To: T10 Membership  
From: Ralph Weber / John Lohmeyer 
Subject: Minutes of T10 Plenary Meeting #55 -- May 8, 2003  
Nashua, NH

Agenda

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   8.19 Fibre Channel Protocol - 3 (FCP-3) {Project 1560-D} [Peterson]
   8.20 SCSI Architecture Model - 3 (SAM-3) {Project 1561-D} [Weber]
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   10.2 Actions on SAS Working Group Recommendations

*Operating under the procedures of The American National Standards Institute.  
INCITS Secretariat, Information Technology Industry Council (ITI)  
1250 Eye Street NW, Suite 200, Washington, DC 20005-3922  
Email: incits@itic.org Telephone: 202-737-8888  FAX: 202-638-4922
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10.2.2 SAS Protocol recommendations
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   12.4 IEEE 1394 [Johansson]
   12.5 SCSI Trade Association (STA) [Czekalski]
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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 8, 2003. He thanked Zane Daggett of Hitachi Cable Manchester for hosting the meeting.

John said that INCITS subgroup membership forms and the T10 document subscription forms are available on the meeting disk. 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 and a copy of the attendance list was circulated. Copies of the draft agenda and general information on T10 were made available to those attending.

2. Approval of Agenda

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 member-
ship 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 letters to 6 people from 2 organizations informing them that their membership was in jeopardy due to non-attendance (see 03-139r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

- General Dynamics
- Madison Cable Corp.

All these organizations were present at the meeting.

No organizations joined the committee at this meeting.

The T10 membership during the meeting was 42 organizations unchanged from the 42 member organizations prior to the meeting. 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 and then reported on the status of companies that have not voted on recent letter ballots:

<table>
<thead>
<tr>
<th>T10 Letter Ballot Jeopardy Report -- 2003/04/30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ballot: 03-006r0   03-075r0   03-144r0</td>
</tr>
<tr>
<td>Report: 03-007r0   03-076r0   03-145r0</td>
</tr>
<tr>
<td>Acronym: SAS      SPC-2 NWIP SBP-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organization</th>
<th>Yes</th>
<th>Yes</th>
<th>DNV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptec, Inc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amphenol Interconnect</td>
<td>Yes</td>
<td></td>
<td>DNV</td>
</tr>
<tr>
<td>Cisco Systems, Inc.</td>
<td>Yes</td>
<td></td>
<td>DNV</td>
</tr>
<tr>
<td>Emulex</td>
<td></td>
<td>Yes</td>
<td>Abs</td>
</tr>
<tr>
<td>Fujitsu</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honda Connectors</td>
<td>Yes</td>
<td></td>
<td>DNV</td>
</tr>
<tr>
<td>Philips Electronics</td>
<td>Yes</td>
<td></td>
<td></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
4. Approval of Minutes - March 2003 Meeting - Dallas, TX (T10/03-124r1)

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 in his hands in electronic format by 10:30 a.m. on Thursday May 15, 2003. 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

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


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.

Cris Simpson 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 responses to the call for patents.

7. Review of Old Action Items

519 Ralph Weber will notify Gary Robinson that the SAM-2 ISO revision can be found at ftp://ftp.t10.org/t10/drafts/sam2/sam2i25.pdf. Carryover

520 John Lohmeyer will notify INCITS that T10 recommends the reaffirmation of SBC, SMC, SPI-2, SBC-2, SES, the SES amendment, and SSC-2. Complete

521 John Lohmeyer will notify INCITS that T10 has voted to change its name to ‘SCSI storage interfaces’. Complete.

522 Gary Robinson will notify INCITS of the T10 recommendation on 25N842Av. Complete

523 Gary Robinson will submit 03-083r0 as a NWIP for SSM-2. Complete

524 Gary Robinson will submit 03-084r0 as a NWIP for PIP. Complete

525 Gary Robinson will submit 03-132r0 as a NWIP for SAM-2. Complete

526 John Lohmeyer will inform Jennifer Garner that T10 recommends that JTC 1 TAG nominate Gary S. Robinson as the US candidate for Convener of JTC 1/SC 25/WG 4. Complete

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 disk and will be included in the mailing as usual.

Bob Davis reported that INCITS is working on policy changes to make INCITS friendly to the electronic age.

John Lohmeyer noted that the INCITS rules document has been changed from the SD-2 to the RD-2. He noted that minor changes have been made in the rules as part of the merging of INCITS and JTC 25.

John Lohmeyer reported that INCITS had received one volunteer to chair T10. The INCITS letter ballot on appointing the T10 Chair closes May 14th.
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 Fibre Channel Protocol - 2 (FCP-2) {Project 1144-D} [Peterson]

John Lohmeyer reported that FCP-2 has been published as ANSI NCITS.350:2003. He congratulated Dave Peterson and Bob Snively for their hard work on this standard.

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

John Lohmeyer reported that SAM-2 has been published as ANSI INCITS.366:2003. He congratulated Ralph Weber his hard work on this standard.

8.4 Object-based Storage Devices Commands (OSD) {Project 1355-D} [Weber]

Ralph Weber reported that SNIA OSD group is having trouble reaching consensus on the security requirements and objecting naming mechanisms to be introduced in the next OSD revision.

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

In the absence of Erich Oetting, no report was made on the status of SMC-2.

8.6 SCSI Primary Commands - 3 (SPC-3) {Project 1416-D} [Weber]

Ralph Weber reported that revision 13 of SPC-3 will be available in time for the mailing and will contain all the proposals approved by this meeting as well as the results of the SPC-3 editing meetings held this week.

