Accredited Standards Committee*

National Committee for Information Technology Standards (NCITS)

Doc. No.: T10/00-122r0

Date: January 20, 2000
Reply to: John Lohmeyer

To: T10 Membership

From: Ralph Weber / John Lohmeyer

Subject: Minutes of T10 Plenary Meeting #35 -- January 13, 2000

Surfers Paradise, Queensland, Australia

Agenda

- 1. Opening Remarks
- 2. Approval of Agenda
- 3. Attendance and Membership
 - 3.1 Voting procedures
- 4. Approval of Minutes Novtember '99 Meeting Monterey, CA (T10/99-310r1)
- 5. Document Distribution
- 6. Call for Patents
- 7. Review of Old Action Items
- 8. Project Status Reports
 - 8.1 Project Status Summary and NCITS Liaison [Lohmeyer]
 - 8.2 SCSI Common Access Method 3 (CAM-3) Status {Project 990-D} [Dallas]
 - 8.3 SCSI-3 Stream Commands (SSC) Status (Project 997-D) [Peterson]
 - 8.4 SCSI Fibre Channel Protocol 2 (FCP-2) {Project 1144-D} [Snively]
 - 8.5 SCSI Architecture Model 2 (SAM-2) {Project 1157-D} [Weber]
 - 8.6 Multimedia Command Set 2 (MMC-2) Status (Project 1228-D) [McFerrin]
 - 8.7 SCSI Primary Commands 2 (SPC-2) Status {Project 1236-D} [Weber]
 - 8.8 Reduced Block Commands (RBC) {Project 1240-D} [McLean]
 - 8.9 SCSI Parallel Interface 3 (SPI-3) {Project 1302-D} [Penokie]
 - 8.10 MultiMedia Command Set 3 (MMC-3) {Project 1363-D} [McFerrin]
 - 8.11 Reduced MultiMedia Command Set (RMC) {Project 1364-D} [McFerrin]
 - 8.12 SCSI Parallel Interface 4 (SPI-4) {Project 1365-D} [Penokie]
 - 8.13 SCSI Domain Validation Technical Report (SDV) {Project 1378-DT} [Lamers]
 - 8.14 SCSI on Scheduled Transfer (SST) {Project 1380-D} [Woelz]
 - 8.15 SCSI Medium Changer Commands 2 (SMC-2) {Project 1383-D} [Oetting]
- 9. Old Business
 - 9.1 Report on T10 Procedures Study Group Meeting [Lohmeyer]
 - 9.2 Project proposal for object-based storage devices command set (OSD) (99-312r0) [Milligan]
 - 9.3 Editing RBC for ISO (99-284r0) [Roberts]
- 10. New Business
 - 10.1 Actions on Working Group Recommendations
 - 10.1.1 WDTR/SDTR/PPR Interactions (00-119r1) [Penokie]
 - 10.1.2 Persistent Reservations Unit Attention Fix (00-114r0) [Penokie]
 - 10.1.3 Proposal to Support Partial Loading & Unloading (99-347r3) [Suhler/Milligan]
 - 10.1.4 Large LBA addressing using variable length CDB structures (00-125r0) [Houlder/Milligan]
 - 10.2 Resolution of SPI-3 Letter Ballot Comments (99-350r2) [Penokie]

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- 11. ISO
 - 11.1 ISO Report [Milligan]
 - 11.2 ISO Business [Milligan]
- 12. Liaison Reports
 - 12.1 T11 Liaison Report [Wanamaker]
 - 12.2 T13 Liaison Report [Milligan]
 - 12.3 SFF Industry Group [Allan]
 - 12.4 IEEE 1394 [Johansson]
 - 12.5 IEEE P1285 Status
 - 12.6 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 9:00 a.m., Thursday January 13, 2000. He thanked Dal Allan of ENDL Pacific Technologies for hosting the meeting and the lavish feast hosted the night before the morning after.

John verified that a quorum was present, with 14 member companies identified as attending 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 WDTR/SDTR/PPR Interactions (00-119r1) [Penokie]
- 10.1.2 Persistent Reservations Unit Attention Fix (00-114r0) [Penokie]
- 10.1.3 Proposal to Support Partial Loading & Unloading (99-347r3) [Suhler/Milligan]
- 10.1.4 Large LBA addressing using variable length CDB structures (00-125r0) [Houlder/Milligan]
- 10.2 Resolution of SPI-3 Letter Ballot Comments (99-370r2) [Penokie]

No agenda items were added/revised during the course of the meeting.

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 starts 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.

John briefly discussed the mailing fees. Complete pricing information is contained in the 2000 membership form (available at ftp://ftp.t10.org/t10/mem_form.txt).

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 5 people from 2 organizations informing them that their membership was in jeopardy due to non-attendance (see 99-019r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Iomega Corp.
UNISYS Corporation

Neither of these organizations were present.

John Lohmeyer moved and Bob Snively seconded that the membership of all of the organizations in jeopardy be continued in spite of their failure to attend. Gene Milligan moved and Dal Allan seconded that consideration be deferred to the March meeting. Gene noted the motion to retain membership might set a problematic precedent. The motion to defer consideration passed 6:5:2.

Dal Allan noted that, by deferring consideration of the motion to retain membership, the committee had terminated the memberships. During a discussion of the point, no one present contested Dal's observation. The two organizations in attendance jeopardy 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).

