Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. Approval of Minutes - May 2005 - Oklahoma City, OK (T10/05-165r1)
5. Document Distribution
6. Call for Patents
7. Review of Old Action Items
8. Project Status Reports
   8.1 Project Status Summary and INCITS Liaison [Lohmeyer]
   8.1.1 INCITS Antitrust Guidelines
   8.2 SCSI Primary Commands - 3 (SPC-3) Project 1416-D [Weber]
   8.3 SCSI Block Commands - 2 (SBC-2) Project 1417-D [Elliott]
   8.4 Bridge Controller Commands (BCC) Project 1528-D [Elliott]
   8.5 MultiMedia Command Set - 4 (MMC-4) Project 1545-D [McFerrin]
   8.6 Automation/Drive Interface - Transport Protocol (ADT) Project 1557-D [Entzel]
   8.7 Automation/Drive Interface - Commands (ADC) Project 1558-D [Entzel/Wideman]
   8.8 SCSI Enclosure Services - 2 (SES-2) Project 1559-D [Elliott]
   8.9 Fibre Channel Protocol - 3 (FCP-3) Project 1560-D [Peterson]
   8.10 Serial Attached SCSI - 1.1 (SAS-1.1) Project 1601-D [Elliott]
   8.11 SCSI Stream Commands - 3 (SSC-3) Project 1611-D [Peterson]
   8.12 MultiMedia Command Set - 5 (MMC-5) Project 1675-D [McFerrin]
   8.13 SCSI Architecture Model - 4 (SAM-4) Project 1683-D [Penokie]
   8.14 SCSI / ATA Translation (SAT) Project 1711-D [Sheffield]
   8.15 Object-Based Storage Devices - 2 (OSD-2) Project 1729-D [Weber]
   8.16 SCSI Media Changer Command Set - 3 (SMC-3) Project 1730-D [Banther]
   8.17 SCSI Primary Commands - 4 (SPC-4) Project 1731-D [Weber]
   8.18 Serial Attached SCSI Driver Interface (SDI) Project 1740-D [Elliott]
   8.19 Automation/Drive Interface - Commands - 2 (ADC-2) Project 1741-D [Hawks]
   8.20 Automation/Drive Interface - Transport Protocol - 2 (ADT-2) Project 1742-D [Entzel]
   8.21 Serial Attached SCSI - 2 (SAS-2) Project 1760-D [Elliott]
9. Old Business
10. New Business
   10.1 Actions on SAS Protocol Working Group Recommendations
   10.2 Actions on SAS PHY Working Group Recommendations
   10.3 Actions on SAT Working Group Recommendations
   10.4 Actions on CAP Working Group Recommendations
   10.5 Actions on Other Working Group Recommendations
10.6 Apply ASC SCSI TO HOST SYSTEM INTERFACE FAILURE to Disks and Tapes

11. ISO/IEC
   11.1 ISO/IEC Report [Robinson]
   11.2 ISO/IEC Business [Robinson]

12. Liaison Reports
   12.1 T11 Liaison Report [Snively]
   12.2 T13 Liaison Report [Colegrove]
   12.3 SFF Industry Group [Allan]
   12.4 IEEE 1394 [Johansson]
   12.5 SCSI Trade Association (STA) [Czekalski]
   12.6 IETF SCSI over IP [Black/Robinson]
   12.7 SNIA [Cummings]
   12.8 Trusted Computing Group [Fitzpatrick]

13. Review of Action Items
14. Meeting Schedule
   14.1 Authorization of Working Group Meetings
15. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Thursday May 5, 2005. He thanked LSI Logic 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.

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

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

10.6 Apply ASC SCSI TO HOST SYSTEM INTERFACE FAILURE to Disks and Tapes

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).


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 8 people from 5 organizations informing them that their membership was in jeopardy due to non-attendance (see 05-189r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

CNT
Hitachi Cable Manchester
Pivot3, Inc.
QLogic Corp.
Storage Technology Corp.

John Lohmeyer noted that CNT is now McDATA.

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

M-Systems joined T10 with Avraham Shimor as the Principal member and Ariel Sobelman as the Alternate member.