Ralph Weber reminded the committee that the target letter ballot date for SPC-3 is November 2003. He noted that, based on this letter ballot date, editing review meetings are in progress to ready SPC-3 for letter ballot. He thanked the SAS working group for relinquishing a half day this week to the editing review and announced that the review will continue following this meeting.

The topic to be discussed this month is:

Access Controls

Additional editorial review meetings held during subsequent meeting weeks will cover the following topics:

Asymmetric logical unit behavior
Protocol specific data
Persistent Reservations Model
Persistent Reservations Commands
8.7 SCSI Block Commands - 2 (SBC-2) (Project 1417-D) [Elliott]

Rob Elliott reported that SBC-2 revision 9 will be uploaded before the next meeting but not in time for the mailing and will include the power conditions proposal. In response to a question from Gerry Houlder, Rob reported that no target date has been set for starting the SBC-2 Letter Ballot.

8.8 SCSI Stream Commands - 2 (SSC-2) (Project 1434-D) [Peterson]

Paul Entzel reported that SSC-2 revision 8g has been posted and will be in the next mailing. He noted that resolution of the SSC-2 Letter Ballot comments is nearing completion.

8.9 SCSI Passive Interconnect Performance (PIP) (Project 1439-D) [Daggett]

John Lohmeyer reported that PIP had been approved by INCITS. PIP is on the agenda for approval by the ANSI Board of Standards Review.

8.10 SCSI Serial Bus Protocol -3 (SBP-3) (Project 1467-D) [Johansson]

Peter Johansson reported that the SBP-3 working group met this week, May 7, during the T10 meetings in Nashua, NH. The working group endorsed the proposed Letter Ballot comment resolutions and requested the Editor to prepare SBP-3 Revision 4.0 for submission to INCITS for first Public Review.

On behalf of the SBP-3 working group, Peter Johansson moved that 03-166r1 and SBP-3 Revision 3b be accepted as resolving the SBP-3 Letter Ballot comments and that the editor be instructed to prepare SBP-3 Revision 4, containing the resolution to the letter ballot comments, so that it may be forwarded to INCITS for processing toward first public review. The motion passed on a vote of 29:0:0:13=42.

In view of the successful resolution of the SBP-3 Letter Ballot comments, Peter Johansson requested that his No vote on the Letter Ballot be changed to a Yes.

Peter Johansson took an action item to prepare SBP-3 revision 4 for forwarding to first public review. John Lohmeyer took an action item to forward SBP-3 to INCITS for further processing toward first public review.

8.11 SCSI Signal Modeling - 2 (SSM-2) (Project 1514-D) [Aloisi/Manildi]

John Lohmeyer reported that SSM-2 had been approved by INCITS. SSM-2 is on the agenda for approval by the ANSI Board of Standards Review.

8.12 SCSI RDMA Protocol - 2 (SRP-2) (Project 1524-D) [Simpson]

Cris Simpson reported that no progress has been SRP-2 this month. Work will resume again in July.

8.13 SCSI Parallel Interface - 5 (SPI-5) (Project 1525-D) [Penokie]

John Lohmeyer reported that SPI-5 had been approved by INCITS. SPI-5 is on the agenda for approval by the ANSI Board of Standards Review. George Penokie reported that the SPI-5 ISO/IEC Letter Ballot began on April 23rd.

8.14 SCSI Management Server Commands (MSC) (Project 1528-D) [Penokie/Elliott]

George Penokie reported that no progress has been made on MSC. He suggested that consideration might be given to closing the project later this year.
8.15 MultiMedia Command Set - 4 (MMC-4) {Project 1545-D} [McFerrin]

In the absence of Bill McFerrin, no report was available. John Lohmeyer noted that the MMC working group will be meeting May 13-14, 2003 in Sunnyvale, CA.

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

Paul Entzel reported on the activities of the ADI working group (minutes in 03-171). He noted that ADC may be ready for Letter Ballot after the July meeting and ADT after the September meeting.

John Lohmeyer reported that the INCITS letter ballot on closing the ADP project closed on April 14 and passed as expected.

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

This topic was covered in item 8.16.

8.18 SCSI Enclosure Services - 2 (SES-2) {Project 1559-D} [Elliott]

Rob Elliott reported that SES-2 revision 3 will be available for the next meeting but not in time for the mailing and will include all proposals approved at this meeting.

8.19 Fibre Channel Protocol - 3 (FCP-3) {Project 1560-D} [Peterson]

In the absence of Dave Peterson, no report was available.

8.20 SCSI Architecture Model - 3 (SAM-3) {Project 1561-D} [Weber]

Ralph Weber reported that revision 7 will be available in time for the mailing and will contain all the changes approved by this meeting.

8.21 Serial Attached SCSI (SAS) {Project 1562-D} [Elliott]

Rob Elliott reported on the activities of the SAS working group (minutes in 03-177). He noted that the working group unanimously recommended approving the SAS letter ballot comments resolution with a formal vote count of 16:0:0.

Rob Elliott moved that 03-055r7 be approved as resolving the letter ballot comments on SAS and that SAS Rev 04, which incorporates the letter ballot resolutions, be forwarded to INCITS for further processing toward first public review. John Lohmeyer seconded the motion. The motion passed 23:0:1:18=42.

The following people requested that their No votes be changed to Yes based on the successful resolution of the letter ballot comments:

Ralph Weber, Rob Elliott, George Penokie, Cris Simpson, John Lohmeyer, Paul Entzel, and Gerry Houlder.

