Accredited Standards Committee*
InterNational Committee for Information Technology Standards (INCITS)

Doc. No.:	T10/05-165r0
Date:	May 6, 2005
Reply to:	John Lohmeyer

To: T10 Membership
From: Ralph Weber / John Lohmeyer
Subject: Minutes of T10 Plenary Meeting #67 -- May 5, 2005
           Oklahoma City, OK

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 May 5, 2005. He thanked Mike Fitzpatrick of Fujitsu for hosting the meeting.

John said that INCITS subgroup membership forms and the T10 document subscription forms are available on the meeting web site. He said that people should use these forms to ensure the INCITS Secretariat has the latest membership information. These forms should be mailed directly to the INCITS Secretariat.

As is customary, the people attending introduced themselves. Attendance was taken electronically via the meeting web site.

2.   Approval of Agenda

No additions/changes were made to the draft agenda.

John Lohmeyer moved and Ralph Weber seconded that the agenda be approved. In the absence of any objections, the motion passed unanimously.

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

3.   Attendance and Membership

The membership requirements were reviewed. INCITS 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 begin voting at the beginning of his/her second meeting.

To maintain membership, organizations must pay the INCITS Service Fee ($800).

John briefly discussed the mailing fees. Complete pricing information is contained in the 2005 membership form (available at http://www.t10.org/ftp/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 emails to 10 people from 5 organizations informing them that their membership was in jeopardy due to non-attendance (see 05-123r0) and that their membership would be terminated if they did not attend this meeting. The following organization was in attendance jeopardy:

Cisco Systems, Inc.
Crossroads Systems, Inc. (*)
General Dynamics
Hitachi Cable Manchester
Toshiba

(*) On April 29th, John Tyndall requested that Crossroads Systems be changed to Advisory status.

The following organization was not present, so their status should have been changed to Advisory (non-voting):

Hitachi Cable Manchester

Mike Fitzpatrick moved that, in consideration of the unforeseen circumstances that prevented the Hitachi Cable Manchester representative from attending, the Hitachi Cable Manchester membership be retained in spite of their lack of attendance. Jay Neer seconded the motion. The motion passed 34:0:1:10=45.

All the other organizations in attendance jeopardy were present so no additional organizations were changed to Advisory (non-voting) status.

No organizations asked to join the committee at this meeting.

The Chair said that INCITS had terminated the Solution Technology advisory membership for non-payment of fees and that the Nvidia and Sonic Solutions memberships have been sent their final notices.

The T10 membership during the meeting was 45 organizations, unchanged from the 45 member organizations extant at the time the meeting was convened. Enclosure (1) is the list of the people present at the meeting and enclosure (2) is the current T10 membership list.

John Lohmeyer reminded members that failure to vote on two out of the last three letter ballots also would result in membership jeopardy. The current letter ballot jeopardy status is as shown:

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T10 Letter Ballot Jeopardy Report -- 2005/04/29

                             Ballot:  04-326r0      05-125r0      05-134r0
                             Report:  04-327r0      05-126r0      05-135r0
                             Acronym: SPC-3         SAS-1.1       FCP-3
Organization
------------------------------  ------------  ------------  ------------
Agilent Technologies                 DNV          Yes           Yes
Crossroads Systems, Inc.    (*)      Yes          DNV           DNV
QLogic Corp.                         DNV          Yes           Yes

Key:
Yes    Organization voted Yes
No     Organization voted No
Abs    Organization voted Abstain
DNV    Organization failed to return letter ballot
--     Organization was not a voting member for the letter ballot
(*)    Organization is in letter ballot jeopardy (and has voluntarily changed
       to Advisory status)
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4.   Approval of Minutes - March 2005 - Dana Point, CA (T10/05-097r0)

John Lohmeyer moved and Ralph Weber seconded that the minutes be approved. In the absence of any objections, the motion passed unanimously.

5.   Document Distribution

Members who have any problems with their mailing subscription should deal directly with Parthenia Purnell (ppurnell@itic.org) (202) 626-5741. A subscription form is included on the meeting disk.

John Lohmeyer requested that all documents for the next mailing be uploaded to the T10 web site by 10:30 a.m. on Thursday May 12, 2005. 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.

People can obtain T10 document numbers and revised T10 document numbers by filling out a web form at http://www.t10.org/members/. The assigned T10 document number will be sent to the requestor by e-mail. The requestor may then reply to this email, including the document to be posted as an attachment. The document will be automatically posted on the T10 web site.

T10 members can complete this entire process using their personal T10 password. John explained that members who do not know their password should surf to the above URL and click on the "forgot password" link to have their password sent to them via e-mail.

John noted that non-members can also use the above document number process, but their requests will require approval by an administrator.

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 e-mail to majordomo@t10.org with the line 'subscribe t10' in the message body.

The INCITS Secretariat maintains a World Wide Web page at:

   http://www.incits.org/.

LSI Logic maintains a web site on behalf of T10 on a server donated by the SCSI Trade Association at:

   http://www.t10.org/

There is also a mirror site at:

   http://www.t11.org/t10/

The T10 document register is available at:

   ftp://ftp.t10.org/t10/dr.txt

6.   Call for Patents

John Lohmeyer explained that this is a regular agenda item to identify any potential patent issues with developing standards and technical reports.

For additional information on ANSI procedures and the ANSI patent policy, please see the INCITS web page at http://www.incits.org/call.htm. The contact for INCITS patent issues is Lynn Barra (lbarra at itic dot org) or (202) 626-5739. Gene Milligan prepared a useful "Handy dandy Technical Committee's Patents Guide", which is available at ftp://ftp.t10.org/t10/document.99/99-291r0.pdf.

John Lohmeyer presented a summary of the ANSI patent policy prepared by Gary Robinson. The summary is also included on the Rules and Procedures (plus Patent Information) page on the T10 web site.

Bob Sheffield reminded the committee that a statement of the Intel patent policy can be found in T10/01-041r0.

John asked that anyone who knows of other applicable patents to contact him.

There were no other responses to the call for patents other than those mentioned above.

7.   Review of Old Action Items

599   Ralph Weber will prepare SPC-3 r22. *Complete.*
600   John Lohmeyer will forward SPC-3 r22 to INCITS for further processing towards first public review. *Complete.*
601   John Lohmeyer will forward 05-060r0 to INCITS for further processing as a new project proposal for SAS-2. *Complete.*
602   John Lohmeyer will notify INCITS of T10's recommendation to reaffirm SSC, MMC-2, RBC, and RBC AM1 as well as T10's recommendation to withdraw SPI-3. *Complete.*
603   Gary Robinson will notify INCITS that T10 recommends T10/04-1216r0 as a JTC1/SC25 NWIP for 14776-151: IT - Small Computer System Interface (SCSI) - 1.1. -Part 151: Serial Attached SCSI (SAS-1.1), answering the 6 questions 'Yes' and naming Gary S. Robinson as the project editor. *Carry over.*

8.   Project Status Reports

8.1   Project Status Summary and INCITS Liaison [Lohmeyer]

John Lohmeyer said that the current T10 project status summary was included on the meeting web site and will be included in the mailing as usual.