John announced that he had received an email from Roger Cummings saying that the Adaptec acquisition of Distributed Processing Technology had become official on 12/23/99, so the DPT membership was terminated

No organizations requested new (or reinstated) membership.

The T10 membership during the meeting was 39 organizations down from 42 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 reviewed the voting procedure changes at NCITS regarding the two-week rule, abstentions, the processing of new project proposals. Now that the NCITS procedures have been finalized, John asked that this item be removed from future agendas.

4. Approval of Minutes - November '99 Meeting - Monterey, CA (T10/99-310r1)

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 January 20, 2000. Documents received after this time may 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

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. Complete
- 328) John Lohmeyer or Larry Lamers will provide the SPI-3 editor with the electronic information used to include the dedication in SPI. Carryover as a new action item concerning an electronic image that must be obtained from Larry Lamers or Dave Deming. Delivery of all other materials in complete.
- 334) Gene Milligan will initiate fast track processing of NCITS:325:1998 (SBP-2). Complete
- 335) Gene Milligan will create an NWIP and CD contribution for MMC-2 revision 11a. Complete
- Ron Roberts (or John Lohmeyer) will give RBC revision 10a to the IR in source and PDF format. Complete.
- 337) Ron Roberts (or John Lohmeyer) will give MMC-2 revision 11a to the IR in source and PDF format. *Complete.*
- 338) Larry Lamers will request minutes for the June CAM-3 review meeting from Bill Dallas. Carryover
- 348) Ralph Weber will create a SPC-2 version descriptor for SPC-2 revision 12. Complete
- 349) Ralph Weber will create a SPC-2 version descriptor for SST. Complete
- 350) Ralph Weber will create a SPC-2 version descriptor for SMC-2. *Complete*
- 351) Bob Snively will prepare FCP-2 revision 4 for letter ballot. *Complete*.
- 352) John Lohmeyer will conduct a letter ballot on FCP-2 revision 4. In process -- will complete 2/2/2000.
- 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. *Complete*.
- 354) Dave Peterson will generate SSC revision 22. Complete.
- 355) Ralph Weber will create an SPC-2 version descriptor for SSC revision 22. Complete
- John Lohmeyer will forward SSC revision 22 to NCITS with the two unresolved negative votes for processing toward first public review. *Complete.*
- John Lohmeyer will forward 99-243r1 to NCITS as a T10 approved project proposal for the SCSI Signal Modeling Technical Report. *Complete.*
- John Lohmeyer will forward 99-246r1 to NCITS as a T10 approved project proposal for the SCSI VI Protocol standard. *Complete*.
- John Lohmeyer will forward 99-294r1 to NCITS as a T10 approved project proposal for the SCSI Primary Commands 3 (SPC-3) standard. *Complete.*
- John Lohmeyer will forward 99-292r1 to NCITS as a T10 approved project proposal for the SCSI Block Commands 2 (SBC-2) standard. *Complete*.
- John Lohmeyer will contact Don Tolmie for an alternate quotation or work time estimate for conversion of RBC to ISO format. *Complete.*
- 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 a T10 policies document. *Carryover*

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.

John announced that four T10 project proposals had recently been approved: SCSI Signal Modeling (SSM) {Project 1414-DT}, SCSI VI Protocol (SVP) {Project 1415-D}, SCS Primary Commands - 3 (SPC-3) {Project 1416-D}, and SCSI Block Commands - 2 (SBC-2) {Project 1417-D}. These projects will be added to the March agenda.

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

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

Neil Wanamaker asked if Compaq has an official position regarding completion of the CAM-3 project and received no response. Dal Allan asked for an agenda item at the next meeting to consider withdrawing the CAM-3 project, along with an invitation to the reflector offering the opportunity for other companies to assume the project responsibilities. John Lohmeyer took an action item to notify the T10 reflector that March 2000 meeting will consider withdrawing CAM-3. John Lohmeyer took an action item to add an item to the March 2000 agenda to consider withdrawing CAM-3.

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

John Lohmeyer reported that SSC is being processed toward first public review. He stated a belief that the public review would begin in early February.

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

John Lohmeyer reported that FCP-2 is under letter ballot for forwarding to first public review. The letter ballot will close on 2 February 2000.

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

Ralph Weber reported that no changes have been made in SAM-2 since the last meeting. He stated a hope that better progress on SAM-2 issues could be achieved starting with the March meeting.

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

John reported that MMC-2 is at NCITS for management review and final approval.

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

Ralph Weber reported SPC-2 revision 14 was prepared following the November meeting and contained all changes approved at or prior to that meeting. Revision 15 will be prepared following this meeting, containing the changes approved at this meeting.

