To: T10 Membership
From: Ralph Weber / John Lohmeyer
Subject: Minutes of T10 Plenary Meeting #34 -- November 4, 1999
Monterey, CA

Agenda

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Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Thursday November 4, 1999. He thanked Larry Lamers of Adaptec 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 Project proposal for object-oriented disk command set (OSD) (99-312r0) [Houlder]
10.2.2 Project Proposal for SCSI Architecture Model - 3 (SAM-3) (99-293r1) [Weber]
10.2.3 Project Proposal for SCSI Primary Commands - 3 (SPC-3) (99-294r1) [Weber]
10.2.4 Project Proposal for SCSI Block Commands - 2 (SBC-2) (99-292r1) [Weber]
10.2.5 MRIE behavior with TEST bit asserted (99-208r2) [Elliott]
10.2.6 List lengths that exceed maximum allocation length (99-258r2) [Penokie]
10.2.7 Description Lengths for 5D ASC/ASCQs (99-266r2) [Weber]
10.2.8 Fixed Block Length (99-325) [Snively]
10.2.9 The MAMA bit (99-263r1) [Oetting]
10.3 READ/WRITE BUFFER Behavior During Domain Validation (99-306) [Lamers]
The following agenda items were added/revised during the course of the meeting:

11.2.1 Editing RBC for ISO (99-284r0) [Roberts]

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 apply for membership and begin voting at anytime following adjournment of the first meeting. Typically, the individual applies for membership and start casting votes at the second plenary meeting. Working group and other ad hoc meetings do not count toward attendance requirements.

An option that allows a person attending their first meeting to become a voting member immediately following that meeting, provided their NCITS fees have been paid, permits a new member to vote on letter ballots issued between his/her first and second meetings. Unfortunately, this option also means that the new organization is immediately in attendance jeopardy.

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


There are also minimum attendance requirements to maintain voting membership on T10. If a member organization fails to attend two of the last three T10 meetings, they are warned that failing to attend the next T10 meeting would result in their membership being terminated. The Chair said he had sent letters to 14 people from 7 organizations informing them that their membership was in jeopardy due to non-attendance (see 99-014r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

AMP, Inc.
Apple Computer
General Dynamics
Hewlett Packard Co.
Hitachi Storage Products
Honda Connectors
Iomega Corp.

All of the organizations were present except:

Apple Computer

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).

Mylex was removed from the T10 membership role since the company was purchased by T10 member IBM. The T10 members from Mylex were made alternate members for IBM. Unitrode was removed from the T10 membership role since the company was purchased by T10 member Texas Instruments. The T10 members from Unitrode were made alternate members for Texas Instruments.
No organizations requested new (or reinstated) membership.

The T10 membership during the meeting was 42 organizations down from 45 organizations following the last meeting. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current T10 membership list.

3.1 Voting procedures

John Lohmeyer reported that NCITS has approved changes to two week rule and abstentions. John noted that he had been unable to review the details of the changes and would follow the new procedures to the best of his ability.

For the two-week rule, the two-week period is measured to the start of the relevant meeting. Also, documents revised at a meeting are not subject to the two-week rule provided the document being modified met the two-week rule. John stated that he will follow to, the best of his ability, the new rule, allowing documents that were available two-weeks prior to the meeting to be processed even if the document is revised during a working group meeting earlier in the week.

The rule about not allowing abstentions on technical issues is has been revised to permit abstentions provided a reason is stated. Such abstentions are not considered in calculating whether the motion met the 50% or 2/3rds voting requirements. John stated that he will be allowing abstentions as per the new rule.

4. Approval of Minutes - September ’99 Meeting - Huntington Beach, CA (T10/99-269r1)

The minutes were approved as written.

5. Document Distribution

Members who have any problems with their mailing subscription should deal directly with Monica Vago (mvago@itic.org) (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 11, 1999. 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 email (at lohmeyer@t10.org), or they can be transferred by ftp protocol to ftp.t10.org and placed in the /incoming directory. In the latter case, please also send email to John informing him of the file name and location of the file.

Minutes are available on the T10 World Wide Web page (see below), and are distributed to the T10 Reflector.

To be added to the T10 Reflector, send an email to majordomo@t10.org 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 on a server provided by the SCSI Trade Association at:

http://www.t10.org/
The current document register is enclosure (3). The T10 document register is also available at:
ftp://ftp.t10.org/t10/dr.txt

Roger Cummings reported on the mirror of the T10 web being hosted by DPT at http://www.t11.org/t10 (see 99-346r0).

6. Call for Patents

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

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.

A call for patents was made. There were no responses.

7. Review of Old Action Items

319) Gene Milligan will submit a NWIP and a CD contribution for RBC to ISO/IEC for consideration. Carryover
328) John Lohmeyer and Larry Lamers will provide the SPI-3 editor with the electronic information used to include the dedication in SPI. Carryover
334) Gene Milligan will initiate fast track processing of NCITS:325:1998 (SBP-2). Carryover
335) Gene Milligan will create an NWIP and CD contribution for MMC-2 revision 11a. Carryover
336) Ron Roberts (or John Lohmeyer) will give RBC revision 10a to the IR in source and PDF format. Carryover
337) Ron Roberts (or John Lohmeyer) will give MMC-2 revision 11a to the IR in source and PDF format. Carryover
338) Larry Lamers will request minutes for the June CAM-3 review meeting from Bill Dallas. Carryover
341) Ralph Weber will create a version descriptor entry for SPI-3 revision 10 in SPC-2. Complete
342) Ralph Weber will add MMC-3 (project 1363-D) to the version descriptors list in SPC-2. Complete
343) Ralph Weber will add RMC (project 1364-D) to the version descriptors list in SPC-2. Complete
344) Ralph Weber will add SPI-4 (project 1365-D) to the version descriptors list in SPC-2. Complete
345) John Lohmeyer will forward 99-239r1 to NCITS for processing as a new project request for a SCSI on Scheduled Transfer (SST) standard. Complete
346) Erich Oetting will provide 99-218r2, a revised new project request for the SCSI Medium Changer Commands -2 (SMC-2), to John Lohmeyer. Complete
347) John Lohmeyer will forward 99-218r2 to NCITS for processing as a new project request for a SCSI Medium Changer Commands -2 (SMC-2) standard. Complete

8. Project Status Reports

8.1 Project Status Summary and NCITS Liaison [Lohmeyer]

John Lohmeyer said that the current T10 project status summary was included in the T10 Information Packages distributed prior to the meeting and will be included in the mailing as usual.
8.2 SCSI Common Access Method - 3 (CAM-3) Status (Project 990-D) [Dallas]

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

8.3 SCSI-3 Stream Commands (SSC) Status (Project 997-D) [Peterson]

Erich Oetting reported on the SSC activities at the T11 Joint Working Group (report in 99-342 and minutes in 99-348).

8.4 SCSI Fibre Channel Protocol - 2 (FCP-2) (Project 1144-D) [Snively]


Bob noted that the current revision of FCP-2 is 3 and that revision 4 is in development. Document 99-235 describes the changes in FCP-2 for revision 4. Bob Snively asked that a letter ballot be conducted after revision 4 is ready.