8.1.1   INCITS Antitrust Guidelines

All T10 members should be aware of the INCITS antitrust guidelines available at http://www.incits.org/natrust.htm.

John reminded committee members that all persons present at a T10 meeting is responsible for identifying potential violations of the antitrust guidelines and reporting them to the chair. Discussions of the following topics are considered sensitive:

   * Any company's prices or pricing policies;
   * Specific R&D, sales and marketing plans;
   * Any company's confidential product, product development or production strategies;
   * Whether certain suppliers or customers will be served;
   * Prices paid to input sources; or
   * Complaints about individual firms or other actions that might tend to hinder a competitor in any market.

8.2   SCSI Primary Commands - 3 (SPC-3) Project 1416-D [Weber]

John Lohmeyer reported that at the request of the FCP working group, a single ASC/ASCQ had been added to SPC-3 Rev 22a. The INCITS Secretariat felt that such a change cannot be deemed editorial and requested that T10 approve changing the SPC-3 public review draft from Rev 22 to Rev 22a.

Subsequently, several other changes were requested. The CAP working group reviewed and updated the letter ballot comment resolution document (04-355) to reflect all the changes.

Ralph Weber moved and Kevin Marks seconded that T10 approve changing the SPC-3 dpANS from revision 22 to revision 23 and that SPC-3 Rev 23 be forwarded to INCITS for first public review. The roll call motion passed 37:0:0:8=45. Details of the roll call vote were as follows:

Organization	Voter	Vote
Adaptec, Inc.	Tim Symons	Yes
Agilent Technologies	Pat Thaler	Yes
Amphenol Interconnect	Michael Wingard	Yes
Broadcom Corp.	Ron Roberts	Yes
Brocade	Robert Snively	Yes
Cisco Systems, Inc.	Claudio DeSanti	Yes
CNT		(not present)
Dallas Semiconductor		(not present)
Dell, Inc.	Kevin Marks	Yes
EMC Corp.	Gary S. Robinson	Yes
Emulex	Robert H. Nixon	Yes
ENDL	Ralph O. Weber	Yes
FCI	Douglas Wagner	Yes
Foxconn Electronics	Elwood Parsons	Yes
Fujitsu	Mike Fitzpatrick	Yes
General Dynamics	Tim Mackley	Yes
Hewlett Packard Co.	Rob Elliott	Yes
Hitachi Cable Manchester		(not present)
Hitachi Global Storage Tech.	Dan Colegrove	Yes
IBM Corp.	George O. Penokie	Yes
Intel Corp.	Robert Sheffield	Yes
Iomega Corp.	David Hawks	Yes
Lexar Media, Inc.	Martin Furuhjelm	Yes
LSI Logic Corp.	John Lohmeyer	Yes
Maxtor Corp.	Mark Evans	Yes
Microsoft Corp.	Jeff Mastro	Yes
Molex Inc.	Jay Neer	Yes
Nvidia Corp.	Mark Overby	Yes
Panasonic Technologies, Inc	Terence J. Nelson	Yes
Philips Electronics		(not present)
Pivot3, Inc.		(not present)
PMC-Sierra	Bill Lye	Yes
QLogic Corp.		(not present)
Quantum Corp.	Paul Entzel	Yes
Seagate Technology	Gerald Houlder	Yes
Sierra Logic, Inc.	William Martin	Yes
Storage Technology Corp.		(not present)
Sun Microsystems, Inc.	Vit Novak	Yes
Texas Instruments	Robert Kando	Yes
Toshiba	Yutaka Arakawa	Yes
TycoElectronics	Ashlie Fan	Yes
Veritas Software		(not present)
Vitesse Semiconductor	David Allen	Yes
Western Digital	Curtis Stevens	Yes
Xiotech Corp.	Jeff Williams	Yes

This two-thirds roll call vote passed (37:0:0:8=45).

John Lohmeyer took an action item to forward SPC-3 Rev 23 to INCITS for first public review.

8.3 SCSI Block Commands - 2 (SBC-2) Project 1417-D [Elliott]

Terry Nelson reported that INCITS has approved SBC-2 for publication and is preparing to forward it to ANSI. Rob Elliott reported that the ISO draft has been forwarded.

8.4   Bridge Controller Commands (BCC) Project 1528-D [Elliott]

Rob Elliott reported that no changes have been made in BCC.

8.5   MultiMedia Command Set - 4 (MMC-4) Project 1545-D [McFerrin]

John Lohmeyer reported that during the final edits of MMC-4, the ANSI Editor asked for a number of changes. Because some of these edits were not obviously editorial, the INCITS Secretariat asked T10 for review the edits (see 05-152) and to vote on whether or not the changes were substantive.

Terry Nelson moved that T10 has reviewed the MMC-4 (INCITS 401) edits documented in T10/05-152r0 and deems them non-substantive and that T10 recommends that INCITS continue processing MMC-4 including these edits. Dan Colegrove seconded the motion. The motion passed 33:0:2:10=45.

John Lohmeyer took an action item to report to INCITS that T10 has reviewed the MMC-4 (INCITS 401) edits documented in T10/05-152r0 and deems them non substantive and that T10 recommends that INCITS continue processing MMC-4 including these edits.

8.6   Automation/Drive Interface - Transport Protocol (ADT) Project 1557-D [Entzel]

Terry Nelson reported that INCITS has approved ADT for publication and is preparing to forward it to ANSI.

8.7   Automation/Drive Interface - Commands (ADC) Project 1558-D [Entzel/Wideman]

John Lohmeyer reported that ADC has been approved and is at ANSI for publication.

8.8   SCSI Enclosure Services - 2 (SES-2) Project 1559-D [Elliott]

Rob Elliott reported that SES-2 revision 10 will be posted following this meeting containing the proposals approved by this meeting. The new revision should be available in time for the mailing.

8.9   Fibre Channel Protocol - 3 (FCP-3) Project 1560-D [Peterson]

In the absence of Dave Peterson, Ralph Weber read a report on the activities of the FCP-3 working group (minutes in 05-184).

8.10 SCSI Architecture Model - 3 (SAM-3) Project 1561-D [Weber]

John Lohmeyer reported that SAM-3 has been published as ANSI INCITS 402-2005. He congratulated Ralph Weber, the SAM-3 Technical Editor.

8.11 Serial Attached SCSI - 1.1 (SAS-1.1) Project 1601-D [Elliott]

Rob Elliott reported that SAS-1.1 is in letter ballot comment resolution with additional meetings this afternoon and Friday morning. There will be a SAS PHY conference call to review the mini-connector. Additional conference calls may be held to resolve letter ballot comments.

SAS-1.1 revision 9c will be prepared in time for the mailing.