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

John Lohmeyer reported that RBC completed its second public review without receiving any comments, but the NCITS Secretariat had noticed a processing error at T10. Before RBC can be placed on the NCITS agenda for management review it needs a roll call vote at T10 (or letter ballot) as opposed to a simple meeting vote. Accordingly, John Lohmeyer moved that T10 recommend that NCITS accept RBC Rev 10a as resolving the comments from the first public review and that T10/99-209r1 be accepted as the comments resolution document. Paul Aloisi seconded the motion. A roll call vote passed on a vote of 26:0:1:12=39. Details of the roll call vote were as follows:

Organization	Stat	Nam	e	Yes	No Abs	NP	
Adaptec, Inc.	A#	Mr.	Vincent Bastiani		1		
Advansys	_		61 1 5 '11	-		1	
AMP, Inc.	Р	Mr.	Charles Brill	1		1	W
Amphenol Interconnect	_			-		1	
Ancot Corp.	P		Bart Raudebaugh	1			W
Andataco	P	Mr.	Gregg Neely	1		_	W
Berg Electronics	_			_		1	
BREA Technologies, Inc.	P -		Bill Galloway	1			W
Circuit Assembly Corp.	P		Ian Morrell	1			W
CMD Technology	P		Edward Haske	1			W
Compaq Computer Corp.	P		Robert C. Elliott	1			
Crossroads Systems, Inc.	P		Neil Wanamaker	1			
Dallas Semiconductor	P	Mr.	Charles Tashbook	1			W
Dell Computer						1	
ENDL						1	
Fujitsu	P	Mr.	Eugene Lew	1			W
General Dynamics	P	Mr.	Nathan Hastad	1			W
Hewlett Packard Co.	P	Mr.	Stewart Wyatt	1			W
Hitachi Cable Manchester	A	${\tt Ms.}$	Jacueline Sylvia	1			W
Hitachi Storage Products						1	
Honda Connectors						1	
IBM Corp.	P	Mr.	George O. Penokie	1			
KnowledgeTek, Inc.	P	Mr.	Dennis Moore	1			
Linfinity Micro						1	
LSI Logic Corp.	P	Mr.	John Lohmeyer	1			
Madison Cable Corp.			-			1	
Maxtor Corp.	P	Mr.	Pete McLean	1			W
Molex Inc.	P	Mr.	Jay Neer	1			
Ophidian Designs	P	Mr.	Edward A. Gardner	1			W
Panasonic Technologies, Inc	P	Mr.	Han Zou	1			
Philips Electronics	P	Mr.	William P. McFerrin	1			
QLogic Corp.						1	
Quantum Corp.	P	MΥ.	Mark Evans	1		_	
Seagate Technology	P		Gene Milligan	1			
Storage Technology Corp.	P		Erich Oetting	1			W
Sun Microsystems Computer Co	P		Robert N. Snively	1			••
Texas Instruments	P		Paul D. Aloisi	1			
Toshiba America Elec. Comp.	-	1.1T ·	1441 D. 1110161	_		1	
Western Digital Corporation						1	
Medical Digital Corporation						_	
				26	0 1	1 2	= 39
1 -1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				20	U I	12	- 39

W indicates a written (email) vote.

Vince Bastiani stated that his abstention was based on lack of expertise.

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

George Penokie reported that letter ballot comment resolution is complete. SPI-3 revisions 13 and 13a contain all the changes resulting from the letter ballot comment resolution. The difference between revisions 13 and 13a is that 13 contains change bars whereas 13a does not. 99-350r2 contains letter ballot comments resolution information.

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

Bill McFerrin noted that original plans for MMC-3 were to include the results from the Mt. Fuji 4 group. Bill reported that additional work relating to CDROM recently has been proposed for inclusion in MMC-3. At Ron's request, Ron Roberts will remain the project editor for MMC-3. Minutes of the MMC/RMC working group meeting are available in 00-131.

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

Bill McFerrin reported that work on the second draft of RMC is in progress. He described the decisions taken at the MMC/RMC working group meeting (minutes in 00-131). He stated a goal of having a new RMC revision available in two weeks.

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

George Penokie reported on the activities of the Physical Working Group meetings in December (minutes in 00-102) and January (minutes in 00-120). He stated a goal of having a SPI-4 revision 0 out by the May meeting.

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

In the absence of Larry Lamers, no report was available.

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

In the absence of Don Woelz, no report was available.

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

In the absence of Erich Oetting, no report was available.

9. Old Business

9.1 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 10 people present. He briefly described the topics discussed. He noted that a new revision of the T10 policy for project development is expected prior to the March meeting. Gene Milligan's offer to handle the keyboard work on the revision was accepted. John Lohmeyer agreed to provide the marked up foils to Gene and to help with the flowcharts.

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

Gene Milligan moved that the OSD project proposal be forwarded to NCITS for processing. Bob Snively seconded the motion. John Lohmeyer moved to defer consideration of the motion to the March meeting. Dennis Moore seconded the motion to defer consideration. The motion to defer consideration passed on a vote of 11:2:1:25=39.

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

Questions were raised regarding editing for ISO MMC-2 and no clear answers were available. Gene Milligan stated that MMC-2 is far behind in ISO as compared to RBC. (This assertion was retracted during the ISO status report.) He asked that no actions be taken regarding RBC until ISO editing for MMC-2 is finalized.

John Lohmeyer reported that Don Tolmie had provided an estimate of \$5,000 by email for converting RBC to ISO format.

The committee reviewed the conversion requirements for MMC and RBC and the procedure for paying editors to perform such conversions. Bill McFerrin was pressed for a statement of interest in having an ISO version MMC.

Bill McFerrin requested that an item be added to the March agenda to consider withdrawing MMC at ISO. John Lohmeyer took an action item add an item to the March 2000 agenda to consider withdrawing MMC at ISO.

10. New Business

10.1 Actions on Working Group Recommendations

10.1.1 WDTR/SDTR/PPR Interactions (00-119r1) [Penokie]

George Penokie moved that 00-119r1 (WDTR/SDTR/PPR Interactions) be approved for inclusion in SPI-3. Rob Elliott seconded the motion. The motion passed on a vote of 13:0:0:26=39.