George Penokie complimented Rob Elliott on the expeditious completion of SAS, noting the size of the working draft, the over 2,700 letter ballot comments, and 23 revisions prepared in less than a year. The committee applauded Rob's efforts.
Rob Elliott took an action item to prepare SAS revision 4 for forwarding to first public review. John Lohmeyer took an action item to contact Microsoft Corporation regarding the disposition of their No vote on the SAS letter ballot. John Lohmeyer took an action item to forward SAS revision 4 to INCITS for processing toward first public review.

8.22 Serial Attached SCSI - 1.1 (SAS-1.1) {Project 1601-D} [Elliott]
Rob Elliott reported that some initial work on SAS-1.1 was done at the SAS Protocol working group (minutes in 03-177).

8.23 SCSI Stream Commands - 3 (SSC-3) {Project 1611-D} [Peterson]
In the absence of Dave Peterson, no report was available.

9. Old Business

9.1 ANSI INCITS 330-2000 Defect Report (03-021) (RBC-A) [Atkinson, Roberts]
John Lohmeyer reported that a letter ballot on the RBC amendment will begin Friday morning.

10. New Business

10.1 Actions on Parallel SCSI Working Group Recommendations
Because the Parallel SCSI working group did not meet this week, no recommendations required consideration at this meeting.

10.2 Actions on SAS Working Group Recommendations

10.2.1 SAS PHY recommendations
Because the SAS PHY working group did not meet this week, no recommendations required consideration at this meeting.

10.2.2 SAS Protocol recommendations
George Penokie noted that the only recommendation from the SAS Protocol working group concerned the SAS letter ballot comments resolution processed under item 8.21.

10.3 Actions on CAP Working Group Recommendations
George Penokie reviewed the content of proposal 02-464r3 (SAM-3, SPC-3, and SBC power conditions proposal) recommended for inclusion in SAM-3, SPC-3, and SBC-2.

Mark Evans moved that 02-464r3 (SAM-3, SPC-3, and SBC power conditions proposal) be approved for inclusion in SAM-3, SPC-3, and SBC-2. Bill Galloway seconded the motion. In the absence of objections, the motion passed unanimously.
George Penokie reviewed the following proposals recommended for inclusion in SAM-3:

- 03-003r2 Remove ULP and LLP from SAM-3 [Weber]
- 03-108r2 Calls and Arguments in SAM-3 [Weber]
- 03-173r0 Task Management Incorrect Logical Unit Selection [Weber]
- 03-184r1 SAM-3 Hard reset generates I_T nexus loss [Elliott]

Ralph Weber moved that 03-003r2, 03-108r2, 03-173r0, and 03-184r1 be approved for inclusion in SAM-3. Mark Evans seconded the motion. The motion passed on a vote of 26:0:0:16=42.

George Penokie reviewed the following proposals recommended for inclusion in SPC-3:

- 03-094r3 Yet More Persistent Reservation Fixes [Penokie]
- 03-127r1 SPC-3 MSB and LSB labels [Elliott]
- 03-172r1 QErr=01b & CHECK CONDITION Initiator [Weber]
- 03-169r1 SPC-3: Un-hiding S.M.A.R.T. [Lohmeyer]

Mark Evans moved that 03-094r3, 03-127r1, 03-172r1, and 03-169r1 be approved for inclusion in SPC-3. Bill Galloway seconded the motion. The motion passed on a vote of 25:0:1:16=42.

George Penokie reviewed the content of proposal 03-059r1 (SES-2 Enclosure/Array Control Device Element for device activity) recommended for inclusion in SES-2.

Mark Evans moved that 03-059r1 (SES-2 Enclosure/Array Control Device Element for device activity) be approved for inclusion in SES-2.

Mark Evans moved that 03-059r1 (SES-2 Enclosure/Array Control Device Element for device activity) be approved for inclusion in SES-2, SPC-3, and SBC-2. Bill Galloway seconded the motion. The motion passed on a vote of 24:0:2:16=42.

Ralph Weber moved that SAM-3 revision 7 be accepted as a committee draft. Mark Evans seconded the motion. The motion passed 26:0:0:16=42.

10.4 Actions on Other Working Group Recommendations

No recommendations from other working groups were brought to this meeting.

11. ISO/IEC

11.1 ISO/IEC Report (03-182) [Robinson]

Gary Robinson provided an electronic report in 03-182r1.

11.2 ISO/IEC Business [Robinson]

11.2.1 Change SPC-2 ISO/IEC part number from 312 to 452 (03-146) [Weber]

Ralph Weber announced that he had published a 'score card' of ISO/IEC part numbers being used for T10 standards (see 03-146).

Since none of the SPC standards have actually been published at ISO/IEC so far, he is proposing that the SPC series of standards be moved to the 45x range of numbers, which fits better with the architectural nature of these standards. In particular, he has requested that SPC-2 be assigned 452 instead of 312.
Since the IR and the SC 25 Secretariat agreed that Ralph’s proposed change in numbering is a good idea, they have agreed to implement Ralph’s proposed change. The IR and the SC 25 Secretariat have also appointed Ralph as the ‘keeper of the part numbers’.

12. Liaison Reports

12.1 T11 Liaison Report (03-187) [Snively]

In the absence of Bob Snively, Roger Cummings presented the T11 liaison report contained in T10/03-187r0.

12.2 T13 Liaison Report [Colegrove]

Dan Colegrove was unable to attend but provided an electronic report contained in T10/03-188r0.

12.3 SFF Industry Group [Allan]

In the absence of Dal Allan, Vit Novak reported that two SSWG meetings and a plenary meeting were held. One SSWG was on single voltage drives the other was on cable labeling.

12.4 IEEE 1394 [Johansson]

Peter Johansson reported IEEE 1394 activities and provided the following electronic report for the minutes.