Bob Snively took an action item to prepare FCP-2 revision 4. John Lohmeyer took an action item to conduct a letter ballot on FCP-2 revision 4.

8.5 SCSI Architecture Model - 2 (SAM-2) (Project 1157-D) [Weber]

Ralph Weber reported that he has been unable to develop the proposals for specific additional changes to SAM-2 regarding multi-port devices. He noted that a new revision of SAM-2 will not be generated at this time, due to the small number of proposals and the minimal content of the change requests.

8.6 Multimedia Command Set - 2 (MMC-2) Status (Project 1228-D) [Roberts]

Ron Roberts reported that he has received changes from the ANSI editor (Harvey Rosenfeld). He reported that two comments have been received during public review (99-333). He stated that the recommendation of the working group is that both comments not be accepted.

Pete McLean moved that T10 forward the working group recommended response to the public review comments to NCITS and that T10 recommend to NCITS that MMC-2 be forwarded to ANSI publication. Bill McFerrin seconded the motion. The motion passed 31:0:0:11=42.

John Lohmeyer took an action item to write letters to the people who commented on MMC-2 thanking them for comments, to forward 99-333r0 to NCITS as the resolution for the public review comments on MMC-2, and to ask NCITS to forward MMC-2 to ANSI for publication.

8.7 SCSI Primary Commands - 2 (SPC-2) Status (Project 1236-D) [Weber]

Ralph Weber reported that SPC-2 revision 12 has been available for nearly six weeks and contains all the committee-approved changes, including those approved at the September meeting. He stated that SPC-2 revision 14 will be generated following this meeting and will contain all changes approved at this meeting.

Ralph Weber moved that SPC-2 revision 12 be accepted as a committee draft for project 1236-D. Neil Wanamaker seconded the motion. The motion passed 28:2:0:12=42. Ralph Weber took an action item to create a SPC-2 version descriptor for SPC-2 revision 12.

8.8 Reduced Block Commands (RBC) (Project 1240-D) [McLean]

John Lohmeyer reported that RBC is in second public review closing 7 November.
8.9 SCSI Parallel Interface - 3 (SPI-3) {Project 1302-D} [Penokie]

John Lohmeyer reported that the letter ballot on SPI-3 passed 34:7:1:3=45 (99-016). George Penokie started resolution of the approximately 400 comments at the Physical Working Group meeting (minutes in 99-308).

George reported that resolution has been reached for most of the technical issues. He asked the committee to review the fairness annex, which would be rewritten if one letter ballot comment is accepted. George stated that the comments resolution process will continue in private conversations and the meeting proposed for Rochester in December. George stated an intention to have a comments resolution document available for approval at the January meeting.

8.10 MultiMedia Command Set - 3 (MMC-3) {Project 1363-D} [Roberts]

John Lohmeyer reported that MMC-3 revision 00a will be available on the web site in a few days. Ron Roberts reported that revision 1 will be available in time for the March meetings. Ron noted that the new streaming data material (from the Mt. Fuji working group) first appeared in revision 00a and will be corrected and enhanced in MMC-3 revision 1.

Ron Roberts stated that Bill McFerrin will be reporting for MMC-3 in the future.

8.11 Reduced MultiMedia Command Set (RMC) {Project 1364-D} [McFerrin]

Bill McFerrin reported that the revision 1 of RMC had been distributed. John Lohmeyer asked if the revision had been provided for the T10 web site and Bill agreed to provide it.

8.12 SCSI Parallel Interface - 4 (SPI-4) {Project 1365-D} [Penokie]

George Penokie reported on the working group activities on SPI-4 (minutes in 99-308). He stated that the first draft of SPI-4 probably will not be available until March or April. He noted that significant effort is required on the part of many companies to get the SPI-4 proposals polished enough for a first SPI-4 draft.

8.13 SCSI Domain Validation Technical Report (SDV) {Project 1378-DT} [Lamers]

Larry Lamers reported that the first draft of SDV will be available before February, maybe as early as December. He stated that the project is generating a lot of interest and that teleconferences may be used to work on some of the early issues.

8.14 SCSI on Scheduled Transfer (SST) {Project 1380-D} [Woelz]

Don Woelz reported that the entire SST document (99-276r0) was reviewed at a T11.1 working group meeting. Don requested authorization for review meetings held during the T11 meeting weeks in December and February (see item 14.1).

Ralph Weber took an action item to create an SPC-2 version descriptor for SST.

8.15 SCSI Medium Changer Commands - 2 (SMC-2) {Project 1383-D} [Oetting]

Erich Oetting reported that the first revision of SMC-2 should be available in January. He noted that the tape alert information will be the principle new content in the first SMC-2 revision.

Ralph Weber took an action item to create an SPC-2 version descriptor for SMC-2.
9. Old Business

9.1 Resolution of SSC letter ballot comments (99-011r2) [Peterson]

Erich Oetting moved that the SSC project editor be instructed to generate SSC revision 22 by incorporating into SSC revision 21 the changes approved under agenda items 10.2.8 and 10.2.9; and to accept 99-228r4 as resolving the SCC letter ballot comments; and to accept SSC revision 22 as resolving the letter ballot comments. The motion passed 29:0:2:11=42. George Penokie stated that his abstention was based on a concern that his comments may not have been fully resolved. Doug Wagner stated that his abstention was based on a lack of expertise in this specific project.

Based on the successful resolution of the letter ballot comments Stewart Watt asked that the HP no vote on the SSC letter ballot be changed to a yes vote. John Lohmeyer noted that SSC still will be forwarded to NCITS with two unresolved negative votes; from IBM and Sun Microsystems.

Dave Peterson took an action item to generate SSC revision 22. Ralph Weber took an action item to create an SPC-2 version descriptor for SSC revision 22. John Lohmeyer took an action item to forward SSC revision 22 to NCITS with the two unresolved negative votes for processing toward first public review.

9.2 Project Proposal for SCSI Signal Modeling TR (99-243r1) [Ham/Wallace]

Bill Ham moved that T10 approve 99-243r1 as a project proposal for the SCSI Signal Modeling Technical Report. Ed Gardner seconded the motion. The motion passed 33:0:0:9=42.

John Lohmeyer took an action item to forward 99-243r1 to NCITS as a T10-approved project proposal for the SCSI Signal Modeling Technical Report.

9.3 Project Proposal for SCSI VI Protocol (SVP) (99-246r1) [Gardner]

Ed Gardner moved that T10 approve 99-246r1 as a project proposal for the SCSI VI Protocol standard. Mark Evans seconded the motion. The motion passed 31:0:2:9=42. Larry Lamers and Roger Cummings stated that their abstentions were based on lack of expertise regarding the proposal.

John Lohmeyer took an action item to forward 99-246r1 to NCITS as a T10-approved project proposal for the SCSI VI Protocol standard.

10. New Business

10.1 Report on T10 Procedures Study Group Meeting [Lohmeyer]

John Lohmeyer reported that a procedures study group meeting was held on Monday of this week with 17 people present. He briefly described the topics discussed.