The goal is to have a stable SAS-1.1 draft on the T10 web site about a month before the July meeting so that forwarding to public review can be accomplished during the July meeting week.

Minutes of the SAS-1.1 protocol working group are in 05-162 and the SAS-1.1 PHY working group are in 05-178.

8.12 SCSI Stream Commands - 3 (SSC-3) Project 1611-D [Peterson]

In the absence of Dave Peterson, Ralph Weber presented a reported prepared by Dave summarizing the activities of the SSC-3 working group (minutes in 05-184).

8.13 MultiMedia Command Set - 5 (MMC-5) Project 1675-D [McFerrin]

In the absence of Bill McFerrin, George Penokie noted that the group plans to meet in Tokyo on May 19 and 20.

8.14 SCSI Architecture Model - 4 (SAM-4) Project 1683-D [Penokie]

George Penokie reported that no new proposals have been approved for SAM-4 this week, meaning that no new revision of SAM-4 will be prepared before the July meeting week.

8.15 SCSI / ATA Translation (SAT) Project 1711-D [Sheffield]

Bob Sheffield reviewed the recent SAT activities (minutes in 05-146 and 05-163). He stated that SAT revision 4 will be posted in time for the next meeting, but not in time for the mailing.

The current prospects for letter ballot are after the September meeting.

8.16 SCSI Primary Commands - 4 (SPC-4) Project 1729-D [Weber]

Ralph Weber stated that r0 of SPC-4 will not be uploaded until the ANSI Editor's comments on SPC-3 are processed.

8.17 SCSI Media Changer Command Set - 3 (SMC-3) Project 1730-D [Banther]

Michael Banther reported on the activities of the SMC-3 working group (minutes in 05-182).

In response to a question from the floor, Michael stated that no inputs have been received from two backup applications vendors who were delinquent at the time of the last meeting.

He stated that the working group is continuing its standards development work based on the interests of those vendors who have provided the requested information.

8.18 Object-Based Storage Devices - 2 (OSD-2) Project 1731-D [Weber]

Ralph Weber reported that OSD-2 r0 is available on the T10 web site and is OSD r10 plus the ANSI Editor's comments on OSD r10. A proposal for inclusion in OSD-2 is nearing completion in the SNIA OSD technical working group.

8.19 Serial Attached SCSI Driver Interface (SDI) Project 1740-D [Elliott]

Rob Elliott reported that an SDI working group did not meet this week. The group will not meet during the July T10 week out of consideration for the SAS-1.1 work. It is anticipated that the SDI group will resume meeting during the September meeting week.

8.20 Automation/Drive Interface - Commands - 2 (ADC-2) Project 1741-D [Hawks]

Paul Suhler reported on the activities of the ADI working group (minutes in 05-176).

8.21 Automation/Drive Interface - Transport Protocol - 2 (ADT-2) Project 1742-D [Entzel]

Paul Suhler reported on the activities of the ADI working group (minutes in 05-176).

8.22 Serial Attached SCSI - 2 (SAS-2) Project 1760-D [Elliott]

Rob Elliott reported that the first SAS-2 discussions concerned a SAS Zoning feature (minutes in 05-162). He noted that a 6 Gbs kickoff meeting will be held in Houston on May 25 and 26.

9. Old Business

There was no old business.

10. New Business

10.1 Results of SAS-1.1 forwarding letter ballot (05-126) [Lohmeyer]

John Lohmeyer reported that the letter ballot on forwarding SAS-1.1 to first public review had passed 31:10:3:2=46 as documented in 05-126r1. Comments were received from 13 organizations.

10.2 Results of FCP-3 forwarding letter ballot (05-135) [Lohmeyer]

John Lohmeyer reported that the letter ballot on forwarding FCP-3 to first public review had passed 42:2:1:1=46 as documented in 05-135r0. Comments were received from 6 organizations.

10.3 Should we adopt ISO/IEC 14776-222:2005 (FCP-2) in place of ANSI INCITS 350-2003 (FCP-2)?

John Lohmeyer stated that he had recently received an email from the INCITS Secretartiat asking three questions:

> Is the International Standard technically equivalent to INCITS 350:2003?
> Do you want this standard to be adopted?
> Do you want the standard to continue at the National level?

Ralph Weber moved that T10 recommends to INCITS that ANSI FCP-2 (INCITS 350:2003) be maintained without change regardless of the status of the ISO version. John Lohmeyer seconded the motion. The motion passed 27:0:2:16=45.

John Lohmeyer took an action item to notify INCITS that T10 recommends to INCITS that ANSI FCP-2 (INCITS 350:2003) be maintained without change regardless of the status of the ISO version.

10.4 Actions on SAS Protocol Working Group Recommendations

There were no recommendations made by the SAS protocol working group (minutes in 05-162).

10.5 Actions on SAS PHY Working Group Recommendations

There were no recommendations made by the SAS physical working group (minutes in 05-178).

10.6 Actions on CAP Working Group Recommendations

The recommendations from the CAP working group (minutes in 05-164) were presented to the committee.

George Penokie reviewed 05-101r1 (Validation of Protection Information) [Martin] a proposal recommended for SBC-3.

George Penokie reviewed the following proposals recommended for inclusion in SES-2:

    05-181r1 (Element Index Addition) [Fairchild]
    05-180r0 (Bay Number Addition) [Fairchild]

Bill Martin moved that 05-101r1 be approved for SBC-3 and that 05-181r1 and 05-180r0 be approved for inclusion in SES-2. Rob Elliott seconded the motion. The motion passed on a vote of 33:0:2:10=45.

10.7 Actions on Other Working Group Recommendations

Bob Sheffield reviewed the following proposals recommended for inclusion in SAT (minutes in 05-163):

    05-137r1 (Standard INQUIRY - PRODUCT REVISION LEVEL) [Bellamy]
    05-109r0 (REQUEST SENSE Correction Proposal) [Overby]

Bob Sheffield moved that 05-137r1 and 05-109r0 be approved for inclusion in SAT. Mark Overby seconded the motion. The motion passed on a vote of 33:0:2:10=45.

11. ISO/IEC

11.1 ISO/IEC Report [Robinson]

Gary Robinson presented the ISO/IEC report (05-166).