The T10 membership during the meeting was 46 organizations, up 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:


<table>
<thead>
<tr>
<th>Ballot:</th>
<th>04-326r0</th>
<th>05-125r0</th>
<th>05-134r0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report:</td>
<td>04-327r0</td>
<td>05-126r0</td>
<td>05-135r0</td>
</tr>
<tr>
<td>Acronym:</td>
<td>SPC-3</td>
<td>SAS-1.1</td>
<td>FCP-3</td>
</tr>
<tr>
<td>Acronym:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Organization

<table>
<thead>
<tr>
<th>Agilent Technologies</th>
<th>DNV</th>
<th>Yes</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossroads Systems, Inc.</td>
<td>(*)</td>
<td>Yes</td>
<td>DNV</td>
</tr>
<tr>
<td></td>
<td>DNV</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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)
4. **Approval of Minutes - May 2005 - Oklahoma City, OK (T10/05-165r1)**

George Penokie 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 July 21, 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

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.

604 John Lohmeyer will forward SPC-3 Rev 23 to INCITS for first public review. Complete.

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. Complete.

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. Complete.

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. Carry Over.

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. Carry Over.


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. Carry Over.

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
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]

Ralph Weber reported that the ANSI Editor’s comments regarding SPC-3 were received and responded to during the past week. Publication is anticipated in the next month or so.

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

John Lohmeyer reported that SBC-2 has been published as ANSI INCITS 405-2005. He congratulated Rob Elliott, the SBC-2 Technical Editor.

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 MMC-4 is at INCITS for management review.

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

John Lohmeyer reported that ADT has been published as ANSI INCITS 406-2005. He congratulated Paul Entzel, the ADT Technical Editor.

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

John Lohmeyer reported that ADC has been published as ANSI INCITS 403-2005. He congratulated Rod Wideman, the ADC Technical Editor.
8.8 SCSI Enclosure Services - 2 (SES-2) Project 1559-D [Elliott]

Rob Elliott reported that no SES-2 proposals were recommended this week. Consequently, no new revision will be generated until at least after the September meeting.

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

Dave Peterson presented a report on the activities of the FCP-3 working group (minutes in 05-282). There were issues with FCP_DL processing. An FC-4 reason code discrepancy will be discussed on the reflector. He stated a hope for forwarding to Public Review after the September meeting.

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

Rob Elliott said that issues with the Transport Layer state machine have delayed the forwarding of SAS-1.1. He stated a hope for forwarding SAS-1.1 to Public Review after the September meeting.

Minutes of the SAS protocol working group are in 05-272 and the SAS PHY working group are in 05-281.

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

Dave Peterson presented a report summarizing the activities of the SSC-3 working group (minutes in 05-283).

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

Bill McFerrin reported that the MMC-5 group is trying to finalize some issues with the Mt. Fuji group regarding dual layer DVD-R and HD-DVD. Work on the draft is proceeding sequentially on specific sections of the document. A line-by-line review was completed on about 20% the document. The plan is to have all the dual layer DVD-R and HD-DVD issues resolved in September.

Bill stated that an MMC-5 review session will be held near Austin on November 1-4, i.e., the week preceding the T10 meeting week held in Austin.

No new technical input is being accepted; the work is directed at stabilizing the existing proposals.

8.13 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 September meeting week.

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

Bob Sheffield reviewed the recent SAT activities (minutes in 05-228, 05-249, 05-256 and 05-273). He provided a review document for the committee’s edification in 05-286r0. He stated that SAT revision 5 will be posted in time for the next the mailing The target for Letter Ballot is after the November meeting week.

8.15 Object-Based Storage Devices - 2 (OSD-2) Project 1729-D [Weber]

Ralph Weber reported that work is underway to prepare a new revision of OSD-2, but that the new revision will not be posted in time for the mailing.
8.16 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 05-254). Michael encouraged members to solicit input for SMC-3 and SSC-3 using a memo that can be found in 05-175r3.

8.17 SCSI Primary Commands - 4 (SPC-4) Project 1731-D [Weber]

Ralph Weber stated that r0 of SPC-4, which will include the ANSI Editor’s comments regarding SPC-3, will be posted. In addition, SPC-4 r01 will be posted containing all approved changes. Both revisions should be posted before the next meeting but not in time for the mailing.

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

Rob Elliott noted that any changes to the SDI will be handled in the CAP working group and that no changes are currently proposed.

8.19 Automation/Drive Interface - Commands - 2 (ADI-2) Project 1741-D [Hawks]

Paul Suhler reported on the activities of the ADI working group (minutes in 05-155). Paul reported that Paul Entzel will replace David Hawks as ADC-2 editor.