10.2 Actions on Working Group Recommendations

10.2.1 Project proposal for object-based storage devices command set (OSD) (99-312r0) [Houlder]

Gerry Houlder moved that T10 approve 99-312r0 as a project proposal for the Object-based Storage Devices command set (OSD) standard. Ed Gardner invoked the two-week rule and John Lohmeyer stated that the proposal will be on the agenda for the January T10 meeting.
10.2.2 Project Proposal for SCSI Architecture Model - 3 (SAM-3) (99-293r1) [Weber]

Ralph Weber moved that T10 approve 99-293r1 as a project proposal for the SCSI Architecture Model - 3 (SAM-3) standard. Paul Aloisi seconded the motion. Larry Lamers moved to table the consideration of the motion. Jeff Williams seconded the motion to table. The motion to table passed 19:4. Dal Allan stated that his no vote was based on the indeterminate state resulting from the motion to table.

10.2.3 Project Proposal for SCSI Primary Commands - 3 (SPC-3) (99-294r1) [Weber]

Ralph Weber moved that T10 approve 99-294r1 as a project proposal for the SCSI Primary Commands - 3 (SPC-3) standard. Paul Aloisi seconded the motion. The motion passed 28:0:0:14=42.

John Lohmeyer took an action item to forward 99-294r1 to NCITS as a T10-approved project proposal for the SCSI Primary Commands - 3 (SPC-3) standard.

10.2.4 Project Proposal for SCSI Block Commands - 2 (SBC-2) (99-292r1) [Weber]

George Penokie moved that T10 approve 99-292r1 as a project proposal for the SCSI Block Commands - 2 (SBC-2) standard. Paul Aloisi seconded the motion. The motion passed 29:0:0:13=42.

John Lohmeyer took an action item to forward 99-292r1 to NCITS as a T10-approved project proposal for the SCSI Block Commands - 2 (SBC-2) standard.

10.2.5 MRIE behavior with TEST bit asserted (99-208r2) [Elliott]

Rob Elliott moved that 99-208r2 (MRIE behavior with TEST bit asserted) be approved for inclusion in SPC-2. Bill Galloway seconded the motion. The motion passed 28:0:1:13=42.

10.2.6 List lengths that exceed maximum allocation length (99-258r2) [Penokie]

George Penokie moved that 99-258r2 (List lengths that exceed maximum allocation length) be approved for inclusion in SPC-2 and SBC-2. Bill Galloway seconded the motion. The motion passed 28:0:0:14=42.

10.2.7 Description Lengths for 5D ASC/ASCQs (99-266r2) [Weber]

Ralph Weber moved that 99-266r2 (Description Lengths for 5D ASC/ASCQs) be approved for inclusion in SPC-2. Mark Evans seconded the motion. The motion passed 29:0:0:11=42.

10.2.8 Fixed Block Length (99-325) [Snively]

Bob Snively that for SSC a fixed block length be a multiple of 4 and for FCP-2 the starting Relative Offset for any FCP_DATA information unit be a multiple of 4. Neil Wanamaker seconded the motion. The motion passed 31:0:0:11=42.

10.2.9 The MAMA bit (99-263r1) [Oetting]

Erich Oetting moved that section 3.2 of 99-263r1 (r1 as revised) be approved for inclusion in SSC. Bill Galloway seconded the motion. The motion passed 23:0:1:18=42.

10.3 READ/WRITE BUFFER Behavior During Domain Validation (99-306) [Lamers]

Larry Lamers reviewed the changes made to create 99-306r1. Erich Oetting moved that consideration of 99-306r1 be remanded to the working group. Mark Evans seconded the motion. The motion passed 22:3:3:14=42.
11. ISO

11.1 ISO Report [Milligan]

Gene Milligan provided the following ISO report:

The responses to MMC and SBC CD letter ballot comments are on hold until the issue of canceling the Fast Track DIS ballot is resolved. See the September T10 minutes (99-269). The T10 recommendation to cancel Fast Track was approved by NCITS and forwarded to the JTC 1 Secretariat (ANSI). Action by ANSI is pending.

Completion of editing for the ISO/IEC comments by the technical editor on SMC, SES, and FCP is still pending and long overdue.

11.2 ISO Business [Milligan]

11.2.1 Editing RBC for ISO (99-284r0) [Roberts]

John Lohmeyer reported that Ron Roberts sent a quote of $10,000 for converting RBC from the ANSI format to the ISO format. The quote can be found in 99-284r0. John noted that the T10 editors’ fund should be able to cover cost. The group discussed whether RBC should be an ISO standard, options for getting the RBC editing done, and how fast track handling of RBC might affect the editing requirements. Don Tolmie was recommended as a possible alternate choice to perform the conversion. Several issues could not be resolved without the presence of Gene Milligan so the topic was deferred to the next meeting.

John Lohmeyer took an action item to contact Don Tolmie for an alternate quotation for conversion of RBC to ISO format.

12. Liaison Reports

12.1 T11 Liaison Report [Wanamaker]

Neil Wanamaker made an oral report to the committee and provided an electronic report in 99-339r0.

12.2 T13 Liaison Report [Milligan]

Pete McLean reported that T13 has withdrawn ATA-1. Review of the Signal Integrity annex in ATA-5 is completed and ATA-5 should go to letter ballot after the December meeting. The project proposal for ATA-6 was approved and collection of work items has begun.

12.3 SFF Industry Group [Allan]

Dal Allan provided the following electronic report for the minutes:

SFF Committee Report November 1999

The revised SFF-8045, SFF-8430 MT-RJ, and SFF-8441 VHDCI were approved for Publication and a number of specifications were Expired at their annual review because they have been incorporated into standards.

INF-8038 for Intel's Bus Master specification would have been renewed for another year except that Pete McLean advised that the contents of the scatter/gather list have been changed and it would be misleading if it was left available. It will be Expired.
The backplane project will analyze the 100-pin SCA-2 to determine whether it can meet the characteristics required of dual port 10 Gbit performance, each of which requires four sets of parallel 2.5 Gbs transfer pairs. The principles of SFF-8410 will be followed in the evaluation.

The issues raised by Bill Ham on the SFF-8053 GBIC have been resolved, and will be incorporated in the next revision.

The resistive tip for SCA-2 applications will not be specified unless there is a resurgence of interest in its benefits for hot plugging.

The dimensions for current generation 5 1/4" CD ROMs provided by Pioneer will be used to update SFF-8551.

There are differences between High Speed Serial Testing for copper and optical and the first draft of SFF-8412 for the latter will be in the next mailing.

There are several SSWGs in the coming months:

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<tr>
<th>Date</th>
<th>SFF-8412 and SFF-8410 SSWG</th>
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<tbody>
<tr>
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<tr>
<td>1/25-26</td>
<td>SFF-8412 and SFF-8410 SSWG</td>
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<td>2/9-10</td>
<td>INF-8090 SSWG</td>
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<td>SFF-8412 and SFF-8410 SSWG</td>
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12.4 IEEE 1394 [Johansson]

No report.

12.5 IEEE P1285 Status

No report.

12.6 SCSI Trade Association (STA) [Jones/Aloisi]

Paul Aloisi made an oral report to the committee and provided an electronic report in 99-344r0.