11.2 ISO/IEC Business [Robinson]

Gary Robinson moved that T10 has reviewed the FCD, SBC-2, 14776-322, project 1.25.13.11.31,and recommends that the JTC1/SC25 TAG vote to approve said FCD. Gerry Houlder seconded the motion. The motion passed on a roll call vote of 37:0:0:8=45. Details of the roll call vote were as follows:

Organization	Voter	Vote
Adaptec, Inc.	Tim Symons	Yes
Agilent Technologies	Pat Thaler	Yes
Amphenol Interconnect	Michael Wingard	Yes
Broadcom Corp.	Ron Roberts	Yes
Brocade	Robert Snively	Yes
Cisco Systems, Inc.	Claudio DeSanti	Yes
CNT		(not present)
Dallas Semiconductor		(not present)
Dell, Inc.	Kevin Marks	Yes
EMC Corp.	Gary S. Robinson	Yes
Emulex	Robert H. Nixon	Yes
ENDL	Ralph O. Weber	Yes
FCI	Douglas Wagner	Yes
Foxconn Electronics	Elwood Parsons	Yes
Fujitsu	Mike Fitzpatrick	Yes
General Dynamics	Tim Mackley	Yes
Hewlett Packard Co.	Rob Elliott	Yes
Hitachi Cable Manchester		(not present)
Hitachi Global Storage Tech.	Dan Colegrove	Yes
IBM Corp.	George O. Penokie	Yes
Intel Corp.	Robert Sheffield	Yes
Iomega Corp.	David Hawks	Yes
Lexar Media, Inc.	Martin Furuhjelm	Yes
LSI Logic Corp.	John Lohmeyer	Yes
Maxtor Corp.	Mark Evans	Yes
Microsoft Corp.	Jeff Mastro	Yes
Molex Inc.	Jay Neer	Yes
Nvidia Corp.	Mark Overby	Yes
Panasonic Technologies, Inc	Terence J. Nelson	Yes
Philips Electronics		(not present)
Pivot3, Inc.		(not present)
PMC-Sierra	Bill Lye	Yes
QLogic Corp.		(not present)
Quantum Corp.	Paul Entzel	Yes
Seagate Technology	Gerald Houlder	Yes
Sierra Logic, Inc.	William Martin	Yes
Storage Technology Corp.		(not present)
Sun Microsystems, Inc.	Vit Novak	Yes
Texas Instruments	Robert Kando	Yes
Toshiba	Yutaka Arakawa	Yes
TycoElectronics	Ashlie Fan	Yes
Veritas Software		(not present)
Vitesse Semiconductor	David Allen	Yes
Western Digital	Curtis Stevens	Yes
Xiotech Corp.	Jeff Williams	Yes

This two-thirds roll call vote passed (37:0:0:8=45).

Gary Robinson took an action item to notify INCITS that T10 has reviewed the FCD, SBC-2, 14776-322, project 1.25.13.11.31,and recommends that the JTC1/SC25 TAG vote to approve said FCD.

Gary Robinson moved that T10 recommends the following list of delegates to the JTC1/SC25 and WG4 meeting September 2005 in Edinburgh, UK: Robert Snively (head of delegation), Roger Cummings, and Claudio DeSanti. Bob Nixon seconded the motion. The motion passed 34:0:1:10=45.

Gary Robinson took an action item to notify INCITS that T10 recommends the following list of delegates to the JTC1/SC25 and WG4 meeting September 2005 in Edinburgh, UK: Robert Snively (head of delegation), Roger Cummings, and Claudio DeSanti.

Gary Robinson moved that T10 has reviewed the following ISs and recommends that the JTC1 TAG vote to reaffirm them:
- 9316-2:2000 Information Technology -- Small Computer System Interface-2 (SCSI-2) -- Part 2: Common Access Method (CAM) Transport SCSI interface module;
- 14776-342:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 342: SCSI Controller Commands - 2 (SCC-2); and
- 14776-381:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 381: Optical Memory Card Device Commands (OMC).

Bob Nixon seconded the motion. The motion passed on a roll call vote of 37:0:0:8=45. Details of the roll call vote were as follows:

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Organization                    Voter                    Vote
Adaptec, Inc.                   Tim Symons               Yes
Agilent Technologies            Pat Thaler               Yes
Amphenol Interconnect           Michael Wingard          Yes
Broadcom Corp.                  Ron Roberts              Yes
Brocade                         Robert Snively           Yes
Cisco Systems, Inc.             Claudio DeSanti          Yes
CNT                                                      (not present)
Dallas Semiconductor                                     (not present)
Dell, Inc.                      Kevin Marks              Yes
EMC Corp.                       Gary S. Robinson         Yes
Emulex                          Robert H. Nixon          Yes
ENDL                            Ralph O. Weber           Yes
FCI                             Douglas Wagner           Yes
Foxconn Electronics             Elwood Parsons           Yes
Fujitsu                         Mike Fitzpatrick         Yes
General Dynamics                Tim Mackley              Yes
Hewlett Packard Co.             Rob Elliott              Yes
Hitachi Cable Manchester                                 (not present)
Hitachi Global Storage Tech.    Dan Colegrove            Yes
IBM Corp.                       George O. Penokie        Yes
Intel Corp.                     Robert Sheffield         Yes
Iomega Corp.                    David Hawks              Yes
Lexar Media, Inc.               Martin Furuhjelm         Yes
LSI Logic Corp.                 John Lohmeyer            Yes
Maxtor Corp.                    Mark Evans               Yes
Microsoft Corp.                 Jeff Mastro              Yes
Molex Inc.                      Jay Neer                 Yes
Nvidia Corp.                    Mark Overby              Yes
Panasonic Technologies, Inc     Terence J. Nelson        Yes
Philips Electronics                                      (not present)
Pivot3, Inc.                                             (not present)
PMC-Sierra                      Bill Lye                 Yes
QLogic Corp.                                             (not present)
Quantum Corp.                   Paul Entzel              Yes
Seagate Technology              Gerald Houlder           Yes
Sierra Logic, Inc.              William Martin           Yes
Storage Technology Corp.                                 (not present)
Sun Microsystems, Inc.          Vit Novak                Yes
Texas Instruments               Robert Kando             Yes
Toshiba                         Yutaka Arakawa           Yes
TycoElectronics                 Ashlie Fan               Yes
Veritas Software                                         (not present)
Vitesse Semiconductor           David Allen              Yes
Western Digital                 Curtis Stevens           Yes
Xiotech Corp.                   Jeff Williams            Yes

This two-thirds roll call vote passed (37:0:0:8=45).
```

Gary Robinson took an action item to notify INCITS that T10 has reviewed the following ISs and recommends that the JTC1 TAG vote to reaffirm them: 9316-2:2000 Information Technology -- Small Computer System Interface-2 (SCSI-2) -- Part 2: Common Access Method (CAM) Transport SCSI interface module; 14776-342:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 342: SCSI Controller Commands - 2 (SCC-2); and 14776-381:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 381: Optical Memory Card Device Commands (OMC).

Gary Robinson moved that T10 has reviewed the following IS and recommends that the JTC1 TAG vote to withdraw it:

- 14776-341:2000 Information Technology -- Small Computer System Interface-3 (SCSI-3) -- Part 341: SCSI Controller Commands (SCC).

Bob Snively seconded the motion. The motion passed on a roll call vote of 37:0:0:8=45. Details of the roll call vote were as follows:

```
Organization                    Voter                 Vote
Adaptec, Inc.                   Tim Symons            Yes
Agilent Technologies            Pat Thaler            Yes
Amphenol Interconnect           Michael Wingard       Yes
Broadcom Corp.                  Ron Roberts           Yes
Brocade                         Robert Snively        Yes
Cisco Systems, Inc.             Claudio DeSanti       Yes
CNT                                                   (not present)
Dallas Semiconductor                                  (not present)
Dell, Inc.                      Kevin Marks           Yes
EMC Corp.                       Gary S. Robinson      Yes
Emulex                          Robert H. Nixon       Yes
ENDL                            Ralph O. Weber        Yes
FCI                             Douglas Wagner        Yes
Foxconn Electronics             Elwood Parsons        Yes
Fujitsu                         Mike Fitzpatrick      Yes
General Dynamics                Tim Mackley           Yes
Hewlett Packard Co.             Rob Elliott           Yes
Hitachi Cable Manchester                              (not present)
Hitachi Global Storage Tech. Dan Colegrove            Yes
IBM Corp.                       George O. Penokie     Yes
Intel Corp.                     Robert Sheffield      Yes
Iomega Corp.                    David Hawks           Yes
Lexar Media, Inc.               Martin Furuhjelm      Yes
LSI Logic Corp.                 John Lohmeyer         Yes
Maxtor Corp.                    Mark Evans            Yes
Microsoft Corp.                 Jeff Mastro           Yes
Molex Inc.                      Jay Neer              Yes
Nvidia Corp.                    Mark Overby           Yes
Panasonic Technologies, Inc  Terence J. Nelson        Yes
Philips Electronics                                   (not present)
Pivot3, Inc.                                          (not present)
PMC-Sierra                      Bill Lye              Yes
QLogic Corp.                                          (not present)
Quantum Corp.                   Paul Entzel           Yes
Seagate Technology              Gerald Houlder        Yes
Sierra Logic, Inc.              William Martin        Yes
Storage Technology Corp.                              (not present)
Sun Microsystems, Inc.          Vit Novak             Yes
Texas Instruments               Robert Kando          Yes
Toshiba                         Yutaka Arakawa        Yes
TycoElectronics                 Ashlie Fan            Yes
Veritas Software                                      (not present)
Vitesse Semiconductor           David Allen           Yes
Western Digital                 Curtis Stevens        Yes
Xiotech Corp.                   Jeff Williams         Yes

This two-thirds roll call vote passed (37:0:0:8=45).
```

Gary Robinson took an action item to notify INCITS that T10 has reviewed the 14776-341:2000 Information Technology -- Small Computer System Interface-3 (SCSI-3) -- Part 341: SCSI Controller Commands (SCC) and recommends that the JTC1 TAG vote to withdraw it.

Gary Robinson moved that T10 has reviewed the following IS and recommends that the JTC1 TAG vote to reaffirm them:

- 13213:1994 Information Technology -- Microprocessor systems -- Control and Status Registers (CSR) Architecture for microcomputer buses;
- 15205:2000 Bus -- Chip and module interconnect bus SBus;
- 13961:2000 Information Technology -- Scalable Technologies -- Interface Coherent Interface (SCI);
- ISO 9314-1:1989 Information Processing Systems -- Distributed Data Interface (FDDI) -- Part 1: Token Ring Physical Layer (FDDI);
- ISO 9314-2:1989 Information Processing Systems -- Fibre Distributed Data Interface (FDDI) -- Part 2: Token Ring Media Access Control (FDDI) -- (MAC);
- 9314-9:2000 Information Technology -- Fibre Distributed Data Interface (FDDI) -- Part 9: Low-cost fibre physical layer medium dependent (LCF-PMD); and
- 9314-21:2000 Information Technology -- Interface Distributed Data Interface (FDDI) -- Part 21: Abstract test suite for FDDI physical layer protocol conformance testing (FDDI PHY ATS).

Curtis Stevens seconded the motion. The motion passed on a roll call vote of 37:0:0:8=45. Details of the roll call vote were as follows:

```
Organization                  Voter                  Vote
Adaptec, Inc.                 Tim Symons              Yes
Agilent Technologies          Pat Thaler              Yes
Amphenol Interconnect         Michael Wingard         Yes
Broadcom Corp.                Ron Roberts             Yes
Brocade                       Robert Snively          Yes
Cisco Systems, Inc.           Claudio DeSanti         Yes
CNT                                                   (not present)
Dallas Semiconductor                                  (not present)
Dell, Inc.                    Kevin Marks             Yes
EMC Corp.                     Gary S. Robinson        Yes
Emulex                        Robert H. Nixon         Yes
ENDL                          Ralph O. Weber          Yes
FCI                           Douglas Wagner          Yes
Foxconn Electronics           Elwood Parsons          Yes
Fujitsu                       Mike Fitzpatrick        Yes
General Dynamics              Tim Mackley             Yes
Hewlett Packard Co.           Rob Elliott             Yes
Hitachi Cable Manchester                              (not present)
Hitachi Global Storage Tech.  Dan Colegrove           Yes
IBM Corp.                     George O. Penokie       Yes
Intel Corp.                   Robert Sheffield        Yes
Iomega Corp.                  David Hawks             Yes
Lexar Media, Inc.             Martin Furuhjelm        Yes
LSI Logic Corp.               John Lohmeyer           Yes
Maxtor Corp.                  Mark Evans              Yes
Microsoft Corp.               Jeff Mastro             Yes
Molex Inc.                    Jay Neer                Yes
Nvidia Corp.                  Mark Overby             Yes
Panasonic Technologies, Inc   Terence J. Nelson       Yes
Philips Electronics                                   (not present)
Pivot3, Inc.                                          (not present)
PMC-Sierra                    Bill Lye                Yes
QLogic Corp.                                          (not present)
Quantum Corp.                 Paul Entzel             Yes
Seagate Technology            Gerald Houlder          Yes
Sierra Logic, Inc.            William Martin          Yes
Storage Technology Corp.                              (not present)
Sun Microsystems, Inc.        Vit Novak               Yes
Texas Instruments             Robert Kando            Yes
Toshiba                       Yutaka Arakawa          Yes
TycoElectronics               Ashlie Fan              Yes
Veritas Software                                      (not present)
Vitesse Semiconductor         David Allen             Yes
Western Digital               Curtis Stevens          Yes
Xiotech Corp.                 Jeff Williams           Yes
```

This two-thirds roll call vote passed (37:0:0:8=45).

Gary Robinson took an action item to notify INCITS that T10 has reviewed the following ISs and recommends that the JTC1 TAG vote to reaffirm them: 13213:1994 Information Technology -- Microprocessor systems -- Control and Status Registers (CSR) Architecture for microcomputer buses; 15205:2000 Bus -- Chip and module interconnect bus SBus; 13961:2000 Information Technology -- Scalable Technologies -- Interface Coherent Interface (SCI); ISO 9314-1:1989 Information Processing Systems -- Distributed Data Interface (FDDI) -- Part 1: Token Ring Physical Layer (FDDI); ISO 9314-2:1989 Information Processing Systems -- Fibre Distributed Data Interface (FDDI) -- Part 2: Token Ring Media Access Control (FDDI) -- (MAC); 9314-9:2000 Information Technology -- Fibre Distributed Data Interface (FDDI) -- Part 9: Low-cost fibre physical layer medium dependent (LCF-PMD); 9314-21:2000 Infor-

mation Technology -- Interface Distributed Data Interface (FDDI) -- Part 21: Abstract test suite for FDDI physical layer protocol conformance testing (FDDI PHY ATS).

12. Liaison Reports

12.1 T11 Liaison Report [Snively]

Bob Snively presented the T11 liaison report contained in T10/05-174.

12.2 T13 Liaison Report [Colegrove]

Dan Colegrove provided an oral report to the committee on the activities of T13. For details regarding T13 activities see www.t13.org.

12.3 SFF Industry Group [Allan]

In the absence of Dal Allan, no report was available.

12.4 IEEE 1394 [Johansson]

In the absence of Peter Johansson, no report was available.

12.5 SCSI Trade Association (STA) [Czekalski]

Marty Czekalski presented an electronic report on the activities of the SCSI Trade Association available in 05-185r0.

George Penokie moved that '4x' be changed to '4e' in the SAS-1.1 connector definitions. Kevin Marks seconded the motion. The motion failed 9:11:9:16=45.

12.6 IETF SCSI over IP [Black/Robinson]

David Black reported that most of the iSCSI documents are published RFCs. The iSCSI extensions over RDMA, iSER, draft is about to go to WG Last Call. The discussion of iSER over Infiniband at the March meeting was inconclusive and the iSER draft was forwarded to Last Call absent Infiniband support. The Infiniband issues will be considered in a separate draft during the July-August meeting week in Paris.

12.7 SNIA [Cummings]

David Black reported that SNIA is in the process of trying to declare victory on SMI-S 1.1.

12.8 Trusted Computing Group [Fitzpatrick]

Mike Fitzpatrick reported the TCG work has been begun formally in the CAP WG.

13. Review of Action Items

603   Gary Robinson will notify INCITS that T10 recommends T10/04-1216r0 as a JTC1/SC25 NWIP for 14776-151: IT - Small Computer System Interface (SCSI) - 1.1. -Part 151: Serial Attached SCSI (SAS-1.1), answering the 6 questions 'Yes' and naming Gary S. Robinson as the project editor.
604   John Lohmeyer will forward SPC-3 Rev 23 to INCITS for first public review.

605   John Lohmeyer will report to INCITS that T10 has reviewed the MMC-4 (INCITS 401) edits documented in T10/05-152r0 and deems them non substantive and that T10 recommends that INCITS continue processing MMC-4 including these edits.

606   John Lohmeyer will notify INCITS that T10 recommends to INCITS that ANSI FCP-2 (INCITS 350:2003) be maintained without change regardless of the status of the ISO version.

607   Gary Robinson will notify the JTC1/SC25 TAG that T10 has reviewed FCD, SBC-2, 14776-322, project 1.25.13.11.31 and recommends a vote to approve it.

608   Gary Robinson will notify INCITS that T10 recommends the following list of delegates to the JTC1/SC25 and WG4 meeting September 2005 in Edinburgh, UK: Robert Snively (head of delegation), Roger Cummings, and Claudio DeSanti.

609   Gary Robinson will notify INCITS that T10 has reviewed the following ISs and recommends that the JTC1 TAG vote to reaffirm them: 9316-2:2000 Information Technology -- Small Computer System Interface-2 (SCSI-2) -- Part 2: Common Access Method (CAM) Transport SCSI interface module; 14776-342:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 342: SCSI Controller Commands - 2 (SCC-2); and 14776-381:2000 Information Technology -- Small Computer System Interface (SCSI) -- Part 381: Optical Memory Card Device Commands (OMC).

610   Gary Robinson will notify INCITS that T10 has reviewed the 14776-341:2000 Information Technology -- Small Computer System Interface-3 (SCSI-3) -- Part 341: SCSI Controller Commands (SCC) and recommends that the JTC1 TAG vote to withdraw it.

611   Gary Robinson will notify INCITS that T10 has reviewed the following ISs and recommends that the JTC1 TAG vote to reaffirm them: 13213:1994 Information Technology -- Microprocessor systems -- Control and Status Registers (CSR) Architecture for microcomputer buses; 15205:2000 Bus -- Chip and module interconnect bus SBus; 13961:2000 Information Technology -- Scalable Technologies -- Interface Coherent Interface (SCI); ISO 9314-1:1989 Information Processing Systems -- Distributed Data Interface (FDDI) -- Part 1: Token Ring Physical Layer (FDDI); ISO 9314-2:1989 Information Processing Systems -- Fibre Distributed Data Interface (FDDI) -- Part 2: Token Ring Media Access Control (FDDI) -- (MAC); 9314-9:2000 Information Technology -- Fibre Distributed Data Interface (FDDI) -- Part 9: Low-cost fibre physical layer medium dependent (LCF-PMD); 9314-21:2000 Information Technology -- Interface Distributed Data Interface (FDDI) -- Part 21: Abstract test suite for FDDI physical layer protocol conformance testing (FDDI PHY ATS).

14. Meeting Schedule

The next plenary meeting of T10 will be Thursday July 14, 2005 in Colorado Springs, CO at the Antlers Hilton Hotel (719-955-5600), hosted by LSI Logic. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

```
                         July 2005 Meeting Map
                         (2005/05/05 Version)

Monday 7/11          9   10  11  12  1   2   3   4   5   6   7   8
                     +==============+       +================+
                     | ADI-2 WG     |       | SMC-3 WG       |         (10)
                     +=============+=====+================+
                     | SAS Prot WG                         |         (40)
                     +======================================+

Tuesday 7/12   8   9   10  11  12  1   2   3   4   5   6   7   8
                     +======================================+
                     | SAS Physical WG                     |         (25)
                     +==================================+===+
                     | SCSI/ATA Trans WG                |         (40)
                     +==============+--------------+===+
                     | FCP-3 WG     | STA Marcom *  |         (20)
                     +==============+--------------+
                     | MMC WG                      |         (25)
                     +============================+

Wednesday 7/13       9   10  11  12  1   2   3   4   5   6   7   8
                     +==================================+
                     | CAP WG                           |         (40)
                     +==================================+
                     | MMC WG                           |
                     +==============+======+===========+
                     | SSC-3 WG     |      |SFF        |         (30)
                     +--------------+------+-------+---+
                     | STA Plenary * / TCC*          |         (20)
                     +---------------------------+

Thursday 7/14  8   9   10  11  12  1   2   3   4   5   6   7   8
                     +==============+====================+
                     | T10 Plenary  | T10 Editor's Meeting|       (45/10)
                     +==============+====================+

Friday 7/15    8   9   10  11  12  1   2   3   4   5   6   7   8
                     No meetings planned for Friday.
```

/ means the next meeting starts when the previous meeting concludes
Meetings marked with == are T10-authorized meetings.
Meetings marked with -- are other groups and may change without notice.
Meetings marked with (*) are closed meetings of other groups.