The Ballot Response Committee (BRC) for IEEE P1394.1, High Performance Serial Bus Bridges, has resolved, in principal, all of the comments received during Sponsor Ballot. The Editor is incorporating the agreed changes in anticipation of a recirculation ballot this year, with projected approval as an IEEE standard in 2003. Contact the Chair, Peter Johansson (PJohansson@ACM.org), for details.

IEEE P1394.3, Peer to Peer Data Transport, a protocol built upon SBP-2, commenced a 10-day recirculation ballot May 10. The Vice Chair, Alan Berkema (Alan_Berkema@HP.com), anticipates its approval as an IEEE standard this summer.

The IEEE S800BASE-T study group continues to investigate methods of running IEEE 1394 over up to 100 meters of UTP-5 by leveraging existing gigabit Ethernet PHY technology. They are pursuing a very aggressive schedule and plan to hand over the work to the IEEE P1394 revision working group for incorporation in the revised IEEE 1394 base standard. The STDS-1394@IEEE.org reflector is used for S800BASE-T discussions. Contact the study group Chair, Michael Teener (Teener@Apple.com), for details.

The 1394 Trade Association Wireless working group is developing "protocol adaptation layers" (PALs) to enable IEEE 1394 applications to interoperate with like applications in both IEEE P802.11e and IEEE P802.15.3 devices. Some of the work is active in the IEEE P802.11e (quality of service) working group. The 802.15.3 PAL project is investigating the use of ultra-wide band (UWB) technologies for wireless 1394. Contact the working group Chair, John Fuller (JFuller@Computer.org) or the PAL Project Editors, Takashi Sato (T.Sato@Philips.com) and Peter Johansson (PJohansson@ACM.org), for details.

12.5 SCSI Trade Association (STA) [Czekalski]

Marty Czekalski provided an electronic report on the activities of the SCSI Trade Association that can be found in 03-191r0.

12.6 IETF SCSI over IP [Black/Robinson]

In the absence of David Black, no report was available.
12.7 SNIA [Cummings]

Roger Cummings reported on the activities of SNIA and provided an electronic report in T11/03-213v0.

12.8 SATA II [open]

John Lohmeyer reported that he had attended part of the SATA II Steering Committee meeting on April 29th. The group requested that T10 identify liaisons to the SATA II focus groups. The SATA II PHY group has several members who also participate on the SAS PHY working group. John Lohmeyer moved that Alvin Cox be named the T10 liaison to the SATA II PHY group. Mark Evans seconded the motion. The motion passed 26:0:0:16=42.

John Lohmeyer took an action item to notify SATA II that Alvin Cox will be the T10 liaison to the SATA II PHY group.

John asked for volunteers to serve as T10 liaison to the SATA II Protocol group and for volunteers to serve as the SATA II liaison to T10.

13. Review of Action Items

519 Ralph Weber will notify Gary Robinson that the SAM-2 ISO revision can be found at ftp://ftp.t10.org/t10/drafts/sam2/sam2i25.pdf.
527 Peter Johansson will prepare SBP-3 revision 4 for forwarding to first public review.
528 John Lohmeyer will forward SBP-3 to INCITS for further processing towards first public review.
529 Rob Elliott will prepare SAS revision 4 for forwarding to first public review.
530 John Lohmeyer will contact Microsoft Corporation regarding the disposition of their No vote on the SAS letter ballot.
531 John Lohmeyer will forward SAS revision 4 to INCITS for processing toward first public review.
532 John Lohmeyer will notify SATA II that Alvin Cox will be the T10 liaison to the SATA II PHY group.

14. Meeting Schedule

The next plenary meeting of T10 will be Thursday July 10, 2003 in Colorado Springs, CO at the Wyndham Colorado Springs Hotel (719-260-1800), hosted by LSI Logic Corp. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:
## July 2003 Meeting Map
(2003/05/08 Version)

### Monday 7/07

<table>
<thead>
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<td>FCP-3 WG?</td>
<td>SMC-2 / ADI WG</td>
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<td></td>
<td>SAS Protocol WG</td>
<td>SCSI CAP WG</td>
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<tr>
<td></td>
<td>SCSI Commands, Arch., &amp; Protocol WG</td>
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### Thursday 7/10