10.1.2 Persistent Reservations Unit Attention Fix (00-114r0) [Penokie]

George Penokie moved that 00-114r0 (Unit Attention Fixes for Persistent Reservations) be approved for SPC-2. Ralph Weber seconded the motion. The motion passed on a vote of 13:0:0:26=39.

10.1.3 Proposal to Support Partial Loading & Unloading (99-347r3) [Suhler/Milligan]

Gene Milligan moved that 99-347r3 (Proposal for SPC Support for Partial Loading & Unloading) be approved for inclusion in SPC-2. Ralph Weber seconded the motion. The motion passed on a vote of 11:0:1:27=39.

10.1.4 Large LBA addressing using variable length CDB structures (00-125r0) [Houlder/Milligan]

Gene Milligan moved that 00-125r0 (Large LBA address using variable length CDB structure) be approved for inclusion in SBC-2 with allocation of service action codes to be added to SPC-2. Dennis Moore seconded the motion. The motion passed on a vote of 12:0:0:27=39.

10.2 Resolution of SPI-3 Letter Ballot Comments (99-350r2) [Penokie]

John Lohmeyer moved that T10 accept the resolution of the SPI-3 letter ballot comments documented in T10/99-350r2 and that T10 forward SPI-3 Rev 12 as revised (Rev 13 or 13a), which incorporates the letter ballot resolution, to NCITS for further processing toward first public review. George Penokie seconded the motion. A roll call vote passed on a vote of 23:0:0:16=39. Details of the roll call vote were as follows:

Organization	Stat	Nam	e	Yes	No	Abs	NF)
Adaptec, Inc.	A#	Mr.	Vincent Bastiani	1				
Advansys	R	Mr.	Robert Frey	1				W
AMP, Inc.							1	
Amphenol Interconnect							1	
Ancot Corp.	P	Mr.	Bart Raudebaugh	1				M
Andataco							1	
Berg Electronics	P	Mr.	Douglas Wagner	1				M
BREA Technologies, Inc.							1	
Circuit Assembly Corp.							1	
CMD Technology	P		Edward Haske	1				W
Compaq Computer Corp.	P		Robert C. Elliott	1				
Crossroads Systems, Inc.	P		Neil Wanamaker	1				
Dallas Semiconductor	P	Mr.	Charles Tashbook	1				W
Dell Computer							1	
ENDL	P	Mr.	I. Dal Allan	1				
Fujitsu							1	
General Dynamics							1	
Hewlett Packard Co.	P	Mr.	Stewart Wyatt	1				W
Hitachi Cable Manchester, Inc							1	
Hitachi Storage Products							1	
Honda Connectors	P		Thomas J. Kulesza	1				W
IBM Corp.	P		George O. Penokie	1				
KnowledgeTek, Inc.	P	Mr.	Dennis Moore	1				
Linfinity Micro							1	
LSI Logic Corp.	P	Mr.	John Lohmeyer	1				
Madison Cable Corp.				_			1	
Maxtor Corp.	P		Pete McLean	1				W
Molex Inc.	P		Jay Neer	1				
Ophidian Designs	P		Edward A. Gardner	1				W
Panasonic Technologies, Inc	P		Han Zou	1				
Philips Electronics	P	Mr.	William P. McFerrin	1			_	
QLogic Corp.	_			_			1	
Quantum Corp.	P		Mark Evans	1				
Seagate Technology	P	Mr.	Gene Milligan	1			_	
Storage Technology Corp.	_			_			1	
Sun Microsystems Computer Co			Robert N. Snively	1				
Texas Instruments	P	Mr.	Paul D. Aloisi	1			_	
Toshiba America Elec. Comp.							1	
Western Digital Corporation							1	
				22	0	^	1.0	- 20
				23	0	0	ΤР	= 39

W indicates a written (email) vote.

George Penokie took an action item to provide SPI-3 revision 13 [to include change information] and 13a [technically identical to rev 13 but without change highlighting] to the T10 chair. John Lohmeyer took an action item to forward SPI-3 revision 13a to NCITS for processing toward first public review.

11. ISO

11.1 ISO Report [Milligan]

Gene Milligan provided the following ISO report:

1/2000 ISO/IEC Report

Project

#

Description

Status

Months Pending

Editor

25.13.11.02

DIS9316-2

CAM

In Publication

Completed

Bill Dallas

25.13.11.13

IS 9316-1

SCSI-2

Published IS

Completed

Larry Lamers

25.13.11.05

CD 14776-111

SPI

Withdrawn

25.13.11.08

IS 14776-411

SAM

Published IS

Completed

Charles Monia

25.13.11.14

CD 14776-121

Fast-20

Withdrawn

25.13.11.15

IS 14776-341

SCC

Publishing

Completed

George Penokie

25.13.11.13

CD 14776-351

SMC

Awaiting DIS text with resolution of comments

12 - Target 7/99

Erich Oetting

25.13.11.25 CD 14776-112 SPI-2

DIS text provided with resolution of comments

Current step Completed

George Penokie

25.13.11.22 CD 14776-371 SES

Awaiting DIS text with resolution of comments

12 - Target 8/99

Bob Snively

25.13.11.23 DIS 14776-342 SCC-2

Awaiting DIS ballot Current step completed

George Penokie

25.13.13.02 CD 14776-221

FCP

Awaiting DIS text with resolution of comments 12 - Target 8/99

Bob Snively

25.13.11.16 CD 14776-381

OMC

FDIS being issued

0

Japan

25.13.11.17 CD 14776-361

MMC

Awaiting DIS text with resolution of comments

Ron Roberts

25.13.11.10 CD 14776-321

Awaiting DIS text with resolution of comments 1- Target 1/2000

Gene Milligan

25.13.11.20 DIS 14776-232

SBP-2Fast Track Requested

Peter Johansson

25.13.11.xx CD 14776-326 RBC NWIP & CD Contribution submitted

Ron Roberts

25.13.11.xx CD 14776-362 MMC-2 NWIP & CD Contribution submitted

Ron Roberts

The responses to MMC and SBC CD letter ballot comments were on hold until the issue of canceling the Fast Track DIS ballot was resolved. The T10 recommendation to cancel Fast Track was approved by NCITS and forwarded to the JTC 1 Secretariat (ANSI). JTC 1 has canceled and withdrawn the fast track on these two items.

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

ISO/IEC business for T10 at this meeting is a decision on SSC.

=> 1999 ISO/IEC Document Register

ORIG_I	DATE DESCRIPTN DESCRIPTN2	
99/03/29	Yes vote on CD 14776-381 SCSI OMC with commnt	
99/03/29	T11 Request to Withdraw CD 14165-221 FC-SB	
99/03/29	T11 Request to Withdraw CD 14165-121 FC-AL	
99/03/29	T10 Request to Withdraw CD 14776-111 SPI	
99/03/29	T10 Withdraw CD 14776-121 SCSI-3 Fast-20	
99/04/14	T11 Request to Withdraw CD 14165-411 FC-GS	
99/05/02	X3.304:1997 SCSI-3 Multimedia Commands (MMC) Fast Tracking as ISO/IEC 14	4776-
99/05/02	NCITS.306:1998 SCSI-3 Block Commands (SBC) Fast track as ISO/IEC 14776-321	
99/05/21	CD 14776-232 Yes Ballot for SCSI SBP-2	
99/05/25	Request to Fast Track NCITS 323-1998 HIPPI 6400-PH	
99/05/25	Request to Fast Track NCITS 324-199X HIPPI-6400-SC	
99/06/04	Yes vote & Change 18353 to 9318-4	
99/06/04	Yes vote & Change 18354 to 11518-6	
99/06/04	Yes vote & Change 18355 to 11518-2	
99/07/03	ISO/IEC JTC 1/SC 25/WG 4 US HOD Report	
99/08/12	T12 Recommended vote on DIS 9314-20 Yes	
99/08/12	T12 Recommended vote on DIS 9314-21 Yes w/c	
99/08/26	Brannon notice error in DIS 9314-9, 26, 14165 -131 & 14776-342 close 12/12/99	
99/09/10	T12 Recommended vote on ISO/IEC 9314-1:1989 Five Year Review - Confirm	
99/09/10	T12 Recommended vote on ISO/IEC 9314-2:1989 Five Year Review - Confirm	
99/09/27	For JTC 1 TAG Letter Ballot, ISO/IEC DIS 14776-342 SCC-2 Yes with comments	
99/10/20	For JTC 1 TAG Letter Ballot, ISO/IEC DIS 9314-9 FDDI LCF-PMD Yes	
	99/03/29 99/03/29 99/03/29 99/03/29 99/03/29 99/05/02 99/05/02 99/05/21 99/05/25 99/05/25 99/06/04 99/06/04 99/06/04 99/07/03 99/08/12 99/08/12 99/08/10 99/09/10 99/09/10	99/03/29 Yes vote on CD 14776-381 SCSI OMC with commnt 99/03/29 T11 Request to Withdraw CD 14165-221 FC-SB 99/03/29 T11 Request to Withdraw CD 14165-121 FC-AL 99/03/29 T10 Request to Withdraw CD 14776-111 SPI 99/03/29 T10 Withdraw CD 14776-121 SCSI-3 Fast-20 99/04/14 T11 Request to Withdraw CD 14165-411 FC-GS 99/05/02 X3.304:1997 SCSI-3 Multimedia Commands (MMC) Fast Tracking as ISO/IEC 14 99/05/02 NCITS.306:1998 SCSI-3 Block Commands (SBC) Fast track as ISO/IEC 14776-321 99/05/21 CD 14776-232 Yes Ballot for SCSI SBP-2 99/05/25 Request to Fast Track NCITS 323-1998 HIPPI 6400-PH 99/05/25 Request to Fast Track NCITS 324-199X HIPPI-6400-SC 99/06/04 Yes vote & Change 18353 to 9318-4 99/06/04 Yes vote & Change 18354 to 11518-6 99/06/04 Yes vote & Change 18355 to 11518-2 99/07/03 ISO/IEC JTC 1/SC 25/WG 4 US HOD Report 99/08/12 T12 Recommended vote on DIS 9314-20 Yes 99/08/26 Brannon notice error in DIS 9314-9, 26, 14165 -131 & 14776-342 close 12/12/99

IR99022	99/10/20	For JTC 1 TAG Letter Ballot, ISO/IEC DIS 9314-26 FDDI MAC-ATS Yes
IR99023	99/10/25	For JTC 1 TAG Letter Ballot, ISO/IEC DIS 14165-131 FC-SW Yes
IR99024	99/12/09	DIS 11518-10 HIPPI 6400 PH Recommended Yes
IR99025	99/12/20	Request to Fast Track NCITS 325:1998 SBP-2
IR00001	2000/01/0	6 NWIP for RBC & CD contribution Rev 10a
IR00002	2000/01/0	6 NWIP for MMC-2 & CD contribution Rev 11a

11.2 ISO Business [Milligan]

Gene Milligan moved that T10 forward SSC to ISO for processing. Mark Evans seconded the motion.

