

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T10/03-248r0

Date: July 15, 2003

Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber / John Lohmeyer
Subject: Minutes of T10 Plenary Meeting #56 -- July 10, 2003
Colorado Springs, CO

Agenda

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 - 8.18 SCSI Architecture Model - 3 (SAM-3) {Project 1561-D} [Weber]
 - 8.19 Serial Attached SCSI (SAS) {Project 1562-D} [Elliott]
 - 8.20 Serial Attached SCSI - 1.1 (SAS-1.1) {Project 1601-D} [Elliott]
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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

11. ISO/IEC
 - 11.1 ISO/IEC Report (03-238) [Robinson]
 - 11.2 ISO/IEC Business [Robinson]
12. Liaison Reports
 - 12.1 T11 Liaison Report (03-252) [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 SATA II [open/Cox]
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 July 10, 2003. 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 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 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 2003 membership form (available at ftp://ftp.t10.org/t10/mem_form.txt).

There are also minimum attendance requirements to maintain voting membership on T10. If a member organization fails to attend two of the last three T10 meetings, they are warned that failing to attend the next T10 meeting would result in their membership being terminated.

The Chair said he had sent letters to 4 people from 3 organizations informing them that their membership was in jeopardy due to non-attendance (see 03-194r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Cisco Systems, Inc.
Honda Connectors
KnowledgeTek, Inc.

The following organizations were not present at the meeting:

Cisco Systems, Inc.

The members from the organizations that failed to attend will have their membership changed to non-voting status.

The following organizations joined the committee at this meeting:

Agilent Technologies

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 noted that the status of companies that have not voted on recent letter ballots is contained in 03-213. John stated that Cisco Systems, Inc. and Honda Connectors are in letter ballot jeopardy.

4. Approval of Minutes - May 2003 Meeting - Nashua, NH (T10/03-179r0)

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 July 17, 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.

A document is available from ANSI, "Procedures for the Development and Coordination of American National Standards", at no charge. This document is also on the WWW at http://www.incits.org/help/ansi_sdo.html. Section 1.2.11 contains the ANSI patent policy. Amy Marasco manages patent issues for ANSI and can be contacted at amarasco@ansi.org or 212-642-4954. 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.

John Lohmeyer noted that he had received a letter from Ron Silletti of IBM disclosing IBM's patent position regarding the ADI draft standards (see 03-241).

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 other than those mentioned above.

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. *Carry over.*
- 527 Peter Johansson will prepare SBP-3 revision 4 for forwarding to first public review. *Complete.*
- 528 John Lohmeyer will forward SBP-3 to INCITS for further processing towards first public review. *Complete.*
- 529 Rob Elliott will prepare SAS revision 4 for forwarding to first public review. *Complete.*
- 530 John Lohmeyer will contact Microsoft Corporation regarding the disposition of their No vote on the SAS
letter ballot. *Complete.*
- 531 John Lohmeyer will forward SAS revision 4 to INCITS for processing toward first public review. *Complete.*
- 532 John Lohmeyer will notify SATA II that Alvin Cox will be the T10 liaison to the SATA II PHY group.
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 web site and will be included in the mailing as usual.

John Lohmeyer reported that Bob Davis, who was our INCITS liaison, has been laid off and has resigned from the T10 committee.

Terry Nelson reported that INCITS will be meeting next week at Oracle in the bay area.

John reported that Monica Vago left INCITS and Kate McMillan passed away.

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

Ralph Weber reported that OSD revisions 7 and 7a were uploaded to the T10 web site in June. The substantive content of the two revisions is identical but revision 7 contains editing markings to show the text that has been removed since revision 6.

Ralph Weber moved that OSD revision 7a be accepted as a committee draft. Cris Simpson seconded the motion. In the absence of any objections, the motion passed unanimously.

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

Erich Oetting reported on the activities of the SMC-2 working group (minutes in 03-255). He stated that a motion to forward SMC-2 to first Public Review is anticipated at the September meeting.

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

Ralph Weber reported that revision 14 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.