13. Review of Action Items

319) Gene Milligan will submit a NWIP and a CD contribution for RBC to ISO/IEC for consideration.

328) John Lohmeyer and Larry Lamers will provide the SPI-3 editor with the electronic information used to include the dedication in SPI.


335) Gene Milligan will create an NWIP and CD contribution for MMC-2 revision 11a.

336) Ron Roberts (or John Lohmeyer) will give RBC revision 10a to the IR in source and PDF format.

337) Ron Roberts (or John Lohmeyer) will give MMC-2 revision 11a to the IR in source and PDF format.

338) Larry Lamers will request minutes for the June CAM-3 review meeting from Bill Dallas.

348) Ralph Weber will create a SPC-2 version descriptor for SPC-2 revision 12.

349) Ralph Weber will create a SPC-2 version descriptor for SST.

350) Ralph Weber will create a SPC-2 version descriptor for SMC-2.

351) Bob Snively will prepare FCP-2 revision 4 for letter ballot.

352) John Lohmeyer will conduct a letter ballot on FCP-2 revision 4.

353) John Lohmeyer will write letters to the people who commented on MMC-2 thanking them for comments, will forward 99-333r0 to NCITS as the resolution for the public review comments on MMC-2, and will ask NCITS to forward MMC-2 to ANSI for publication.

354) Dave Peterson will generate SSC revision 22.
355) Ralph Weber will create an SPC-2 version descriptor for SSC revision 22.
356) John Lohmeyer will forward SSC revision 22 to NCITS with the two unresolved negative votes for processing toward first public review.
357) John Lohmeyer will forward 99-243r1 to NCITS as a T10 approved project proposal for the SCSI Signal Modeling Technical Report.
358) John Lohmeyer will forward 99-246r1 to NCITS as a T10 approved project proposal for the SCSI VI Protocol standard.
359) John Lohmeyer will forward 99-294r1 to NCITS as a T10 approved project proposal for the SCSI Primary Commands - 3 (SPC-3) standard.
360) John Lohmeyer will forward 99-292r1 to NCITS as a T10 approved project proposal for the SCSI Block Commands - 2 (SBC-2) standard.
361) John Lohmeyer will contact Don Tolmie for an alternate quotation or work time estimate for conversion of RBC to ISO format.
362) Ralph Weber will ensure that the policy of requiring a two-thirds vote to approve the scheduling of a plenary meeting outside the 48 contiguous United States gets recorded in the revised T10 policies document.

14. Meeting Schedule

The next plenary meeting of T10 will be January 13, 2000 in Brisbane, Australia at the Surfer's Paradise Marriott Resort (+61-7-55-929-800), hosted by ENDL Pacific Technologies. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:
January '00 Meeting Map
(11/04/99 Version)

Monday 1/10
| T10 Proc. SG | SCSI Physical WG | (50) |
+---------------+-------------------+------+
| Mt. Fuji - 4 WG |                   | (20) |

Tuesday 1/11
| SCSI Physical WG | (50) |
+-------------------+------+
| MMC WG            | (20) |

Wednesday 1/12
<table>
<thead>
<tr>
<th>SCSI WG</th>
<th>MMC WG</th>
<th>SFF WG</th>
<th>SFF</th>
<th>(40)</th>
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</table>

Thursday 1/13
<table>
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<tr>
<th>T10 Plenary</th>
<th>Joint T10/T11.3</th>
<th>(50)</th>
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</thead>
</table>

(*) - Joint T10/T11.3 meeting begins 30 minutes after the T10 plenary meeting but not before 11:00 am

Friday 1/14
No Meetings are planned for Friday.

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

Other T10-authorized meetings:

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Location / Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Control Teleconference</td>
<td>11/18/99 Thu 8:00a (CST)</td>
<td>Teleconference / Elliott</td>
</tr>
<tr>
<td>Cable Perf. SG</td>
<td>11/30/99 Tue 9:00a</td>
<td>Rochester, MN / Fasig</td>
</tr>
<tr>
<td>SCSI Model SG</td>
<td>12/01/99 Wed 9:00a</td>
<td>Rochester, MN / Fasig</td>
</tr>
<tr>
<td>SPI-3/-4 WG</td>
<td>12/02/99 Thu 9:00a</td>
<td>Rochester, MN / Williams</td>
</tr>
<tr>
<td></td>
<td>12/03/99 Fri 9:00a</td>
<td>Rochester, MN / Williams</td>
</tr>
<tr>
<td>Joint T10/T11</td>
<td>12/07/99 Tue</td>
<td>Reno, NV / T11</td>
</tr>
<tr>
<td>SST WG</td>
<td>12/08/99 Wed</td>
<td>Reno, NV / T11</td>
</tr>
<tr>
<td>Cable Perf. SG</td>
<td>02/07/00 Mon 1:00p</td>
<td>Huntington Beach, CA / Jones</td>
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<tr>
<td>SCSI Model SG</td>
<td>02/08/00 Tue 9:00a</td>
<td>Huntington Beach, CA / Jones</td>
</tr>
<tr>
<td>SPI-4</td>
<td>02/09/00 Wed 1:00p</td>
<td>Huntington Beach, CA / Jones</td>
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<tr>
<td></td>
<td>02/10/00 Thu 9:00a</td>
<td>Huntington Beach, CA / Jones</td>
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<tr>
<td>Joint T10/T11</td>
<td>02/15/00 Tue</td>
<td>Huntington Beach, CA / T11</td>
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<tr>
<td>SST WG</td>
<td>02/16/00 Wed</td>
<td>Huntington Beach, CA / T11</td>
</tr>
<tr>
<td>Cable Perf. SG</td>
<td>02/29/00 Tue</td>
<td>Manchester, NH / Daggett</td>
</tr>
<tr>
<td>SCSI Model SG</td>
<td>03/01/00 Wed</td>
<td>Manchester, NH / Daggett</td>
</tr>
</tbody>
</table>
Meeting Map Abbreviation Key:
Amnd: Amendment
Cable Perf.: Cable Performance Testing
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)
SSWGs: 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
T10 Proc.: T10 Procedures
WG: Working Group (same as Ad Hoc Group)

Ralph Weber moved that T10 adopt a policy of requiring a two-thirds vote to approve the scheduling of a plenary meeting outside the 48 contiguous United States. George Penokie seconded the motion. The motion passed 28:0:3:11=42. Ralph Weber took an action item to ensure that the policy gets recorded in the revised T10 policies document.