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

### Other T10-authorized meetings:

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Location / Contact</th>
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<tr>
<td>ADI Calls</td>
<td>Bi-weekly</td>
<td>To be announced via T10 reflector</td>
</tr>
<tr>
<td>SAS Prot Calls</td>
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<td>To be announced via T10 reflector</td>
</tr>
<tr>
<td>SAS PHY Calls</td>
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<td>To be announced via T10 reflector</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
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: Lower Level 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</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</td>
<td>Rod Wideman</td>
<td>(720) 249-5796 <a href="mailto:rwd.wideman@adic.com">rwd.wideman@adic.com</a></td>
</tr>
<tr>
<td>PIP, PIP-2</td>
<td>Zane Daggett</td>
<td>(603) 669-4347 x236 <a href="mailto:zdaggett@hcm.hitachi.com">zdaggett@hcm.hitachi.com</a></td>
</tr>
<tr>
<td>SBC-2, SES-2, SAS</td>
<td>Rob Elliott</td>
<td>(281) 518-5037 <a href="mailto:Elliott@hp.com">Elliott@hp.com</a></td>
</tr>
<tr>
<td>MMC-2, MMC-3, MMC-4</td>
<td>Bill McFerrin</td>
<td>(303) 651-5400 <a href="mailto:bmcferrin@aol.com">bmcferrin@aol.com</a></td>
</tr>
<tr>
<td>SBP-2, SSB-3</td>
<td>Peter Johansson</td>
<td>(510) 527-3926 <a href="mailto:PJohansson@ACM.org">PJohansson@ACM.org</a></td>
</tr>
<tr>
<td>SCC-2, SPI-4, SPI-5, MSC</td>
<td>George Penokie</td>
<td>(507) 253-5208 <a href="mailto:gpenokie@tivoli.com">gpenokie@tivoli.com</a></td>
</tr>
<tr>
<td>SMC, 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>SPC-3, SAM-2, SAM-3, OSD</td>
<td>Ralph Weber</td>
<td>(214) 912-1373 <a href="mailto:roweber@acm.org">roweber@acm.org</a></td>
</tr>
<tr>
<td>SSC, SSC-2, FCP-2, FCP-3</td>
<td>Dave Peterson</td>
<td>(612) 802-3299 <a href="mailto:dap@cisco.com">dap@cisco.com</a></td>
</tr>
<tr>
<td>SRP, SRP-2</td>
<td>Cris Simpson</td>
<td>(503) 712-4333 <a href="mailto:cris.simpson@intel.com">cris.simpson@intel.com</a></td>
</tr>
<tr>
<td>SSM-2</td>
<td>Paul Aloisi</td>
<td>(603) 222-8687 <a href="mailto:paul_aloisi@ti.com">paul_aloisi@ti.com</a></td>
</tr>
<tr>
<td>Other Activities</td>
<td>John Lohmeyer</td>
<td>(719) 533-7560 <a href="mailto:llohme@t10.org">llohme@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>
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<tbody>
<tr>
<td>Sep 8-12, 2003</td>
<td>Seattle, WA</td>
<td>Microsoft</td>
</tr>
<tr>
<td>Nov 3-7, 2003</td>
<td>Austin, TX</td>
<td>Crossroads</td>
</tr>
<tr>
<td>Jan 12-16, 2004</td>
<td>Chandler, AZ</td>
<td>Intel</td>
</tr>
<tr>
<td>Mar 8-12, 2004</td>
<td>Dana Point, CA</td>
<td>QLogic</td>
</tr>
<tr>
<td>May 3-7, 2004</td>
<td>Toronto, Montreal, or Ottawa</td>
<td>Brocade</td>
</tr>
<tr>
<td>Jul 12-16, 2004</td>
<td>Colorado Springs, CO</td>
<td>LSI Logic</td>
</tr>
<tr>
<td>Sep 13-17, 2004</td>
<td>Nashua, NH</td>
<td>Hitachi Cable</td>
</tr>
<tr>
<td>Nov 8-12, 2004</td>
<td>Austin, TX</td>
<td>Crossroads</td>
</tr>
</tbody>
</table>

Approved 2005 dates:
- Jan 17-21, 2005
- Mar 7-11, 2005
- May 2-6, 2005
- Jul 11-15, 2005
- Sep 12-16, 2005
- Nov 7-11, 2005

John Lohmeyer moved that T10 authorize the March 2004 meeting week to be hosted by QLogic in Dana Point, CA and the September 2004 meeting week to be hosted by Hitachi Cable in Nashua, NH. Bill Galloway 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.

Peter Johansson 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 2003. Bill Galloway 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 10:45 a.m. on Thursday May 8, 2003.
Enclosure(1) -- Meeting Attendees