Ralph reported that the editing review meetings for SPC-3 have completed all planned tasks except review of the Persistent Reservations material. Based on the number of outstanding proposals regarding Persistent Reservations, the editing team has decided to skip reviewing that material. As a result, the SPC-3 editing review is now concluded.

8.5 SCSI Block Commands - 2 (SBC-2) {Project 1417-D} [Elliott]

Rob Elliott reported that SBC-2 r09 has been posted and will be included in the next mailing. Rob asked committee members to prepare for an SBC-2 editing meeting to be held during the November meeting week.

8.6 SCSI Stream Commands - 2 (SSC-2) {Project 1434-D} [Peterson]

Dave Peterson reported that the CAP working group (minutes in 03-247) has recommended accepting 02-081r8 as the resolution for the SSC-2 Letter Ballot comments and forwarding SSC-2 r09 for first Public Review.

On behalf of the CAP working group, Cris Simpson moved that 02-081r8 be accepted as containing the resolution for the SSC-2 Letter Ballot comments, that SSC-2 revision 09 be accepted as containing the agreed resolutions for the Letter Ballot comments, and that SSC-2 revision 09 be forward to INCITS for processing towards first Public Review. The motion passed on a vote of 26:0:0:16=42, meeting the two-thirds rule.

Based on the successful resolution of their Letter Ballot comments, Ralph Weber, George Penokie, Paul Entzel, and Gerry Houlder requested that their No votes on the Letter Ballot be changed to Yes.

John Lohmeyer took an action item to forward SSC-2 revision 09 to INCITS for processing towards first Public Review.

8.7 SCSI Passive Interconnect Performance (PIP) {Project 1439-D} [Daggett]

John Lohmeyer reported that PIP had been published as ANSI INCITS.368:2003. He congratulated Zane Daggett and Bill Ham for their hard work on completing this standard.

When Bill Ham reported that he had not yet received a courtesy copy of EPI, John Lohmeyer took an action item to contact INCITS regarding courtesy copies of EPI, PIP, SSM-2, and SPI-5.

8.8 SCSI Serial Bus Protocol -3 (SBP-3) {Project 1467-D} [Johansson]

John Lohmeyer reported that the Public Review for SBP-3 closed on July 7th and no comments are known to have been received. He stated that Peter Johansson mentioned an outstanding issue. John was waiting for a response from Peter on whether to continue the SBP-3 processing or to request a second public review on a revised SBP-3.

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

John Lohmeyer reported that SSM-2 had been published as ANSI INCITS.369:2003. He congratulated Paul Aloisi, Bruce Manildi, and Larry Barnes for their hard work on completing this standard.

8.10 SCSI RDMA Protocol - 2 (SRP-2) {Project 1524-D} [Simpson]

Cris Simpson reported on the SRP-2 First Burst support and multi-channel model activities conducted in the CAP working group (minutes in 03-247).

8.11 SCSI Parallel Interface - 5 (SPI-5) {Project 1525-D} [Penokie]

John Lohmeyer reported that SPI-5 had been published as ANSI INCITS.367:2003. He congratulated George Penokie for his hard work on completing this standard.

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

George Penokie reported that the CAP working group (minutes in 03-247) has recommended that the MSC project be withdrawn unless proposals for MSC content are received by the November meeting week. He noted that the working group also recommended making announcements to this effect as part of both this meeting week and the September meeting week.

George Penokie took an action item to announce on the T10 Reflector the T10 intention to withdraw the MSC project unless proposals for MSC content are received by the November T10 meeting week. George Penokie took an action item to announce on the T10 Reflector during the September T10 meeting week the T10 intention to withdraw the MSC project unless proposals for MSC content are received by the November T10 meeting week.

8.13 MultiMedia Command Set - 4 (MMC-4) {Project 1545-D} [McFerrin]

Bill McFerrin reported on the activities of the MMC-4 working group. He noted that MMC-4 r02 and r02a have been posted since the last meeting and will be available in the next meeting. He stated that the November Letter Ballot date is in jeopardy.