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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Contact</th>
<th>Telephone/Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAM-3</td>
<td>Bill Dallas</td>
<td>(603) 881-2508 <a href="mailto:dallas@zk3.dec.com">dallas@zk3.dec.com</a></td>
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<td>EPI</td>
<td>Bill Ham</td>
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</tr>
</tbody>
</table>
The long-term T10 meeting week schedule is:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Host/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 10-14, 2000</td>
<td>Brisbane, Australia</td>
<td>ENDL Pacific Technologies</td>
</tr>
<tr>
<td>Mar 6-10, 2000</td>
<td>Dallas, TX</td>
<td>Texas Instruments</td>
</tr>
<tr>
<td>May 15-19, 2000</td>
<td>Nashua, NH</td>
<td>Hitachi Cable / dates changed</td>
</tr>
<tr>
<td>Jul 10-14, 2000</td>
<td>Colorado Springs, CO</td>
<td>LSI Logic</td>
</tr>
<tr>
<td>Sep 11-15, 2000</td>
<td>Huntington Beach, CA</td>
<td>QLogic</td>
</tr>
<tr>
<td>Oct 30-Nov 3, 2000</td>
<td>Monterey, CA</td>
<td>Adaptec / dates changed</td>
</tr>
<tr>
<td>Jan 15-19, 2001</td>
<td>(open)</td>
<td></td>
</tr>
<tr>
<td>Mar 5-9, 2001</td>
<td>Dallas, TX</td>
<td>Texas Instruments</td>
</tr>
<tr>
<td>May 7-11, 2001</td>
<td>Manchester, NH</td>
<td>Hitachi Cable</td>
</tr>
<tr>
<td>Jul 16-20, 2001</td>
<td>Colorado Springs, CO</td>
<td>LSI Logic</td>
</tr>
<tr>
<td>Sep 10-14, 2001</td>
<td>Huntington Beach, CA</td>
<td>QLogic</td>
</tr>
<tr>
<td>Nov 5-9, 2001</td>
<td>Monterey, CA</td>
<td>Adaptec</td>
</tr>
</tbody>
</table>

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.

John Lohmeyer moved that T10 authorize the T10-related meetings and events in the list above that had not previously been approved. Mark Evans seconded the motion. The motion passed 19:1:0:22=42. John noted that Gene Milligan had submitted a written No vote on this motion opposing the SPI-4 dates in December, which are in conflict with a T13 meeting, and opposed to the proposed February 2000 dates. While the February dates were changed in a manner that accommodates Gene, the December dates were unchanged. John interpreted Gene’s written vote would remain No unless both dates were changed.
15. Adjournment

The meeting was adjourned at 12:35 p.m. on Thursday November 4, 1999.
Enclosure(1) -- Meeting Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>S</th>
<th>Organization</th>
<th>Electronic Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Mr. Ron Roberts</td>
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<td>Mr. Robert N. Snively</td>
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<td><a href="mailto:bob.snively@sun.com">bob.snively@sun.com</a></td>
</tr>
</tbody>
</table>

Page 17 of 58
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Mr. Paresh Sheth       A# Texas Instruments         paresh.sheth@ti.com
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51 People Present

Status Key:  P    -  Principal
             A,A# -  Alternate
             O    -  Observer
             L    -  Liaison
             V    -  Visitor
Enclosure(2) -- T10 Attendance Database

Generated on 1999/11/10 at 10:14:24

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AMP, Inc.                           Fax: (717) 520-9090
Minutes of T10 Plenary Meeting #34 -- November 4, 1999

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T10/99-016R0 Date: 1999/10/29 Author: John Lohmeyer Mailing: 1999_5
Results of letter ballot 99-015 on forwarding SPI-3

T10/99-017R0 Date: 1999/11/08 Author: J. Lohmeyer Mailing: Missing
Agenda for T10 Meeting #35 (January '00)

T10/99-018R0 Date: 1999/11/08 Author: J. Lohmeyer Mailing: Missing
Agenda for T10 Meeting #35 (January '00)

T10/99-019R0 Date: 1999/11/08 Author: J. Lohmeyer Mailing: Missing
Jeopardy Letter for January '00 meeting

T10/99-101R0 Date: 1998/12/04 Author: Ron Roberts Mailing: 1999_1
Minutes of MMC-2 Working Group - 11/30 - 12/2/98

T10/99-102R0 Date: 1998/12/08 Author: Larry Lamers Mailing: 1999_1
Unexpected Bus Free Timeout Function

T10/99-102R1 Date: 1999/01/25 Author: Larry Lamers Mailing: 1999_1
UBF Timeout Function

T10/99-102R2 Date: 1999/01/27 Author: Larry Lamers Mailing: 1999_1
Synchronous Transfer Timeout Function

T10/99-102R3 Date: 1999/01/28 Author: Larry Lamers Mailing: 1999_1
STT Timeout Function

T10/99-102R4 Date: 1999/02/05 Author: Larry Lamers Mailing: 1999_1
STT Timeout Function

T10/99-102R5 Date: 1999/03/10 Author: Larry Lamers Mailing: 1999_1
STT Timeout Function

T10/99-103R0 Date: 1998/12/17 Author: John Lohmeyer Mailing: 1999_1
Minutes of SPI-3 Working Group - January 26-27, 1999

T10/99-104R0 Date: 1999/01/10 Author: George Penokie Mailing: 1999_1
Message Information Unit Definition

T10/99-104R1 Date: 1999/03/09 Author: George Penokie Mailing: 1999_1
Message Information Unit Definition

T10/99-105R0 Date: 1999/01/06 Author: Stewart Wyatt Mailing: 1999_1
Minutes of Fibre Channel Tape Profile Meeting - 12/16/98

T10/99-106R0 Date: 1999/01/06 Author: Penman, Mottahedin, Nazir, & Moore Mailing: 1999_1
Case Study: Fast-80 Setup and Hold Timings

T10/99-107R0 Date: 1998/12/10 Author: ISO/IEC JTC 1/SC 25 Mailing: 1999_1
Optical Memory Card Device Commands (SCSI OMC)

T10/99-108R0 Date: 1999/01/07 Author: John Lohmeyer Mailing: 1999_1
Clarification of interaction of SDTR/WDTR messages with PPR message

T10/99-108R1 Date: 1999/01/27 Author: John Lohmeyer Mailing: 1999_1
Clarification of interaction of SDTR/WDTR messages with PPR message

T10/99-108R2 Date: 1999/02/09 Author: John Lohmeyer Mailing: 1999_1
Clarification of interaction of SDTR/WDTR messages with PPR message

T10/99-108R3 Date: 1999/03/09 Author: John Lohmeyer Mailing: 1999_1
Clarification of interaction of SDTR/WDTR messages with PPR message

T10/99-109R0 Date: 1999/01/07 Author: John Lohmeyer Mailing: 1999_1
Clarification of MODIFY DATA POINTER message

T10/99-110R0 Date: 1999/01/07 Author: Gene Milligan Mailing: 1999_1
SCSI Version Proposal Flavor Two for SPC-2

T10/99-110R1 Date: 1999/03/04 Author: Gene Milligan Mailing: 1999_1
SCSI Version Proposal Flavor Two for SPC-2

T10/99-110R2 Date: Author: Gene Milligan Mailing: 1999_1
SCSI Version Proposal Flavor Two for SPC-2

T10/99-111R0 Date: 1999/01/26 Author: Zane Daggett Mailing: 1999_1
Recommended changes to SPI-3 Tables

T10/99-111R1 Date: 1999/05/11 Author: Zane Daggett Mailing: 1999_3
Recommended for content in SPI-3 relating to cable performance

T10/99-111R3 Date: 1999/06/15 Author: Zane Daggett Mailing: 1999_3
Recommendations for content in SPI-3 relating to cable performance