```
 Other T10-authorized meetings:
Meeting          Date               Location / Contact
--------------   -----------------  ------------------------------------
SAS PHY Calls                       TBA via T10 reflector / Cox
SAS Prot Calls                      TBA via T10 reflector / Elliott
SAS PHY Call     May 9 1p CDT       TBA via T10 reflector / Cox
SAS Zoning       May 13 1p PDT tent TBA via T10 reflector / Heng Liao
SAT Call         May 19 noon-3p PDT TBA via T10 reflector / Sheffield
SAS 6gb PHY      May 25-26          Houston / Elliott
SAT WG           Jun 20             Irvine, CA (T13) / Stevens


  Map Abbreviation Key:
ADI:        Automation Drive Interface (tape library interface)
```

```
Amnd:         Amendment
CAP:          Commands, Architecture, and Protocols
Fast-80:      Data Transfer at 80 Mega-transfers/sec. (a.k.a., Ultra3,Ultra160)
Fast-160:     Data Transfer at 160 Mega-transfers/sec. (a.k.a., Ultra320)
FC:           Fibre Channel
I/F:          Interface
IETF:         Internet Engineering Task Force (the group that sets
              Internet standards)
iFC:          Internet Fibre Channel
IPS:          Internet Protocol SCSI
iSCSI:        Internet SCSI
LB:           Letter Ballot
MMC:          Multimedia Commands (CD-ROM, DVD, etc.)
OSD:          Object-based Storage Device
Par.:         Parallel (e.g., SPI-n)
PH or PHY:    Physical (Connectors, Cables, Transceivers, etc.)
PIP:          (SCSI) Passive Interconnect Performance
Plenary:      Full Committee Meeting
Res:          Resolution
SAS:          Serial Attached SCSI
SBC-2:        SCSI Block Commands - 2
SBP-3:        Serial Bus Protocol - 3
SCSI:         Small Computer System Interface
SDI:          Serial Attached SCSI Driver Interface
SES:          SCSI Enclosure Services
SFF:          SFF Industry Group (not an INCITS activity)
SG:           Study Group
SMC-2:        SCSI Medium Changer - 2 Commands
SPC-3:        SCSI Primary Commands - 2 (3rd generation)
SPI-4:        Fourth Generation SCSI Parallel Interface
SPI-5:        Fifth Generation SCSI Parallel Interface
SRP:          SCSI RDMA Protocol (was SVP)
SRP-2:        SCSI RDMA Protocol (2nd generation)
SSC-2:        SCSI Stream Commands - 2 (includes Tape)
SSM-2:        SCSI Signal Modeling (2nd generation)
SSWGs:        Specific-Subject Working Groups
STA:          SCSI Trade Association (Closed meeting -- not an INCITS activity)
STA Marcom:   STA Marketing Communications (Closed meeting -- not an INCITS activity)
STA Tech:     STA Technical Meeting (T10 members invited)
STP:          Serial ATA Tunneled Protocol
T10:          SCSI Storage Interfaces Technical Committee
T11:          Device Level Interfaces Technical Committee
WG:           Working Group (same as Ad Hoc Group)
```

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

```
Activity                    Contact         Telephone/Email
-------------------------- --------------- ------------------------------
ADT, ADT-2                  Paul Entzel     (720) 406-5782
                                            paul.entzel@quantum.com
ADC, ADC-2                  Rod Wideman     (720) 249-5796
                                            rod.wideman@adic.com
SBC-2,SES-2,SAS-1.1,SAS-2,  Rob Elliott     (281) 518-5037
BCC,SDI                                     Elliott@hp.com
MMC-4, MMC-5                Bill McFerrin   (325) 423-1560
                                            billmc@tstar.net
SBP-3                       Peter Johansson (510) 527-3926
                                            PJohansson@ACM.org
SAM-4                       George Penokie  (507) 253-5208
                                            gop@us.ibm.com
SAT                         Bob Sheffield   (480) 554-8597
                                            robert.l.sheffield@intel.com
SMC-2                       Erich Oetting   (303) 673-2178
                                            Erich_Oetting@Stortek.com
SMC-3                       Noud Snelder    +31408446108
                                            Noud.snelder@bdt.de
SPC-3, SAM-3, SPC-4, OSD-2  Ralph Weber     (214) 912-1373
                                            roweber@acm.org
SSC-3, FCP-3                Dave Peterson   (763) 268-6139
                                            david_peterson@cnt.com
Other Activities            John Lohmeyer   (719) 533-7560
                                            lohmeyer@t10.org
```

The long-term T10 meeting week schedule is:

```
Date               Location                 Host/Comments
------------------ ------------------------ -----------------------------
Jul 11-15, 2005    Colorado Springs, CO     LSI Logic
Sep 12-16, 2005    Vancouver, BC            PMC Sierra
Nov 7-11, 2005     Austin, TX               Dell Computer
Jan 9-13, 2006     Phoenix, AZ              Intel Corp.
Mar 6-10, 2006     TBD                      SCSI Trade Association
May 8-12, 2006
Jul 10-14, 2006    Colorado Springs, CO     LSI Logic
Sep 11-15, 2006    Nashua, NH               Hitachi Cable Manchester
Nov 6-10, 2006     Las Vegas, NV            Hitachi GST
Approved dates for 2007:
Jan 15-19, 2007
Mar 12-16, 2007
May 7-11, 2007
Jul 9-13, 2007
Sep 17-21, 2007 (to avoid conflicts with the Jewish High Holy Days)
Nov 5-9, 2007
```

John Lohmeyer asked people interested hosting one of the above meetings to contact him.

14.1 Authorization of Working Group Meetings

Curtis Stevens moved that the Tuesday afternoon meeting time slot be changed from CAP to SAT. Mark Overby seconded the motion. The motion passed 13:4:9:19=45.

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.

Curtis Stevens moved that T10 authorize the T10-related meetings and events in the list above that had not previously been approved through the end of June 2005. Bill Martin seconded the motion. The motion passed 27:2:0:16=45.

15. Adjournment

John Lohmeyer moved and Ralph Weber seconded that the meeting be adjourned. In the absence of any objections, the motion passed unanimously. The meeting was adjourned at 11:35 a.m. on Thursday May 5, 2005.

Enclosure(1) -- Meeting Attendees

