Capacitance Compensation on SCSI Signal Lines			
T10/98-239R0	Date: 1998/10/30	Author: Bruce Leshay	Mailing: 1998_5
Interaction of QAS and Glitch Filters			
T10/98-240R0	Date: 1998/11/03	Author: Hank Herrmann	Mailing: 1998_5
Dual Conductivity Contact			
T10/98-241R0	Date: 1998/11/03	Author: Bob Snively	Mailing: 1998_5
Obsoleting the Flag bit in the control byte			
T10/98-242R0	Date: 1998/11/05	Author: Ron Roberts	Mailing: 1998_5
Minutes of MMC Working Group - Nov 3-4, 1998			
T10/98-243R0	Date: 1998/11/10	Author: Larry Lamers	Mailing: 1998_5
Meeting Notice - January 1999 Working Group Meetings			
T10/98-244R0	Date: 1998/11/11	Author: Rob Elliott	Mailing: 1998_5
Removing SCAM from SPI-3			