T10/99-111R4 Date: 1999/07/28 Author: Bill Ham Mailing: 1999_4
Recommendations for content in SPI-3 relating to cable performance

T10/99-111R5 Date: 1999/08/31 Author: Bill Ham Mailing: 1999_4
Recommendations for content in SPI-3 relating to cable performance

T10/99-111R6 Date: 1999/09/13 Author: Bill Ham Mailing: 1999_4
Recommendations for content in SPI-3 relating to cable performance

T10/99-111R7 Date: 1999/09/28 Author: Bill Ham Mailing: 1999_4
Recommendations for content in SPI-3 relating to cable performance

T10/99-112R0 Date: 1999/01/22 Author: Bill Galloway Mailing: 1999_1
Synchronous ATN timing

T10/99-112R1 Date: 1999/03/07 Author: Bill Galloway Mailing: 1999_1
Synchronous ATN timing

T10/99-112R2 Date: 1999/03/13 Author: Bill Galloway Mailing: 1999_1
Synchronous ATN timing

T10/99-113R0 Date: 1999/01/22 Author: Bill Galloway Mailing: 1999_1
DiffSense Timing

T10/99-113R1 Date: 1999/03/07 Author: Bill Galloway Mailing: 1999_1
DiffSense Timing

T10/99-113R2 Date: 1999/03/13 Author: Bill Galloway Mailing: 1999_1
DiffSense Timing
T10/99-114R0 Date: 1999/01/22 Author: Bill Galloway Mailing: 1999_1
LVD Receiver offset voltage

T10/99-115R0 Date: 1999/01/22 Author: Keld Simonsen Mailing: 1999_1
Tips & Techniques for JTC 1 web-based distribution

T10/99-116R0 Date: 1999/01/22 Author: Jie Fan Mailing: 1999_1
Cable Testing Requirements

T10/99-117R0 Date: 1999/01/22 Author: ISO Mailing: 1999_1
ISO's long-range strategies 1999-2001

T10/99-118R0 Date: 1999/01/25 Author: Jim McGrath Mailing: 1999_1
Common CRC for DT and Packetized SCSI

T10/99-119R0 Date: 1999/02/26 Author: Jim McGrath Mailing: 1999_1
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R1 Date: 1999/03/05 Author: Jim McGrath Mailing: 1999_1
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R2 Date: 1999/04/06 Author: Mark Evans and Bruce Leshay Mailing: 1999_2
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R3 Date: 1999/04/21 Author: Mark Evans and Bruce Leshay Mailing: 1999_2
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R4 Date: 1999/04/23 Author: Mark Evans and Bruce Leshay Mailing: 1999_2
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R5 Date: 1999/05/28 Author: Mark Evans and Bruce Leshay Mailing: 1999_3
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-119R6 Date: 1999/06/21 Author: Mark Evans and Bruce Leshay Mailing: 1999_3
Protection for the Asynchronous Information phases (Command, Message, Status)

T10/99-120R0 Date: 1999/01/22 Author: Gene Milligan Mailing: 1999_1
SCSI ATN Timing Sort of Proposal for SPI-3

T10/99-121R0 Date: 1999/02/10 Author: Rob Sims Mailing: 1999_1
Mt. Fuji Commands for Multimedia Devices

T10/99-122R0 Date: 1999/01/25 Author: Frank Gasparik Mailing: 1999_1
SPI-3 LVD Setup/Hold Time Issues

T10/99-123R0 Date: 1999/01/26 Author: Vince Bastiani Mailing: 1999_1
Setup and Hold Time Measurements

T10/99-124R0 Date: 1999/01/24 Author: Bruce Leshay Mailing: 1999_1
Packetized CRC Proposal
T10/99-125R0  Date: 1999/01/27  Author: Ron Roberts       Mailing: 1999_1

T10/99-126R0  Date:          Author:            Mailing: Missing
not used

T10/99-127R0  Date: 1999/01/27  Author: Paul Aloisi       Mailing: 1999_1
Proposed changes to SPI-3 LVD AC timing diagrams

T10/99-127R1  Date: 1999/01/28  Author: Paul Aloisi       Mailing: 1999_1
Proposed changes to SPI-3 LVD AC timing diagrams

T10/99-127R2  Date: 1999/03/09  Author: Paul Aloisi       Mailing: 1999_1
LVD Timing Diagram Correction

T10/99-127R3  Date: 1999/03/09  Author: Paul Aloisi       Mailing: 1999_1
LVD Timing Diagram Correction

T10/99-127R4  Date: 1999/03/09  Author: Paul Aloisi       Mailing: 1999_1
LVD Timing Diagram Correction

T10/99-127R5  Date: 1999/05/05  Author: Paul Aloisi       Mailing: 1999_2
LVD Timing Diagram Correction

T10/99-127R6  Date: 1999/05/27  Author: Paul Aloisi       Mailing: 1999_3
LVD Timing Diagram Correction

T10/99-127R7  Date: 1999/07/12  Author: Paul Aloisi       Mailing: 1999_3
LVD Timing Diagram Correction

T10/99-127R8  Date: 1999/07/13  Author: Paul Aloisi       Mailing: 1999_3
LVD Timing Diagram Correction

T10/99-128R0  Date: 1999/02/02  Author: Hayden Smith      Mailing: 1999_1
Comments on Draft 14776-381 (SCSI OMC)

T10/99-128R1  Date: 1999/03/16  Author: Hayden Smith      Mailing: 1999_1
Comments on Draft 14776-381 (SCSI OMC)

T10/99-129R0  Date: 1999/02/02  Author: Ralph Weber &      Mailing: 1999_1
George Penokie
Minutes of SPC-2 Working Group - 1/28/99

T10/99-130R0  Date: 1999/02/10  Author: George Penokie     Mailing: 1999_1
Changes to INQUIRY

T10/99-130R1  Date: 1999/03/10  Author: George Penokie     Mailing: 1999_1
Changes to INQUIRY

T10/99-131R0  Date: 1999/02/05  Author: Tariq Abou-Jeyab / Mailing: 1999_1
Vince Bastiani
Setup and hold time measurements for Ultra 160/m

T10/99-132R0  Date: 1999/03/07  Author: Bill Galloway      Mailing: 1999_1
Removing zero length data transfers with CRC

T10/99-133R0  Date: 1999/03/07  Author: Bill Galloway      Mailing: 1999_1
Timing for SCSI RST line
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Project Proposal for SCSI Parallel Interface - 4 (SPI-4)

T10/99-141R0  Date: 1999/02/26  Author: Larry Lamers  Mailing: Missing
A Common CRC Method for Packetized and Legacy Devices

T10/99-142R0  Date: 1999/09/08  Author: Larry Lamers  Mailing: 1999_4
Flow Control

T10/99-143R0  Date: 1999/03/02  Author: Steve Wilson  Mailing: 1999_1
Extended Copy Command

T10/99-143R1  Date: 1999/04/02  Author: Steve Wilson  Mailing: 1999_2
Extended Copy Command