Bill McFerrin moved that SPC-3 version descriptors be assigned for ATAPI-6, ATAPI-7, USB-1, USB-2, and USB Mass. Ron Roberts seconded the motion. In the absence of any objections, the motion passed unanimously.

Bill McFerrin took an action item provide the SPC-3 Editor with document references for USB-1, USB-2, and USB Mass.

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

Paul Entzel reported on the activities of the ADI working group (minutes in 03-236). He stated that new revisions of ADC and ADT will be prepared soon and that the new ADT will be finished in time for the mailing.

He noted that ADC is not quite ready for Letter Ballot after this meeting, as previously planned. Paul stated that the goal is to hold the ADC Letter Ballot before or immediately after the September meeting, and the ADT Letter Ballot after that.

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

This topic was covered in item 8.14.

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

Rob Elliott reported on the SES-2 activities undertaken in the CAP working group (minutes in 03-247). He stated that revision 3 containing changes approved by the last meeting has been posted and that revision 4 containing changes approved by this meeting will be posted in time for the next mailing.

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

Dave Peterson reported that FCP-3 r01 has been posted for inclusion in the next mailing. He informed the committee that the first FCP-3 working group meeting will be held during the September T10 meeting week.

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

Ralph Weber reported that revision 8 will be available in time for the mailing. He noted that no SAM-3 changes are on the agenda for approval by this meeting, but that a new SAM-3 revision is needed to correct a non-substantive conflict between the QErr definitions in SPC-3 and SAM-3.

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

John Lohmeyer reported that the SAS first Public Review closed on July 7th with no comments received.

Rob Elliott reported on the SAS-related activities of the SAS Protocol working group (minutes in 03-246). He noted that two sets of proposed SAS changes are on the agenda for consideration under item 10.1 and that the result of approving these changes, as recommended by the SAS working group, will be a second Public Review for SAS.

Rob noted that SAS r05 has been posted and will be available for the next mailing.

8.20 Serial Attached SCSI - 1.1 (SAS-1.1) {Project 1601-D} [Elliott]

Rob Elliott reported on the activities related to SAS-1.1 of the SAS Protocol working group (minutes in 03-246).

He stated that SAS-1.1 r00, which will be identical to SAS r05, will be uploaded in time for the next mailing.

8.21 SCSI Stream Commands - 3 (SSC-3) {Project 1611-D} [Peterson]

Dave Peterson reported that the SSC-3 working group plans to ask for meeting time during the November meeting week.

9. Old Business**9.1 ANSI INCITS 330-2000 Defect Report (03-021) (RBC AM1) [Atkinson, Roberts]**

John Lohmeyer reported that the RBC Amendment letter ballot passed 37:0:3:2=42. Two yes ballots (Weber and Lohmeyer) included editorial comments. Since there were no unresolved negatives, RBC AM1 automatically went to INCITS for management review and first public review (expected to start in mid-August). The editorial comments received from Weber and Lohmeyer will be dealt with during the ANSI pre-publication edit.

10. New Business

10.1 Actions on SAS Protocol Working Group Recommendations

John Lohmeyer described the following proposals recommended for inclusion in SAS by the SAS Protocol working group:

03-223r1 (SAS Changes from sas-r04 to sas-r05) [Elliott]

03-228r2 (SAS: Notify primitive issues) [Penokie]

He noted that both proposals contain substantive changes to the SAS dpANS following first Public Review and that both proposals were unanimously recommended for inclusion in SAS r05. He reminded the committee that one of the recommended changes was to increase the output signal levels.

Rob Elliott moved that 03-223r1 and 03-228r2 be approved for inclusion in SAS r05. Gerry Houlder seconded the motion. In the absence of any objections, the motion passed unanimously.