8.20 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 05-155).

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

Rob Elliott reported that work has begun SAS-2 and that STA has been asked to provide guidance on the 6 Gbs features.

9. Old Business

There was no old business.

10. New Business

10.1 Actions on SAS Protocol Working Group Recommendations

The recommendations from the SAS protocol working group (minutes in 05-272) were presented to the committee.

George Penokie reviewed 05-167r5 (New NOTIFY to indicate imminent power failure) [Penokie] a proposal recommended for inclusion in SAS-2.

George Penokie moved that 05-167r5 be approved for inclusion in SAS-2. Gerry Houlder seconded the motion. The motion passed on a vote of 28:0:6:12=46.

10.2 Actions on SAS PHY Working Group Recommendations

There were no recommendations made by the SAS physical working group (minutes in 05-281).
10.3 Actions on SAT Working Group Recommendations

The recommendations from the SAT working group (minutes in 05-273) were presented to the committee.

George Penokie and Mark Overby reviewed the following proposals recommended for inclusion in SAT:

- 05-136r2 (REASSIGN BLOCKS command) [Bellamy]
- 05-177r2 (Write Same Translation) [Stevens]
- 05-227r2 (READ MEDIA SERIAL NUMBER proposal) [Overby]
- 05-229r0 (Remove Persistent Reservation Commands) [Lohmeyer]
- 05-233r3 (ATA Errors to SCSI Errors - Translation Map) [Bellamy]
- 05-238r2 (Informational Exceptions Control mode page) [Bellamy]
- 05-239r1 (Caching mode page) [Bellamy]
- 05-241r2 (Read-Write Error Recovery mode page) [Bellamy]
- 05-253r1 (PACKET / non-PACKET Device Definition) [Overby]
- 05-280r1 (COMRESET Notification) [Overby]

Bob Sheffield moved that 05-136r2, 05-177r2, 05-227r2, 05-229r0, 05-233r3, 05-238r2, 05-239r1, 05-241r2, 05-253r1, and 05-280r1 be approved for inclusion in SAT. Mark Overby seconded the motion. The motion passed on a vote of 30:0:2:14=46.

10.4 Actions on CAP Working Group Recommendations

The recommendations from the CAP working group (minutes in 05-274) were presented to the committee.

George Penokie reviewed the following proposals recommended for inclusion in SPC-4:

- 05-230r0 (Obsolete Per Initiator Port in SPC-4) [Weber]
- 05-003r3 (VPD Page 83 Identifier s/b Designator Changes) [Weber, Penokie]

George Penokie reviewed 04-371r2 (Enable Background Operation Error Reporting Bit) [Penokie] a proposal recommended for SPC-4 and SBC-3.

Ralph Weber moved that 05-230r0 and 05-003r3 be approved for inclusion in SPC-4 and that 04-371r2 be approved for SPC-4 and SBC-3. George Penokie seconded the motion. The motion passed on a vote of 30:0:2:14=46.

10.5 Actions on Other Working Group Recommendations

No actions from other working groups were presented for committee consideration.

10.6 Apply ASC SCSI TO HOST SYSTEM INTERFACE FAILURE to Disks and Tapes

George Penokie and Ralph Weber reviewed a request that the additional sense code SCSI TO HOST SYSTEM INTERFACE FAILURE be modified to apply to disk and tape devices.

Paul Suhler moved that the additional sense code SCSI TO HOST SYSTEM INTERFACE FAILURE be modified to apply to disk and tape devices in SPC-4. Erich Oetting seconded the motion.

Mark Overby made a friendly amendment that reduced block devices also be added to the additional sense code. Both Paul and Erich agreed that the amendment was friendly.

The amended motion passed on a vote of 30:0:2:14=46.
11. ISO/IEC

11.1 ISO/IEC Report [Robinson]


11.2 ISO/IEC Business [Robinson]

No new ISO business was brought before the committee.

12. Liaison Reports

12.1 T11 Liaison Report [Snively]

John Lohmeyer presented the T11 liaison report contained in T10/05-264.

12.2 T13 Liaison Report [Colegrove]

Dan Colegrove provided an oral report to the committee on the activities of T13. Dan noted that negotiations are underway to move responsibility for the SATA transport definition to the SATA I/O group. 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 05-287r0.