Dal Allan described a problem with large addressing issues in SSC recently identified in a T10 reflector message. Dal Allan moved to defer consideration of the motion to the March meeting. Paul Aloisi seconded the motion to defer consideration. The motion to defer consideration passed on a vote of 6:5:3:25=39.

John Lohmeyer took an action item to add an item to the March 2000 agenda to discuss large addressing issues in SSC.

Gene Milligan moved that T10 submit a NWIP for SPI-3 with a contribution of SPI-3 revision 13a for simultaneous CD. George Penokie seconded the motion. John Lohmeyer moved that consideration of the motion be deferred to the March meeting. Dennis Moore seconded the motion to defer. The motion to defer passed on a vote of 10:4:0:25=39.

12. Liaison Reports

12.1 T11 Liaison Report [Wanamaker]

Neil Wanamaker made an oral report to the committee and provided an electronic report in 00-128.

12.2 T13 Liaison Report [Milligan]

Gene Milligan provided an oral report to the committee. T13 will meet next in February in Placerville, CA.

12.3 SFF Industry Group [Allan]

Dal Allan provided an oral report to the committee.

12.4 IEEE 1394 [Johansson]

Gene Milligan reported that 1394.b is forming a ballot pool. The period for applying to participate in the ballot pool closes near the end of January.

12.5 IEEE P1285 Status

No report.

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

Paul Aloisi reported that STA has selected marketing names for SPI-3, SPI-4, and SPI-5. The annual meeting will be on 11 February in Huntington Beach, CA.

13. Review of Action Items

- 338) Larry Lamers will request minutes for the June 1999 CAM-3 review meeting from Bill Dallas.
- 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 a T10 policies document.
- Larry Lamers will provide the SPI-3 editor with a file containing the electronic image used in the SPI dedication or John Lohmeyer will contact Dave Deming to obtain the file.
- 364) John Lohmeyer will notify the T10 reflector that March 2000 meeting will consider withdrawing CAM-3.
- 365) John Lohmeyer will add an item to the March 2000 agenda to consider withdrawing CAM-3.
- 366) John Lohmeyer will add an item to the March 2000 agenda to consider withdrawing MMC at ISO.
- 367) George Penokie will provide SPI-3 revision 13 and 13a to the T10 chair.
- 368) John Lohmeyer will forward SPI-3 revision 13a to NCITS for processing toward first public review.
- 369) John Lohmeyer will add an item to the March 2000 agenda to discuss large addressing issues in SSC.
- 370) Ralph Weber will create an SPC-2 version descriptor for SPI-3 revision 13a.
- 371) Ralph Weber will assign SPC-2 standard code values to the four projects whose approval was announced at this meeting.

14. Meeting Schedule

The next plenary meeting of T10 will be March 9, 2000 in Dallas, TX at the Crowne Plaza Suites (972-233-7600), hosted by Texas Instruments. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

without notice.

March '00 Meeting Map
 (1/13/00 Version)

Monday 3/6	9 10 11 12 1 2 3 4 5 6	7 8 9			
	T10 Proc. SG SCSI Protocol WG	(50)			
	++============+ T11 ad hocs	(40)			
	Mt. Fuji - 4 WG	(20)			
Tuesday 3/7	9 10 11 12 1 2 3 4 5 6	7 8 9 ====+			
	SCSI Physical WG	(50)			
	MMC WG	(20)			
	Total	(40)			
Wednesday 3/8		7 8 9			
	SCSI Protocol WG	(50)			
	+======+====== MMC WG	(20)			
	+======+ SFF WG SFF	(40)			
		++ eception (All)			
	+-	+			
Thursday 3/9	9 10 11 12 1 2 3 4 5 6	7 8			
	T10 Plenary	(60/40)			
	STA Marcom ++	(15)			
(*) - STA Technical meeting (includes SCSI Harbor) begins 30 minutes after the T10 plenary meeting but not before 1:30 pm					
Friday 3/10	9 10 11 12 1 2 3 4 5				
	SCSI Trade Association (STA) 	(30)			
_	ed with == are T10-authorized meetings. ed with are authorized by other groups	and may change			