<table>
<thead>
<tr>
<th>Name</th>
<th>S</th>
<th>Organization</th>
<th>Electronic Mail Address</th>
</tr>
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<tbody>
<tr>
<td>Mr. Ron Roberts</td>
<td>P</td>
<td>Adaptec, Inc.</td>
<td><a href="mailto:rkroberts@aol.com">rkroberts@aol.com</a></td>
</tr>
<tr>
<td>Ms. Pat Thaler</td>
<td>V</td>
<td>Agilent Technologies</td>
<td><a href="mailto:pat_thaler@agilent.com">pat_thaler@agilent.com</a></td>
</tr>
<tr>
<td>Mr. Michael Wingard</td>
<td>P</td>
<td>Amphenol Interconnect</td>
<td><a href="mailto:mikwingard@aol.com">mikwingard@aol.com</a></td>
</tr>
<tr>
<td>Dr. Claudio DeSanti</td>
<td>P</td>
<td>Andiamo Systems, Inc.</td>
<td><a href="mailto:cds@andiamo.com">cds@andiamo.com</a></td>
</tr>
<tr>
<td>Mr. Peter Johansson</td>
<td>P</td>
<td>Congruent Software, Inc.</td>
<td><a href="mailto:PJohansson@ACM.org">PJohansson@ACM.org</a></td>
</tr>
<tr>
<td>Mr. John Tyndall</td>
<td>A</td>
<td>Crossroads Systems, Inc.</td>
<td><a href="mailto:jtyndall@crossroads.com">jtyndall@crossroads.com</a></td>
</tr>
<tr>
<td>Mr. Titkwan Hui</td>
<td>A</td>
<td>Dallas Semiconductor</td>
<td><a href="mailto:tk.hui@dalsemi.com">tk.hui@dalsemi.com</a></td>
</tr>
<tr>
<td>Mr. Robert H. Nixon</td>
<td>P</td>
<td>Emulex</td>
<td><a href="mailto:bob.nixon@emulex.com">bob.nixon@emulex.com</a></td>
</tr>
<tr>
<td>Mr. Ralph O. Weber</td>
<td>P</td>
<td>ENDL Texas</td>
<td><a href="mailto:roweber@acm.org">roweber@acm.org</a></td>
</tr>
<tr>
<td>Mr. Douglas Wagner</td>
<td>P</td>
<td>FCI</td>
<td><a href="mailto:dwagner@fciconnect.com">dwagner@fciconnect.com</a></td>
</tr>
<tr>
<td>Mr. Mike Fitzpatrick</td>
<td>P</td>
<td>Fujitsu</td>
<td><a href="mailto:mfitzpatrick@fcpa.fujitsu.com">mfitzpatrick@fcpa.fujitsu.com</a></td>
</tr>
<tr>
<td>Mr. Nathan Hastad</td>
<td>A</td>
<td>General Dynamics</td>
<td><a href="mailto:nathan.hastad@gd-ais.com">nathan.hastad@gd-ais.com</a></td>
</tr>
<tr>
<td>Mr. Rob Elliott</td>
<td>P</td>
<td>Hewlett Packard Co.</td>
<td><a href="mailto:Elliott@hp.com">Elliott@hp.com</a></td>
</tr>
<tr>
<td>Mr. Werner Glinka</td>
<td>AV</td>
<td>Hitachi America</td>
<td><a href="mailto:werner.glinka@attglobal.net">werner.glinka@attglobal.net</a></td>
</tr>
<tr>
<td>Mr. Zane Daggett</td>
<td>P</td>
<td>Hitachi Cable Manchester</td>
<td><a href="mailto:zdaggett@hcm.hitachi.com">zdaggett@hcm.hitachi.com</a></td>
</tr>
<tr>
<td>Mr. George O. Penokie</td>
<td>P</td>
<td>IBM / Tivoli Systems</td>
<td><a href="mailto:gop@us.ibm.com">gop@us.ibm.com</a></td>
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<tr>
<td>Mr. Kris Simpson</td>
<td>P</td>
<td>Intel Corp.</td>
<td><a href="mailto:cris.simpson@intel.com">cris.simpson@intel.com</a></td>
</tr>
<tr>
<td>Mr. John Lohmeyer</td>
<td>A</td>
<td>LSI Logic Corp.</td>
<td><a href="mailto:lohmeyer@t10.org">lohmeyer@t10.org</a></td>
</tr>
<tr>
<td>Ms. Jie Fan</td>
<td>P</td>
<td>Madison Cable Corp.</td>
<td><a href="mailto:jie.fan@madisoncable.com">jie.fan@madisoncable.com</a></td>
</tr>
<tr>
<td>Mr. Mark Evans</td>
<td>P</td>
<td>Maxtor Corp.</td>
<td><a href="mailto:mark_evans@maxtor.com">mark_evans@maxtor.com</a></td>
</tr>
<tr>
<td>Mr. Jay Neer</td>
<td>P</td>
<td>Molex Inc.</td>
<td><a href="mailto:jneer@molex.com">jneer@molex.com</a></td>
</tr>
<tr>
<td>Mr. James R. (Bob) Davis</td>
<td>P</td>
<td>Network Appliance Inc.</td>
<td><a href="mailto:bob@netapp.com">bob@netapp.com</a></td>
</tr>
</tbody>
</table>

Mr. Edward A. Gardner (AV) Ophidian Designs eag@ophidian.com
Mr. Bill Galloway (P) Pivot3, Inc. billg@pivot3.com
Mr. Craig W. Carlson (A#) QLogic Corp. craig.carlson@qlogic.com
Mr. Paul Entzel (P) Quantum Corp. paul.entzel@quantum.com
Mr. Gerald Houlder (P) Seagate Technology gerry.houlder@seagate.com
Mr. Vit Novak (P) Sun Microsystems, Inc. vit.novak@sun.com
Mr. Paul D. Aloisi (P) Texas Instruments Paul_Aloisi@ti.com
Mr. Robert Kando (A) Texas Instruments Robert_Kando@ti.com
Mr. Hiroshi Suzuki (P) Toshiba hiroshi.suzuki@tai/toshiba.com
Mr. Ron Mathews (P) UNISYS Corporation ronald.mathews@unisys.com
Mr. Roger Cummings (P) Veritas Software roger.cummings@veritas.com
Mr. Kenneth Hirata (P) Vixel Corp. Ken.Hirata@Vixel.com

34 People Present

Status Key:  
P     - Principal
A      - Alternate
A#     - Alternate
AV     - Advisory Member
L      - Liaison
V      - Visitor
Enclosure(2) -- T10 Attendance Database
Generated on 2003/05/08 at 12:56:53

Mr. Ron Roberts  (P)              Phone: (530) 677-5714
Adaptec, Inc.                       Fax: (530) 677-1218
691 S. Milpitas Blvd.             Email: rkroberts@aol.com
Milpitas, CA 95035

Mr. Ram Rangarajan  (AV)          Phone: (408) 383-5719
Advansys                            Fax: (408) 383-9612
1150 Ringwood Ct.                 Email: rrangarajan@advansys.com
San Jose, CA 95131

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

Mr. Litko Chan  (AV)              Phone: (408) 970-3020
Agilent Technologies                Fax:
3175 Bowers Ave., MS 88R          Email: lito_chan@agilent.com
Santa Clara, CA 95054

Mr. Michael Wingard  (P)          Phone: (607) 786-4241
Amphenol Interconnect             Fax: (607) 786-4311
20 Valley St.                     Email: mikwingard@aol.com
Endicott, NY 13760

Mr. John Majernik  (A)            Phone: (607) 786-4249
Amphenol Interconnect             Fax: (607) 786-4311
20 Valley St.                     Email: john.majernik@aipce.com
Endicott, NY 13760

Mr. Bart Raudebaugh  (AV)         Phone: (415) 322-5322
Ancot Corp.                         Fax: (415) 322-0455
1024 Hamilton Court                Email: bart@ancot.com
Menlo Park, CA 94025