12.6 IETF SCSI over IP [Black/Robinson]

David Black reported that the next IETF meeting is the first week in August in Paris, where a major topic will be adapting iSER to Infiniband. An Implementer’s Guide for iSCSI is being development. iSER is going forward for IETF approval soon.

12.7 SNIA [Cummings]

In the absence of Roger Cummings, no report was available.

12.8 Trusted Computing Group [Fitzpatrick]

Mike Fitzpatrick reported verbally on the activities of the TCG and provided an electronic report in 05-288.
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.

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.


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.


14. Meeting Schedule

The next plenary meeting of T10 will be Thursday September 15, 2005 in Vancouver, BC at the Vancouver Marriott Pinnacle Downtown Hotel (604-684-1128; Reservations: 800-207-4150), hosted by PMC-Sierra. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:
September 2005 Meeting Map
(2005/07/14 Version)

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

Tuesday 9/13
8 9 10 11 12 1 2 3 4 5 6 7 8
+-------------------+-------------------+
| SAS Physical WG | (45) |
+-------------------+-------------------+
| SCSI/ATA Trans WG | (30) |
+-------------------+-------------------+
| STA Marcom * | (35) |
+-------------------+-------------------+
| FCP-3 WG | SSC-3 WG | (15) |
+-------------------+-------------------+
| MMC WG | (25) |
+-------------------+-------------------+

Wednesday 9/14
9 10 11 12 1 2 3 4 5 6 7 8
+-------------------+-------------------+
| CAP WG | (40) |
+-------------------+-------------------+
| MMC WG | (25) |
+-------------------+-------------------+
| SFF | (30) |
+-------------------+-------------------+
| STA Plenary * / TCC* | (20) |
+-------------------+-------------------+

PMC-Sierra Hosted Boat Cruise (must RSVP) --> | Boat Cruise |
+-------------------+-------------------+

Thursday 9/15
8 9 10 11 12 1 2 3 4 5 6 7 8
+-------------------+-------------------+
| T10 Plenary | T10 Editor’s Meeting | (50/10) |
+-------------------+-------------------+

Friday 9/16
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:

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Location / Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAS PHY Calls</td>
<td>TBA via T10 reflector / Cox</td>
<td></td>
</tr>
<tr>
<td>SAS Prot Calls</td>
<td>TBA via T10 reflector / Elliott</td>
<td></td>
</tr>
<tr>
<td>SAT Call</td>
<td>Tue Jul 26 12n PDT</td>
<td>TBA via T10 reflector / Sheffield</td>
</tr>
<tr>
<td>SAT WG</td>
<td>Mon Aug 22</td>
<td>Boulder, CO (T13) / Sheffield</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Contact</th>
<th>Telephone/Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT, ADT-2</td>
<td>Paul Entzel</td>
<td>(720) 406-5782 <a href="mailto:paul.entzel@quantum.com">paul.entzel@quantum.com</a></td>
</tr>
<tr>
<td>ADC, ADC-2</td>
<td>Rod Wideman</td>
<td>(720) 249-5796 <a href="mailto:rod.wideman@adic.com">rod.wideman@adic.com</a></td>
</tr>
<tr>
<td>SBC-2, SES-2, SAS-1.1, SAS-2, BCC, SDI</td>
<td>Rob Elliott</td>
<td>(281) 518-5037 <a href="mailto:Elliott@hp.com">Elliott@hp.com</a></td>
</tr>
<tr>
<td>MMC-4, MMC-5</td>
<td>Bill McFerrin</td>
<td>(325) 423-1560 <a href="mailto:billmc@tstar.net">billmc@tstar.net</a></td>
</tr>
<tr>
<td>SBP-3</td>
<td>Peter Johansson</td>
<td>(510) 527-3926 <a href="mailto:PJohansson@ACM.org">PJohansson@ACM.org</a></td>
</tr>
<tr>
<td>SAM-4</td>
<td>George Penokie</td>
<td>(507) 253-5208 <a href="mailto:gop@us.ibm.com">gop@us.ibm.com</a></td>
</tr>
<tr>
<td>SAT</td>
<td>Bob Sheffield</td>
<td>(480) 554-8597 <a href="mailto:robert.1.sheffield@intel.com">robert.1.sheffield@intel.com</a></td>
</tr>
<tr>
<td>SMC-2</td>
<td>Erich Oetting</td>
<td>(303) 673-2178 <a href="mailto:Erich_Oetting@Stortek.com">Erich_Oetting@Stortek.com</a></td>
</tr>
<tr>
<td>SMC-3</td>
<td>Noud Snelder</td>
<td>+31408446108 <a href="mailto:Noud.snelder@bdt.de">Noud.snelder@bdt.de</a></td>
</tr>
<tr>
<td>SPC-3, SAM-3, SPC-4, OSD-2</td>
<td>Ralph Weber</td>
<td>(214) 912-1373 <a href="mailto:roweber@acm.org">roweber@acm.org</a></td>
</tr>
<tr>
<td>SSC-3, FCP-3</td>
<td>Dave Peterson</td>
<td>(763) 268-6139 <a href="mailto:david.peterson@mcdata.com">david.peterson@mcdata.com</a></td>
</tr>
<tr>
<td>Other Activities</td>
<td>John Lohmeyer</td>
<td>(719) 533-7560 <a href="mailto:lohmeyer@t10.org">lohmeyer@t10.org</a></td>
</tr>
</tbody>
</table>