T10/99-144R0  Date: 1999/03/01  Author: Bob Snively  Mailing: 1999_1
Suggested changes to REPORT LUNS command for SPC-2

T10/99-144R1  Date: 1999/03/15  Author: Bob Snively  Mailing: 1999_1
Suggested changes to REPORT LUNS command for SPC-2

T10/99-145R0  Date: 1999/03/01  Author: Stewart Wyatt  Mailing: 1999_1

T10/99-146R0  Date: 1999/03/02  Author: Bob Snively  Mailing: 1999_1
Correction in interaction of persistent and legacy reservations

T10/99-146R1  Date: 1999/03/15  Author: Bob Snively  Mailing: 1999_1
Correction in interaction of persistent and legacy reservations

T10/99-147R0  Date: 1999/03/05  Author: Bob Snively  Mailing: 1999_1
Make CT and TTD obsolete

T10/99-148R0  Date: 1999/03/18  Author: Ian 'Sid' Crichton  Mailing: 1999_1
Memory in Cartridge proposal

T10/99-148R1  Date: 1999/05/19  Author: Ian 'Sid' Crichton  Mailing: 1999_3
Proposal for Storage and Access of Data on Media Auxiliary Memory

T10/99-148R2  Date: 1999/09/08  Author: Ian 'Sid' Crichton  Mailing: 1999_4
Proposal for Storage and Access of Data on Media Auxiliary Memory

T10/99-148R3  Date: 1999/10/22  Author: Steve Jerman  Mailing: 1999_5
Proposed Addition of Read and Write Attribute Commands to SPC-2

T10/99-149R0  Date: 1999/03/08  Author: Bill Ham  Mailing: 1999_1
Revised SPI-3 Timing Diagram

T10/99-150R0  Date: 1999/03/08  Author: Richard Tomaszewski, Tom Grieff, & Rob Elliott  Mailing: 1999_1
Justification for asynchronous information phase protection

T10/99-151R0  Date: 1999/03/04  Author: Gene Milligan, George Penokie, and Larry Lamers  Mailing: 1999_1
Packet Protocol Extensions Illustrations (see 99-139r3)

T10/99-152R0 Date: 1999/03/09 Author: Ron Roberts Mailing: 1999_1

T10/99-153R0 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for MMC-3

T10/99-153R1 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for MMC-3

T10/99-153R2 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for MMC-3

T10/99-154R0 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for RMC

T10/99-154R1 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for RMC

T10/99-154R2 Date: 1999/05/06 Author: Ron Roberts Mailing: 1999_2
Project Proposal for RMC

T10/99-155R0 Date: 1999/03/09 Author: Gene Milligan Mailing: 1999_1
Timing Diagram

T10/99-156R0 Date: 1999/03/09 Author: Bill Ham and Zane Daggett Mailing: 1999_1
Report from the SCSI Cable Testing Ad hoc -- March 2, 1999

T10/99-157R0 Date: 1999/03/10 Author: Bruce Leshay Mailing: 1999_1
Proposed edit to SPI-3 on P_CRCA transitions during DT transfers

T10/99-157R1 Date: 1999/03/17 Author: Bruce Leshay Mailing: 1999_2
Proposed edit to SPI-3 on P_CRCA transitions during DT transfers

T10/99-158R0 Date: 1999/03/10 Author: Bob Snively Mailing: 1999_1
Very long CDBs in FCP-2 and SPI-3

T10/99-158R1 Date: 1999/03/15 Author: Bob Snively Mailing: 1999_1
Very long CDBs in FCP-2 and SPI-3

T10/99-158R2 Date: 1999/03/17 Author: Bob Snively Mailing: 1999_1
Very long CDBs in FCP-2 and SPI-3

T10/99-158R3 Date: 1999/03/17 Author: Bob Snively Mailing: 1999_2
Very long CDBs in FCP-2 and SPI-3

T10/99-158R4 Date: 1999/04/28 Author: Bob Snively Mailing: 1999_2
Very long CDBs in FCP-2 and SPI-3

T10/99-159R0 Date: 1999/03/09 Author: Dale LaFollette Mailing: 1999_1
Joint T10/T11 FC-TAPE / SSC / FCP-2 Liaison Report

T10/99-160R0 Date: 1999/04/01 Author: Rob Elliott & Gerry Houlder Mailing: 1999_2
Arbitration Fairness Control (in SPC-2/SPI-3/FCP-2)

T10/99-160R1 Date: 1999/04/21 Author: Rob Elliott & Mailing: 1999_2
T10/99-169R0  Date: 1999/03/31  Author: Larry Lamers & Vince Bastiani  Mailing: 1999_2
Groundwork for Expander Communication

T10/99-169R1  Date: 1999/04/08  Author: Larry Lamers & Vince Bastiani  Mailing: 1999_2
Groundwork for Expander Communication

T10/99-170R0  Date: 1999/04/04  Author: Bill Galloway  Mailing: 1999_2
Packetized cleanup and improvements

T10/99-170R1  Date: 1999/04/09  Author: Bill Galloway  Mailing: 1999_2
Packetized cleanup and improvements

T10/99-171R0  Date: 1999/04/07  Author: Bill Ham  Mailing: Missing
Implied Assumptions in SPI-3 Timing Budget

T10/99-172R0  Date: 1999/04/07  Author: Bill Ham & Zane Daggett  Mailing: 1999_2
Report on April 6th Cable Performance meeting

T10/99-173R0  Date: 1999/04/08  Author: Bill Galloway  Mailing: 1999_2
Restrict QAS to Packetized

T10/99-174R0  Date: 1999/04/12  Author: George Penokie  Mailing: 1999_2
Annex A Modification

T10/99-175R0  Date: 1999/05/07  Author: Weber & Lohmeyer  Mailing: 1999_2
Minutes of SPI-3 Working Group - May 2-3, 1999

T10/99-175R1  Date: 1999/05/20  Author: Weber & Lohmeyer  Mailing: 1999_2
Minutes of SPI-3 Working Group - May 2-3, 1999

T10/99-176R0  Date: 1999/05/10  Author: Weber & Lohmeyer  Mailing: 1999_2
Minutes of SCSI-3 Working Group - May 5, 1999

T10/99-177R0  Date: 1999/05/12  Author: Weber & Lohmeyer  Mailing: 1999_2
Minutes of T10 Plenary Meeting #31 - May 6, 1999

T10/99-177R1  Date: 1999/05/20  Author: Weber & Lohmeyer  Mailing: 1999_2
Minutes of T10 Plenary Meeting #31 - May 6, 1999

T10/99-178R0  Date: 1999/04/20  Author: Stewart Wyatt  Mailing: 1999_2

T10/99-179R0  Date: 1999/04/26  Author: Mark Evans  Mailing: 1999_2
Hard Drive Self Tests

T10/99-179R1  Date: 1999/05/14  Author: Mark Evans  Mailing: 1999_2
Hard Drive Self Tests

T10/99-179R2  Date: 1999/07/08  Author: Mark Evans  Mailing: 1999_3
Logical Unit Self Tests

T10/99-179R3  Date: 1999/07/23  Author: Mark Evans  Mailing: 1999_4
Logical Unit Self Tests