Mr. Ward Winburn  (AV)            Phone: (650) 322-5322
Ancot Corp.                         Fax: (650) 322-0455
1024 Hamilton Court                Email: ward@ancot.com
Menlo Park, CA 94025

Dr. Claudio DeSanti  (P)          Phone: (408) 853-9172
Andiamo Systems, Inc.              Fax: (408) 853-9172
Circuit Assembly Corp.                      Fax: (949) 855-4298
18 Thomas St.                            Email: dennisl@circuitassembly.com
Irvine, CA 92618

Mr. Ian Morrell  (AV)                    Phone: (949) 598-1780
Circuit Assembly Corp.                    Fax: (949) 855-4298
18 Thomas St.                            Email: ianm@circuitassembly.com
Irvine, CA 92718-2703

Mr. Ben Chang  (AV)                     Phone: (510) 226-2394
Cirrus Logic Inc.                        Fax:
3100 W. Warren Ave.                     Email: ben@corp.cirrus.com
Fremont, Ca 94538

Mr. David Peterson  (P)                  Phone: (612) 802-3299
Cisco Systems, Inc.                      Fax: (763) 398-1001
6450 Wedgwood Road                      Email: dap100@attbi.com
Maple Grove, MN 55311

Mr. Peter Johansson  (P)                 Phone: (510) 527-3926
Congruent Software, Inc.                Fax: (510) 527-3856
98 Colorado Avenue                      Email: PJohansson@ACM.org
Berkeley, CA 94707

Mr. Robert Griswold  (P)                 Phone: (512) 928-7272
Crossroads Systems, Inc.                Fax: (512) 928-7403
8300 N. Mopac Blvd.                     Email: rgriswold@crossroads.com
Austin, TX 78759

Mr. John Tyndall  (A)                    Phone: (512) 928-7282
Crossroads Systems, Inc.                Fax:
8300 North Mopac Expressway             Email: jtyndall@crossroads.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.lott@dalsemi.com
Dallas, TX 75244-3292

Mr. Titkwan Hui  (A)                     Phone: (972) 371-4340
Dallas Semiconductor                    Fax: (972) 371-4370
4401 S. Beltwood Pkwy.                  Email: tk.hui@dalsemi.com
Dallas, TX 75244-3292

Mr. Bill Anderson  (AV)                  Phone: (408) 980-8344
DDK Electronics                         Fax: (408) 980-9750
3001 Oakmead Village Dr.                Email: bill_anderson@ddkconnectors.com
Santa Clara, CA 95051
Data Storage Systems Div. Email: h-ogawa@gm.str.hitachi.co.jp  
2880 Kozu,Odawara-shi, Kanagawa-ken,Japan

Mr. Anthony Yang (AV) Phone: (408) 941-7048  
Hitachi Storage Products Fax: (408) 946-1062  
1971 Milmont Drive Email: anthony.yang@hal.hitachi.com  
Milpitas, CA 95035

Mr. Terry Enright (P) Phone: (847) 913-9566  
Honda Connectors Fax: (847) 913-9587  
960 Corporate Woods Parkway Email: tenright@hondaconnectors.com  
Vernon Hill, IL 60061

Mr. David McFadden (A) Phone: (847) 913-9566  
Honda Connectors Fax: (847) 913-9587  
960 Corporate Woods Parkway Email: dmcfadden@hondaconnectors.com  
Vernon Hills, IL 60061

Mr. George O. Penokie (P) Phone: (507) 253-5208  
IBM / Tivoli Systems Fax: (507) 253-2880  
MS 2C6 Email: gop@us.ibm.com  
3605 Highway 52 N. Rochester, MN 55901

Mr. John P. Scheible (A) Phone: (512) 918-3187  
IBM Corp. Fax: (512) 823-0758  
Bldg 815 MS 4051 Email: scheible@vnet.ibm.com  
11400 Burnett Rd. Austin, TX 78758

Mr. Kevin Butt (AV) Phone: (520) 799-5280  
IBM Corp. Fax:  
M/S 9032-2 65U Email: kdbutt@us.ibm.com  
9000 S. Rita Rd. Tucson, AZ 85744

Mr. Bill Troop (AV) Phone: (919) 254-2695  
IBM Corp. Fax:  
3039 Cornwallis Rd. Email: troop@us.ibm.com  
MS: FROA/B205 RTP, NC 27709

Mr. Cris Simpson (P) Phone: (503) 712-4333  
Intel Corp. Fax: (503) 712-2200  
2111 N.E. 25th Ave. Email: cris.simpson@intel.com  
JF5-355 Hillsboro, OR 97124

Mr. Robert Sheffield (A) Phone: (480) 554-8597  
Intel Corp. Fax: (480) 554-6617  
5000 W. Chandler Blvd. Email: robert.l.sheffield@intel.com  
Chandler, AZ 85226-3699

Mr. Hiromichi Oribe (P) Phone: (801) 332-5360
Sunnyvale, CA 94088-3409

Mr. Bill Galloway (P)  Phone: (281) 530-3063  
Pivot3, Inc.  Fax: (281) 988-0358  
14902 Mesita Dr.  Email: billg@pivot3.com  
Houston, TX 77083

Mr. Skip Jones (P)  Phone: (949) 389-6368  
QLogic Corp.  Fax: (949) 389-6114  
26600 Laguna Hills Dr.  Email: skip.jones@qlogic.com  
Aliso Viejo, CA 92656

Mr. Craig W. Carlson (A#)  Phone: (952) 932-4064  
QLogic Corp.  Fax:  
6321 Bury Drive  Email: craig.carlson@qlogic.com  
Eden Prairie, MN 55346