The long-term T10 meeting week schedule is:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Host/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep 12-16, 2005</td>
<td>Vancouver, BC</td>
<td>PMC Sierra</td>
</tr>
<tr>
<td>Nov 7-11, 2005</td>
<td>Austin, TX</td>
<td>Dell Computer</td>
</tr>
<tr>
<td>Jan 9-13, 2006</td>
<td>Phoenix, AZ</td>
<td>Intel Corp.</td>
</tr>
<tr>
<td>Mar 6-10, 2006</td>
<td>TBD</td>
<td>SCSI Trade Association</td>
</tr>
<tr>
<td>May 8-12, 2006</td>
<td>Seattle, WA</td>
<td>Nvidia Corp.</td>
</tr>
<tr>
<td>Jul 10-14, 2006</td>
<td>Colorado Springs, CO</td>
<td>LSI Logic</td>
</tr>
<tr>
<td>Sep 11-15, 2006</td>
<td>Nashua, NH</td>
<td>Hitachi Cable Manchester</td>
</tr>
<tr>
<td>Nov 6-10, 2006</td>
<td>Las Vegas, NV</td>
<td>Hitachi GST</td>
</tr>
</tbody>
</table>

Approved dates for 2007:
- Jan 15-19, 2007
- Mar 12-16, 2007
- May 7-11, 2007
- Jul 9-13, 2007 (to avoid conflicts with the Jewish High Holy Days)

Proposed dates for 2008:

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

John Lohmeyer moved that T10 approve the March and May 2006 meeting locations and hosts. Mark Overby seconded the motion. In the absence of any objections, the motion passed unanimously.
14.1 Authorization of Working Group Meetings

John noted that the working group meetings are required to operate under the same voting procedures as does T10 (that is, one vote per organization) and the results of a working group are not binding on the parent committee. Ad hoc groups should strive to achieve consensus prior to bringing issues to T10.

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 August 2005. Erich Oetting seconded the motion. In the absence of any objections, the motion passed unanimously.

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 10:25 a.m. on Thursday July 14, 2005.
**Enclosure(1) -- Meeting Attendees**