T10/99-179R4  Date: 1999/07/29  Author: Mark Evans  Mailing: 1999_4
Logical Unit Self Tests
Logical Unit Self Tests

T10/99-179R5  Date: 1999/09/15  Author:  Mark Evans  Mailing: 1999_4

Application Client Log Page proposal

T10/99-180R0  Date: 1999/04/22  Author:  Gerry Houlder  Mailing: 1999_2

T10/99-180R1  Date: 1999/07/15  Author:  Gerry Houlder  Mailing: 1999_3

Application Client Log Page proposal

T10/99-181R0  Date: 1999/04/23  Author:  Rob Elliott and Carl Zeitler  Mailing: 1999_2

SSC Compression Algorithm default values

T10/99-182R0  Date: 1999/04/22  Author:  Gerry Houlder  Mailing: 1999_2

Still more on Persistent Reservations

T10/99-182R1  Date: 1999/05/05  Author:  Tom Coughlan  Mailing: 1999_2

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T10/99-184R1  Date: 1999/04/29  Author:  George Penokie  Mailing: 1999_2

T10/99-185R0  Date: 1999/05/01  Author:  Rob Elliott & Keith Childs  Mailing: 1999_2

Change CRC timing values

T10/99-185R1  Date: 1999/05/10  Author:  Rob Elliott & Keith Childs  Mailing: 1999_2

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T10/99-187R1  Date: 1999/06/18  Author:  John Lohmeyer  Mailing: 1999_3

Proposal to change MSE high-impedance current specification in SPI-3

T10/99-187R2  Date: 1999/07/12  Author:  John Lohmeyer  Mailing: 1999_3

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T10/99-188R0  Date: 1999/05/04  Author:  Dan Smith  Mailing: 1999_3

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T10/99-315R0  Date: 1999/10/25  Author:  Gene Milligan  Mailing: 1999_5
OBJECT BASED STORAGE DEVICES Command Set Proposal

T10/99-316R0  Date: 1999/11/03  Author:  Ed Gardner  Mailing: 1999_5
SVP Overview
T10/99-316R1 Date: 1999/11/03 Author: Ed Gardner Mailing: 1999_5
SVP Overview

T10/99-317R0 Date: 1999/10/28 Author: Bill Ham Mailing: 1999_5
Comments against SPI-3 rev 10 section 6 and annex E

T10/99-318R0 Date: 1999/10/28 Author: John Fasig & Jeff Williams Mailing: 1999_5
Meeting announcement Cable Performance, Signal Modeling, & SPI-4

T10/99-319R0 Date: 1999/10/28 Author: Hank Herrmann Mailing: 1999_5
Hot-Plug Problem & its Solution

T10/99-320R0 Date: 1999/10/29 Author: Bill Galloway Mailing: 1999_5
Letter ballot comments on SPI-3 r10

T10/99-321R0 Date: 1999/10/28 Author: Rob Elliott Mailing: 1999_5
SPI-3 Revision 10 Letter Ballot Comments

T10/99-322R0 Date: 1999/10/29 Author: Gene Milligan Mailing: 1999_5

Fast-160 Phase Encoded Data Enabling

T10/99-324R0 Date: 1999/10/26 Author: Gary Dickinson, Greg Goodemote, Chuck Micalizzi, and Richard Moore Mailing: 1999_5
Fast-160 Buffer Credit Transfer Mechanism

T10/99-325R0 Date: 1999/10/30 Author: Bob Snively Mailing: 1999_5
FCP-2 changes from revision 03 to revision 04

T10/99-326R0 Date: 1999/11/01 Author: Dan Smith Mailing: 1999_5
ISI Measurements for Ultra4 Discussion

T10/99-327R0 Date: 1999/11/01 Author: Gene Milligan Mailing: 1999_5
Fast-160 Agreements

T10/99-328R0 Date: 1999/10/27 Author: Bill Ham Mailing: 1999_5
Minutes of the SCSI Cable Media Performance WG (draft) - 10/27/99

T10/99-329R0 Date: 1999/10/28 Author: Bill Ham Mailing: 1999_5
Minutes of SCSI signal modeling WG (draft) - 10/28/99

T10/99-330R0 Date: 1999/11/01 Author: Larry Lamers Mailing: Missing
Proposed revision for T10 Procedures for funding T10 technical editors

T10/99-331R0 Date: 1999/11/01 Author: Richard Moore Mailing: 1999_5
Comments on SPI-3 Letter Ballot

T10/99-332R0 Date: 1999/11/01 Author: Bill Petty Mailing: Missing
Cable analysis report for ISI compensation

T10/99-333R0 Date: 1999/11/03 Author: Ron Roberts Mailing: 1999_5
Proposed resolution of MMC-2 Public Review Comments

T10/99-334R0  Date: 1999/11/03  Author:  Bill McFerrin & Ron Roberts  Mailing: 1999_5

T10/99-335R0  Date: 1999/11/01  Author:  Andrew Bishop  Mailing: 1999_5
Transmitter Pre-Compensation for 320 MB/sec SCSI

T10/99-336R0  Date: 1999/10/28  Author:  Andrew Bishop  Mailing: 1999_5
Circuit Modeling of 30 AWG LVD SCSI Cable

T10/99-337R0  Date: 1999/11/06  Author:  Wally Bridgewater Mailing: 1999_5
ISI Measurements

T10/99-338R0  Date: 1999/11/01  Author:  Vince Bastiani  Mailing: 1999_5
Crosstalk Presentation

T10/99-339R0  Date: 1999/11/02  Author:  Neil Wanamaker  Mailing: 1999_5
T11 Liaison Report to T10 - November 1999

T10/99-340R0  Date: 1999/10/29  Author:  D. Anderson  Mailing: 1999_5
Object Based Storage Devices Presentation to T10

T10/99-341R0  Date: 1999/11/02  Author:  D. Anderson  Mailing: 1999_5
Object Based Storage: A Vision

T10/99-342R0  Date: 1999/11/03  Author:  Bob Snively  Mailing: 1999_5
Report on Joint T10/T11.3 Activity working group - 11/02/99

T10/99-343R0  Date: 1999/11/03  Author:  Bob Snively  Mailing: 1999_5
Proposal for Queue Full clarification

T10/99-344R0  Date: 1999/11/04  Author:  Paul Aloisi  Mailing: 1999_5
STA liaison report to T10 - November 1999

T10/99-345R0  Date: 1999/11/04  Author:  Larry Lamers  Mailing:  Missing
STT behavior for domain validation

T10/99-346R0  Date: 1999/11/05  Author:  Roger Cummings  Mailing: 1999_5
Mirror site report to T10

T10/99-347R0  Date: 1999/11/08  Author:  Paul Suhler  Mailing: 1999_5
Proposal for SPC Support for Partial Loading & Unloading

T10/99-348R0  Date: 1999/11/08  Author:  Stewart Wyatt  Mailing: 1999_5
Minutes of Joint T10/T11.3 Joint Ad Hoc -- 11/2/1999

T10/99-348R1  Date: 1999/11/09  Author:  Stewart Wyatt  Mailing: 1999_5
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