Mr. Greg Casey (A#)  Phone: (952) 932-4098  
QLogic Corp.  Fax:  
6321 Bury Drive  Email: greg.casey@qlogic.com  
Eden Prairie, MN 55346

Mr. Richard Moore (A#)  Phone: (949) 389-6232  
QLogic Corp.  Fax: (949) 389-6121  
26600 Laguna Hills Dr.  Email: richard.moore@qlogic.com  
Aliso Viejo, CA 92656

Mr. Dean Wallace (A)  Phone: (949) 389-6480  
QLogic Corp.  Fax: (949) 389-6128  
26600 Laguna Hills Dr.  Email: dean.wallace@qlogic.com  
Aliso Viejo, CA 92656

Mr. Paul Entzel (P)  Phone: (720) 406-5782  
Quantum Corp.  Fax: (720) 406-5762  
4001 Discovery Dr.  Email: paul.entzel@quantum.com  
Boulder, CO 80303

Mr. Jim Jones (A)  Phone: (720) 406-5611  
Quantum Corp.  Fax:  
4001 Discovery Dr., # 2100  Email: jim.jones@quantum.com  
Boulder, CO 80303

Mr. John A. Fobel (AV)  Phone: (909) 987-3966  
Rancho Technology, Inc.  Fax: (909) 989-2365  
10783 Bell Court  Email: johnf@rancho.com  
Rancho Cucamonga, CA 91730

Mr. Gregory Fry (AV)  Phone: (503) 629-8874  
Roxio Inc.  Fax:
Seiko Epson Corp.  Fax:
Corporate Res & Dev  Email: yasunori.hiyoshi@exc.epson.co.jp
3-3-5 Owa Suma-Shi
Nagano-Ken 392-8502 Japan

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

Mr. Edward Haske  (AV)  Phone: (949) 699-3206
Silicon Image  Fax:
9501 Jeronimo Rd.  Email: haske@siliconimage.com
Irvine, CA 92618-2032

Mr. Mark O'Dell  (AV)  Phone: (949) 454-0800
Silicon Image  Fax: (949) 454-0542
9501 Jeronimo  Email: odell@siliconimage.com
Irvine, CA 92618

Mr. Greg Alvey  (AV)  Phone: (408) 338-4285
Solution Technology  Fax: (408) 338-4374
P.O. Box 104  Email: kd6hnm@aol.com
Boulder Creek, CA 95006

Mr. Joe A. Maciel  (AV)  Phone: (408) 955-5547
Sony Electronic  Fax:
3300 Zanker Rd. SJ2E2  Email: joe.maciel@am.sony.com
San Jose, CA 95134-1901

Mr. Dennis Pak  (AV)  Phone: (408) 955-5247
Sony Electronics, Inc.  Fax: (408) 955-5066
3300 Zanker Rd.  MS# SJ-3B2  Email: dennis_pak@asd.sel.sony.com
San Jose, CA 95134

Mr. Michael Jensen  (AV)  Phone: (612) 669-3579
ST Microelectronics  Fax: (952) 835-3555
3300 Edinborough Way  Email: michael.jensenr@st.com
Edina, MN 55435

Mr. Rich Wahler  (AV)  Phone: (516) 435-6174
Standard Microsystems Corp.  Fax: (516) 724-1505
300 Kennedy Drive  Email:
Hauppauge, NY 11788

Mr. Erich Oetting  (P)  Phone: (303) 673-2178
Storage Technology Corp.  Fax: (303) 673-8196
2270 South 88th St.  Email: erich_oetting@stortek.com
Louisville, CO 80028-0268
Mr. Kenneth Hirata (P)  
Vixel Corp.  
10 Faraday Suite 200  
Irvine, CA 92618  
Phone: (949) 282-6800  
Fax: (949) 282-6801  
Email: Ken.Hirata@Vixel.com

Mr. Carl Mies (A)  
Vixel Corp.  
11911 Northcreek Pkwy South  
Bothell, WA 98011-8009  
Phone: (425) 806-4079  
Fax: (425) 806-4050  
Email: Carl.Mies@Vixel.com

Mr. Michael G. Kaminski (AV)  
Volex Inc.  
835 Sinclair Frontage Road  
Milpitas, CA 95035  
Phone: (408) 945-7766  
Fax: (408) 945-4360  
Email: Mike_Kaminski@volex.com

Mr. Tom Hanan (AV)  
Western Digital Corporation  
8105 Irvine Ctr. Dr.  
Irvine, CA 92718  
Phone: (949) 672-5679  
Email: tom.hanan@wdc.com

Mr. Ben Chen (AV)  
Wieson Electronic Co. Ltd.  
PO Box 189  
Mauldin, SC 29662  
Phone:  
Fax:  
Email:

Mr. Tom Browning (AV)  
Woven Electronics  
1001 Old Sage Rd.  
Simpsonville, SC 29681  
Phone: (864) 967-1759  
Fax:  
Email: tom.browning@wovenelectronics.com

Mr. Doug Piper (AV)  
Woven Electronics  
PO Box 189  
Mauldin, SC 29662  
Phone: (864) 967-1751  
Fax: (864) 963-1761  
Email: doug.piper@wovenelectronics.com

Mr. Larry Aszmann (AV)  
Xiotech Corp.  
#200  
6509 Flying Cloud Dr.  
Eden Prairie, MN 55344  
Phone: (612) 828-5978  
Fax: (612) 828-5990  
Email: laszmann@xiotech.com

Mr. Arnold Limjoco (AV)  
Yamaichi Electronics  
2235 Zanker Rd.  
San Jose, CA 95131  
Phone: (408) 456-0797 x134  
Fax: (408) 456-0799  
Email: arnold.l@yelu.com