<table>
<thead>
<tr>
<th>Name</th>
<th>S</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. William Lynn</td>
<td>P</td>
<td>Adaptec, Inc.</td>
</tr>
<tr>
<td>Mr. Andy Turudic</td>
<td>V</td>
<td>Agere Systems</td>
</tr>
<tr>
<td>Ms. Pat Thaler</td>
<td>P</td>
<td>Agilent Technologies</td>
</tr>
<tr>
<td>Mr. Paul von Stamwitz</td>
<td>AV</td>
<td>AMCC</td>
</tr>
<tr>
<td>Mr. Michael Wingard</td>
<td>P</td>
<td>Amphenol Interconnect</td>
</tr>
<tr>
<td>Mr. Paul Griffith</td>
<td>P</td>
<td>Broadcom Corp.</td>
</tr>
<tr>
<td>Mr. James A. Lott, Jr.</td>
<td>P</td>
<td>Dallas Semiconductor</td>
</tr>
<tr>
<td>Mr. Kevin Marks</td>
<td>P</td>
<td>Dell, Inc.</td>
</tr>
<tr>
<td>Mr. David Black</td>
<td>A</td>
<td>EMC Corp.</td>
</tr>
<tr>
<td>Mr. Robert H. Nixon</td>
<td>P</td>
<td>Emulex</td>
</tr>
<tr>
<td>Mr. Ralph O. Weber</td>
<td>P</td>
<td>ENDL Texas</td>
</tr>
<tr>
<td>Mr. Douglas Wagner</td>
<td>P</td>
<td>FCI</td>
</tr>
<tr>
<td>Mr. Elwood Parsons</td>
<td>P</td>
<td>Foxconn Electronics</td>
</tr>
<tr>
<td>Mr. Mike Fitzpatrick</td>
<td>P</td>
<td>Fujitsu</td>
</tr>
<tr>
<td>Mr. Michael Banther</td>
<td>V</td>
<td>Hewlett Packard Co.</td>
</tr>
<tr>
<td>Mr. Rob Elliott</td>
<td>P</td>
<td>Hewlett Packard Co.</td>
</tr>
<tr>
<td>Mr. Zane Daggett</td>
<td>P</td>
<td>Hitachi Cable Manchester</td>
</tr>
<tr>
<td>Mr. Hitoshi (Todd) Horita</td>
<td>A#</td>
<td>Hitachi Cable Manchester</td>
</tr>
<tr>
<td>Mr. Dan Colegrove</td>
<td>P</td>
<td>Hitachi Global Storage Tech.</td>
</tr>
<tr>
<td>Mr. George O. Penokie</td>
<td>P</td>
<td>IBM / Tivoli Systems</td>
</tr>
<tr>
<td>Mr. Robert Sheffield</td>
<td>P</td>
<td>Intel Corp.</td>
</tr>
<tr>
<td>Mr. Dennis Moore</td>
<td>AV</td>
<td>KnowledgeTek, Inc.</td>
</tr>
<tr>
<td>Mr. Pat LaVarre</td>
<td>P</td>
<td>Lexar Media, Inc.</td>
</tr>
<tr>
<td>Mr. John Lohnmeyer</td>
<td>P</td>
<td>LSI Logic Corp.</td>
</tr>
<tr>
<td>Mr. Ariel Sobelman</td>
<td>A</td>
<td>M-Systems</td>
</tr>
<tr>
<td>Mr. Martin Czekański</td>
<td>A</td>
<td>Maxtor Corp.</td>
</tr>
<tr>
<td>Mr. Mark Evans</td>
<td>P</td>
<td>Maxtor Corp.</td>
</tr>
<tr>
<td>Mr. David Peterson</td>
<td>P</td>
<td>McA DATA</td>
</tr>
<tr>
<td>Ms. Emily Hill</td>
<td>P</td>
<td>Microsoft Corp.</td>
</tr>
<tr>
<td>Mr. Jay Neer</td>
<td>P</td>
<td>Molex Inc.</td>
</tr>
<tr>
<td>Mr. Mark Overby</td>
<td>P</td>
<td>Nvidia Corp.</td>
</tr>
<tr>
<td>Mr. James Williams</td>
<td>AV</td>
<td>Oracle</td>
</tr>
<tr>
<td>Mr. William P. McFerrin</td>
<td>P</td>
<td>Philips Electronics/CD Edge</td>
</tr>
<tr>
<td>Mr. Bill Galloway</td>
<td>P</td>
<td>Pivot3, Inc.</td>
</tr>
<tr>
<td>Dr. Steve Gorshe</td>
<td>V</td>
<td>PMC-Sierra, Inc.</td>
</tr>
<tr>
<td>Mr. Craig W. Carlson</td>
<td>A</td>
<td>QLogic Corp.</td>
</tr>
<tr>
<td>Dr. Paul Suhler</td>
<td>A</td>
<td>Quantum Corp.</td>
</tr>
<tr>
<td>Mr. Alvin Cox</td>
<td>V</td>
<td>Seagate Technology</td>
</tr>
<tr>
<td>Mr. Gerald Houlder</td>
<td>P</td>
<td>Seagate Technology</td>
</tr>
<tr>
<td>Mr. William Martin</td>
<td>P</td>
<td>Sierra Logic, Inc.</td>
</tr>
<tr>
<td>Mr. Erich Oetting</td>
<td>P</td>
<td>Storage Technology Corp.</td>
</tr>
<tr>
<td>Mr. Charles Binford</td>
<td>A</td>
<td>Sun Microsystems, Inc.</td>
</tr>
<tr>
<td>Mr. Robert Kando</td>
<td>A</td>
<td>Texas Instruments</td>
</tr>
<tr>
<td>Ms. Ashlie Fan</td>
<td>P</td>
<td>TycoElectronics</td>
</tr>
<tr>
<td>Mr. Dan Gorenc</td>
<td>A</td>
<td>TycoElectronics</td>
</tr>
<tr>
<td>Mr. Ron Mathews</td>
<td>AV</td>
<td>UNISYS Corporation</td>
</tr>
<tr>
<td>Mr. Curtis Stevens</td>
<td>P</td>
<td>Western Digital</td>
</tr>
<tr>
<td>Mr. Jeff Williams</td>
<td>P</td>
<td>Xiotech Corp.</td>
</tr>
<tr>
<td>Mr. Rich Ramos</td>
<td>V</td>
<td>Xyratex</td>
</tr>
</tbody>
</table>