```
            Name                    S        Organization
----------------------------------- -- -----------------------------------
Mr. Tim Symons                      P  Adaptec, Inc.
Ms. Pat Thaler                      P  Agilent Technologies
Mr. Michael Wingard                 P  Amphenol Interconnect
Mr. Ron Roberts                     A  Broadcom Corp..
Mr. Robert Snively                  P  Brocade Comm. Systems, Inc.
Dr. Claudio DeSanti                 P  Cisco Systems, Inc.
Mr. Kevin Marks                     P  Dell, Inc.
Mr. David Black                     A  EMC Corp.
Mr. Gary S. Robinson                P  EMC Corp.
Mr. Robert H. Nixon                 P  Emulex
Mr. Ralph O. Weber                  P  ENDL Texas
Mr. Douglas Wagner                  P  FCI
Mr. Elwood Parsons                  P  Foxconn Electronics
Mr. Mike Fitzpatrick                P  Fujitsu
Mr. Tim Mackley                     A  General Dynamics
Mr. Michael Banther                 V  Hewlett Packard Co.
Mr. Rob Elliott                     P  Hewlett Packard Co.
Mr. Dan Colegrove                   P  Hitachi Global Storage Tech.
Mr. George O. Penokie               P  IBM / Tivoli Systems
Mr. Robert Sheffield                P  Intel Corp.
Mr. David Hawks                     P  Iomega Corp.
Mr. Dennis Moore                    AV KnowledgeTek, Inc.
Mr. Martin Furuhjelm                A  Lexar Media, Inc.
Mr. John Lohmeyer                   P  LSI Logic Corp.
Mr. Martin Czekalski                A  Maxtor Corp.
Mr. Mark Evans                      P  Maxtor Corp.
Mr. Jeff Mastro                     A  Microsoft Corp.
Mr. Jay Neer                        P  Molex Inc.
Mr. Mark Overby                     P  Nvidia Corp.
Dr. Terence J. Nelson               P  Panasonic Technologies, Inc
Mr. Bill Lye                        A  PMC-Sierra
Mr. Paul Entzel                     P  Quantum Corp.
Dr. Paul Suhler                     A  Quantum Corp.
Mr. Alvin Cox                       V  Seagate Technology
Mr. Gerald Houlder                  P  Seagate Technology
Mr. William Martin                  P  Sierra Logic, Inc.
Mr. Vit Novak                       P  Sun Microsystems, Inc.
Mr. Robert Kando                    A  Texas Instruments
Mr. Yutaka Arakawa                  P  Toshiba
Ms. Ashlie Fan                      P  TycoElectronics
Mr. Dan Gorenc                      A  TycoElectronics
Mr. David Allen                     A  Vitesse Semiconductor
Mr. Curtis Stevens                  P  Western Digital
Mr. Jeff Williams                   P  Xiotech Corp.
Mr. Rich Ramos                      V  Xyratex


45 People Present


Status Key:  P   - Principal
             A,A# - Alternate
             AV  - Advisory Member
             L   - Liaison
             V   - Visitor
```

Enclosure(2) -- T10 Attendance Database
     Generated on 2005/05/05 at 17:30:01

```
Mr. Tim Symons  (P)              Phone: (719) 884 8704
Adaptec, Inc.                      Fax:
5385 Mark Dabling Blvd.          Email: Timothy_Symons at adaptec dot com
Suite 100
Colorado Springs, CO 80918


Mr. Bernhard Laschinsky  (AV)    Phone: (610) 712-7937
Agere Systems                      Fax: (610) 712-4574
Room 12D-225B                    Email: blaschinsky at agere dot com
1110 American Parkway NE
Allentown, PA  18109-9138


Mr. Ken Paist  (AV)              Phone: (610) 712-3265
Agere Systems                      Fax:
Room 12D-225B                    Email: paist at agere dot com
1110 American Parkway NE
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Ms. Pat Thaler  (P)              Phone: (916) 788-5662
Agilent Technologies               Fax:
1101 Creekside Ridge Dr          Email: pat_thaler at agilent dot com
Suite 100, MS RG-10
Roseville, CA 95678


Mr. Niels Reimers  (A)           Phone: (916) 788-5720
Agilent Technologies               Fax: (916) 788-6136
1101 Creekside Ridge             Email: niels_reimers at agilent dot com
MS RG-10
Roseville, CA 95678


Mr. Paul von Stamwitz  (AV)      Phone: 408.523.1085
AMCC                               Fax:
455 West Maude Avenue            Email: pvstamwitz at amcc dot com
Sunnyvale, CA 95085



Mr. Michael Wingard  (P)         Phone: (607) 786-4241
Amphenol Interconnect              Fax: (607) 786-4311
20 Valley St.                    Email: mike dot wingard at aipce dot com
Endicott, NY 13760



Mr. Brian Miller  (A)            Phone: (281) 340-6500 x130
Amphenol Interconnect              Fax: (281) 340-6501
4850 Wright Road, Ste. 190       Email: bmiller at assembletech dot com
Stafford, TX 77477



Mr. Paul von Stamwitz  (AV)      Phone: (408) 523-1085
Applied Micro Circuits Corp.       Fax: (408) 523-1001
455 West Maude Avenue            Email: pvstamwitz at amcc dot com
Sunnyvale, CA 94085-3517



Mr. Paul Griffith  (P)           Phone: 408-313-6643
Broadcom Corp.                     Fax:
```

```
2451 Mission College             Email: griffith at broadcom dot com
Santa Clara, CA 95054


Mr. Ron Roberts  (A)             Phone: (530) 677-5714
Broadcom Corp..                    Fax: (530) 677-1218
5240 Stampede Lane               Email: rkroberts at aol dot com
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Mr. Robert Snively  (P)          Phone: (408) 333-8135
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Mr. Steven Wilson  (A)           Phone: (408) 333-8128
Brocade Comm. Systems, Inc.        Fax: (408) 392-6655
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Mr. Leroy Fong  (AV)             Phone: (949) 855-7887
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18 Thomas St.                    Email: leroyf at circuitassembly dot com
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Mr. Ian Morrell  (AV)            Phone: (949) 598-1780
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Dr. Claudio DeSanti  (P)         Phone: (408) 853-9172
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170 W. Tasman Dr.                Email: cds at cisco dot com
San Jose, CA 95134


Mr. Fabio Maino  (A)             Phone: (408) 853-7530
Cisco Systems, Inc.                Fax: (408) 853-7530
170 W. Tasman Dr.                Email: fmaino at cisco dot com
San Jose, CA 95134


Mr. David Peterson  (P)          Phone: (763) 268-6139
CNT                                Fax:
6000 Nathan Lane North           Email: david_peterson at cnt dot com
Minneapolis, MN 55442


Mr. John Tyndall  (AV)           Phone: (512) 928-7282
Crossroads Systems, Inc.           Fax:
8300 North Mopac Expressway      Email: jtyndall at crossroads dot com
Austin, TX 78749


Mr. James A. Lott, Jr.  (P)      Phone: (972) 371-4939
```

```
Dallas Semiconductor              Fax: (972) 371-4370
4401 S. Beltwood Pkwy.            Email: jim dot lott at dalsemi dot com
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Mr. Doug Cole  (A)                Phone: 972-371-3887
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Mr. Kevin Marks  (P)              Phone: (512) 723-9173
Dell, Inc.                        Fax: (512) 723-6657
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Round Rock, TX 78682


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