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Other T10-authorized meetings:
Meeting Date
                                                  Location / Contact
_____
Cable Perf. SG 02/07/00 Mon 1:00p Huntington Beach, CA / Jones
SCSI Model WG 02/08/00 Tue 9:00a Huntington Beach, CA / Jones
SCSI Phys WG 02/09/00 Wed 1:00p Huntington Beach, CA / Jones
                     02/10/00 Thu 9:00a Huntington Beach, CA / Jones
Joint T10/T11 02/15/00 Tue Huntington Beach, CA / T11 SST WG 02/16/00 Wed Huntington Beach, CA / T11 Cable Perf. SG 02/29/00 Tue Manchester, NH / Daggett SCSI Model WG 03/01/00 Wed Manchester, NH / Daggett
SCSI Phys WG 03/27/00 Mon 1:00p Monterey, CA / Lamers
                      03/28/00 Tue 9:00a Monterey, CA / Lamers
Cable Perf. SG 04/11/00 Tue 9:00a Monterey, CA / Abou-Jeyab
SCSI Model WG 04/12/00 Wed 9:00a Monterey, CA / Abou-Jeyab
SCSI Phys WG 04/27/00 Thu 1:00p Colo Spgs, CO / Lohmeyer
                      04/28/00 Fri 9:00a Colo Spgs, CO / Lohmeyer
 Meeting Map Abbreviation Key:
Amnd: Amendment
Cable Perf.: Cable Performance Testing
           Common Access Method
               Next generation CAM for SCSI-3
CAM-3:
                SCSI Enhanced Parallel Interface (Technical Report)
EPT:
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, Ultra160)
Fast-160: Data Transfer at 160 Mega-transfers/second (a.k.a., Ultra4, Ultra320)
Fast-160: Data Transfer at 160 Mega-transfers/second (a.k.a., FC: Fibre Channel

FC-AL: Fibre Channel - Arbitrated Loop (a Tll 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.)

OBD_T: Object-Based Device Tutorial

PH: Physical (Connectors, Cables, Transceivers, etc.)
PH:
                Physical (Connectors, Cables, Transceivers, etc.)
Plenary: Full Committee Meeting
RAID: Redundant Array of Independent Devices
                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 CONCLOTICE COMMUNICATION OF SMALL COMPUTER System Interface
SCSI Enclosure Services
SCSI:
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
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
SPI-4: Fourth 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
          Lower Level Interfaces Technical Committee
T10:
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T10 Proc.: T10 Procedures

WG: Working Group (same as Ad Hoc Group)

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

Activity	Contact	Telephone/Email
CAM-3	Bill Dallas	
EPI	Bill Ham	(508) 841-2629 bill.ham@digital.com
FCP, FCP-2, SES	Robert Snively	3
GPP	Gary Stephens	(602) 321-1725 grsfsi@aol.com
SBC, SBC-2	Gene Milligan	(405) 324-3070 gene_milligan@notes.seagate.com
MMC, MMC-2, MMC-3, RMC	Bill McFerrin	
SBP-2 or RBC	Pete McLean	
SBP-2	Peter Johansson	
SCC-2, SPI-2, SPI-3, SPI-4	George Penokie	
SMC	Erich Oetting	
SPC-2, SPC-3, SAM-2	Ralph Weber	(972) 503-3205 x228 roweber@acm.org
SSA-PH1,-PH2,-TL1,-TL2	Larry Lamers	(408) 957-7817 ljlamers@ieee.org
SSA-S2P & -S3P	John Scheible	(512) 823-8208 Scheible@vnet.ibm.com
SSC	Dave Peterson	(612) 391-1008 dap@network.com
SSM	Dean Wallace	(714) 668-5028 d_wallace@qlc.com
SVP	Ed Gardner	(719) 593-8866 eag@ophidian.com
Other Activities	John Lohmeyer	(719) 533-7560 lohmeyer@t10.org

The long-term T10 meeting week schedule is:

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

Gene Milligan moved that the January 2001 plenary meeting be cancelled. George Penokie seconded the motion. John Lohmeyer moved to defer consideration of the motion. Bob Snively seconded the motion to defer. The motion to defer failed on a vote of 7:7:0:15=39. The motion to cancel the January 2001 plenary passed on a vote of 10:2:1:26=39.

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.

Dennis Moore moved that T10 authorize the T10-related meetings and events in the list above that had not previously been approved. Neil Wanamaker seconded the motion. The motion passed 12:0:0:17=39.

15. Adjournment

The meeting was adjourned at 12:16 p.m. on Thursday January 13, 2000.

Enclosure(1) -- Meeting Attendees

Name	S	Organization	Electronic Mail Address
Mr. Vincent Bastiani	A#	Adaptec, Inc.	bastiani@corp.adaptec.com
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Mr. George O. Penokie	P	IBM Corp.	gop@us.ibm.com
Mr. Dennis Moore	P	KnowledgeTek, Inc.	dmoore@ix.netcom.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeyer@t10.org
Mr. Ralph O. Weber	A	LSI Logic Corp.	roweber@acm.org
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			qį
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Mr. Paul D. Aloisi	P	Texas Instruments	Paul_Aloisi@ti.com
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21 People Present

Status Key: P - Principal

A,A# - Alternate
O - Observer
L - Liaison
V - Visitor

Enclosure(2) -- T10 Attendance Database

Generated on 2000/01/19 at 12:30:20

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T10/00-001R0 Date: 1999/12/30 Author: John Lohmeyer Mailing: Missing

Agenda for T10 Meeting #36 (March '00)