48 People Present

**Status Key:**
- P = Principal
- A, A# = Alternate
- AV = Advisory Member
- L = Liaison
- V = Visitor
Enclosure(2) -- T10 Attendance Database
Generated on 2005/07/19 at 10:07:59

Mr. William Lynn  (P)             Phone: (303) 589-4655
Adaptec, Inc.                       Fax:
1951 South Fordham St.            Email: bill_lynn at adaptec dot com
Longmont, CO 80503

Mr. Lawrence J. Lamers  (A)       Phone: (408) 957-7817
Adaptec, Inc.                       Fax: (408) 945-6736
691 S. Milpitas Blvd.             Email: ljlamers at ieee dot org
Milpitas, CA 95035

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
Allentown, PA  18109-9138

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: (408) 523-1001
455 West Maude Avenue             Email: pvstamwitz at amcc dot com
Sunnyvale, CA 95085

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

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. Paul Griffith  (P)            Phone: 408-313-6643
Broadcom Corp.                      Fax:
Mr. Elwood Parsons  (P)           Phone: (717) 558-7518 x141  
Foxconn Electronics                 Fax: (717) 558-9306  
100 S. 38th St.                   Email: elwood dot parsons at foxconn dot com  
Harrisburg, PA 17105

Mr. Mike Fitzpatrick  (P)         Phone: (405) 820-5809  
Fujitsu                             Fax: (405) 755-8073  
2904 Orchard Pkwy.                Email: mfitzpatrick at fcpa dot fujitsu dot com  
San Jose, CA 95134

Mr. Ben-Koon Lin  (A)             Phone: (408) 894-3979  
Fujitsu                             Fax: (408) 894-3908  
2904 Orchard Pkwy.                Email: blin at fcpa dot fujitsu dot com  
San Jose, CA 95134

Mr. Erhard Weiss  (AV)            Phone: 49-821-804-3602  
Fujitsu Siemens Comp. gmbH          Fax: 49-821-804-2910  
Department: SNI PC SB ESW          Email: weiss dot abg at sni dot de  
Burgermeister-Ulrich-St            
D-86199 Augsburg Germany

Mr. Bob Thornton  (AV)            Phone: (408) 745-4932  
Fujitsu Takamisawa America         Fax: (408) 745-4971  
250 E. Caribbean Dr.              Email: bthornto at fta dot fujitsu dot com  
Sunnyvale, CA 94089

Mr. Nathan Hastad  (P)            Phone: (952) 956-5417  
General Dynamics                    Fax: (952) 956-5445  
3021 American Blvd East            Email: nathan dot hastad at gd-ais dot com  
Bloomington, MN 55425

Mr. Tim Mackley  (A)              Phone: (952) 921-6866  
General Dynamics                    Fax:  
8800 Queen Ave. S.                Email: timothy dot mackley at gd-ais dot com  
Bloomington, MN 55431

Ms. Liza Hunt  (XO)               Phone:  
Global Engineering Documents        Fax:  
15 Inverness Way East              Email:  
Englewood, CO 80112-5704

Mr. Rob Elliott  (P)              Phone: (281) 518-5037  
Hewlett Packard Co.                 Fax: (281) 518-7135  
MC140801                             Email: Elliott at hp dot com  
PO Box 692000                       
Houston, TX 77269-2000

Dr. William Ham  (A)              Phone: (978) 828-9102  
Hewlett Packard Co.                 Fax: (978) 470-0321  