T10/00-002R0 Date: 1999/12/30 Author: John Lohmeyer Mailing: Missing

T10 Project Summary - January '00

T10/00-003R0 Date: 1999/12/30 Author: John Lohmeyer Mailing: Missing

Jeopardy Letter for March '00 meeting

T10/00-004R0 Date: 1999/12/30 Author: John Lohmeyer Mailing: 2000_1

Letter Ballot on forwarding FCP-2 to first public review

T10/00-101R0 Date: 1999/11/19 Author: Rob Elliott Mailing: 2000_1

Minutes of Access Controls teleconference - 11/18/99

T10/00-102R0 Date: 1999/12/03 Author: John Lohmeyer Mailing: 2000_1

Minutes of SPI-3/-4 Working Group - 12/2-3/99

T10/00-103R0 Date: 1999/11/30 Author: Richard Uber Mailing: 2000_1

Ultra-320 SCSI Implementing 1.8x Transmit Pre-compensation

T10/00-103R1 Date: 1999/12/02 Author: Richard Uber Mailing: 2000_1

Ultra-320 SCSI Implementing 1.8x Transmit Pre-compensation

T10/00-104R0 Date: 1999/11/30 Author: Andrew Bishop Mailing: 2000_1

Ultra-320 SCSI Compensation Techniques

T10/00-105R0 Date: 1999/11/30 Author: Russ Brown Mailing: 2000_1

Ultra-320 SCSI Calibration Strategy

T10/00-105R1 Date: 1999/12/01 Author: Russ Brown Mailing: 2000_1

Ultra-320 SCSI Calibration Strategy

T10/00-106R0 Date: 1999/12/02 Author: Pat McGarrah Mailing: 2000_1

Ultra 320 SCSI Summary and Recommendations

T10/00-107R0 Date: 1999/12/01 Author: John Lohmeyer Mailing: 2000_1

Response to NCITS 333 (MMC-2) 1PR comment #1 from Frank Rutherford

T10/00-108R0 Date: 1999/12/01 Author: John Lohmeyer Mailing: 2000_1

Response to NCITS 333 (MMC-2) 1PR comment #2 from Paul Suhler

T10/00-109R0 Date: 2000/01/04 Author: Larry Lamers Mailing: 2000_1

SPC-3 Echo Buffer Size

T10/00-110R0 Date: 1999/11/30 Author: Bill Ham Mailing: 2000_1

Minutes of the SCSI Cable Media Performance WG (draft) - 11/30/99

T10/00-111R0 Date: 1999/12/01 Author: Bill Ham Mailing: 2000_1

Minutes of SCSI signal modeling WG (draft) - 12/01/99

T10/00-112R0 Date: 1999/12/01 Author: Jonathan Fasig Mailing: 2000_1

Electrical Model Requirements of SCSI Interconnect Components

T10/00-113R0 Date: 1999/12/01 Author: Dima Smolyansky Mailing: 2000_1

SCSI Connector and Cable Modeling from TDR Measurements

T10/00-114R0 Date: 1999/12/21 Author: George Penokie Mailing: 2000_1 Unit Attention fixes in Persistent Reservation

T10/00-115R0 Date: 1999/12/07 Author: Stewart Wyatt Mailing: 2000_1 Minutes of Joint T10/T11.3 Joint Ad Hoc -- 12/7/1999

T10/00-116R0 Date: 1999/12/13 Author: Skip Jones Mailing: 2000_1 Meeting Notice -- Working Group Meetings -- Feb 7-11, 2000

T10/00-117R0 Date: 1999/12/20 Author: John Lohmeyer Mailing: Missing TASK SET FULL handling in SPI-3

T10/00-118R0 Date: 1999/12/15 Author: Gene Milligan Mailing: 2000_1 Comment Resolution

T10/00-119R0 Date: 1999/12/21 Author: George Penokie Mailing: 2000_1 WDTR/SDTR/PPR Interactions

T10/00-120R0 Date: 2000/01/19 Author: Weber & Lohmeyer Mailing: 2000_1 Minutes of SCSI Physical Working Group - Jan 10-11, 2000

T10/00-121R0 Date: 2000/01/19 Author: Weber & Lohmeyer Mailing: 2000_1 Minutes of SCSI Protocol Working Group - Jan 12, 2000

T10/00-122R0 Date: 1999/12/22 Author: Weber & Lohmeyer Mailing: Missing Minutes of T10 Plenary Meeting #35 - Jan 13, 2000

T10/00-123R0 Date: 2000/01/06 Author: Ralph Weber Mailing: 2000_1 Access Controls, an alternate approach

T10/00-124R0 Date: 2000/01/04 Author: Dale LaFollette Mailing: 2000_1 Draft Agenda - Joint T10/T11.3 Activity WG - Jan 13, 2000

T10/00-125R0 Date: 2000/01/05 Author: Gerry Houlder Mailing: 2000_1 Large LBA addressing using variable length CDB structure

T10/00-126R0 Date: 2000/01/10 Author: Vince Bastiani Mailing: 2000_1 U320 Timing Specification

T10/00-127R0 Date: 1999/12/31 Author: Rob Elliott Mailing: 2000_1 Target-controlled congestion relief

T10/00-128R0 Date: 2000/01/10 Author: Neil Wanamaker Mailing: 2000_1 T11 Liaison Report - January 2000

T10/00-129R0 Date: 2000/01/12 Author: Gene Milligan Mailing: Missing Overview of proposal for SPC-2 partial media load

T10/00-130R0 Date: 2000/01/13 Author: Ralph Weber Mailing: Missing Minutes of T10/T11.3 Joint Ad Hoc -- 1/13/2000

T10/00-131R0 Date: 2000/01/20 Author: Bill McFerrin Mailing: 2000_1 Minutes of MMC Working Group - 1/11/2000