John Lohmeyer moved that SAS revision 05, containing the substantive changes, be forwarded to INCITS for processing toward second Public Review. Mark Evans seconded the motion. The motion passed on a roll call vote of 30:0:0:12:=42, meeting the two-thirds rule. Details of the roll call vote were as follows:

| Organization | Stat | Name | Yes | No | Abs | NP |
|------------------------------|------|-------------------------|-----|----|-----|----|
| Adaptec, Inc. | P | Mr. Ron Roberts | 1 | | | |
| Agilent Technologies | P | Ms. Pat Thaler | 1 | | | |
| Amphenol Interconnect | P | Mr. Michael Wingard | 1 | | | |
| Andiamo Systems, Inc. | P | Dr. Claudio DeSanti | 1 | | | |
| Brocade Comm. Systems, Inc. | P | Mr. Robert Snively | 1 | | | |
| Congruent Software, Inc. | | | | | | 1 |
| Crossroads Systems, Inc. | | | | | | 1 |
| Dallas Semiconductor | P | Mr. James A. Lott, Jr. | 1 | | | |
| Dell Computer Corp. | P | Mr. Kevin Marks | 1 | | | |
| EMC Corp. | P | Mr. Gary S. Robinson | 1 | | | |
| Emulex | P | Mr. Robert H. Nixon | 1 | | | |
| ENDL Texas | P | Mr. Ralph O. Weber | 1 | | | |
| FCI | P | Mr. Douglas Wagner | 1 | | | |
| Fujitsu | P | Mr. Mike Fitzpatrick | 1 | | | |
| General Dynamics | | | | | | 1 |
| Hewlett Packard Co. | P | Mr. Rob Elliott | 1 | | | |
| Hitachi Cable Manchester | | | | | | 1 |
| Hitachi Global Storage Tech. | P | Mr. Dan Colegrove | 1 | | | |
| Honda Connectors | | | | | | 1 |
| IBM / Tivoli Systems | P | Mr. George O. Penokie | 1 | | | |
| Intel Corp. | P | Mr. Cris Simpson | 1 | | | |
| Iomega Corp. | P | Mr. Hiromichi Oribe | 1 | | | |
| KnowledgeTek, Inc. | P | Mr. Dennis Moore | 1 | | | |
| LSI Logic Corp. | P | Mr. John Lohmeyer | 1 | | | |
| Madison Cable Corp. | | | | | | 1 |
| Maxtor Corp. | P | Mr. Mark Evans | 1 | | | |
| Microsoft Corp. | P | Ms. Emily Hill | 1 | | | |
| Molex Inc. | | | | | | 1 |
| Network Appliance Inc. | | | | | | 1 |
| Panasonic Technologies, Inc | P | Dr. Terence J. Nelson | 1 | | | |
| Philips Electronics/CD Edge | P | Mr. William P. McFerrin | 1 | | | |
| Pivot3, Inc. | | | | | | 1 |
| QLogic Corp. | A# | Mr. Craig W. Carlson | 1 | | | |
| Quantum Corp. | P | Mr. Paul Entzel | 1 | | | |
| Seagate Technology | P | Mr. Gerald Houlder | 1 | | | |

| | | | | |
|--------------------------|----|--------------------|----|-------------|
| Storage Technology Corp. | P | Mr. Erich Oetting | 1 | |
| Sun Microsystems, Inc. | P | Mr. Vit Novak | 1 | |
| Texas Instruments | A. | Mr. Robert Kando | 1 | |
| Toshiba | | | | 1 |
| UNISYS Corporation | | | | 1 |
| Veritas Software | | | | 1 |
| Vixel Corp. | P | Mr. Kenneth Hirata | 1 | |
| | | | 30 | 0 0 12 = 42 |

John Lohmeyer took an action item to forward SAS revision 05 for processing toward second Public Review.

10.2 Actions on CAP Working Group Recommendations

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

- 03-203r0 (SPC-3: TransportID Cleanup) [Weber]
- 03-209r0 (Limiting the MD5 logical unit identifier to logical units) [Weber]
- 03-227r1 (Add additional sense code values to SPC-3 for ADC) [Entzel]
- 03-230r3 (Persistent All Registrants Fix) [Penokie]

It was noted that 03-227r1 and 03-230r3 were modified by the CAP working group (minutes in 03-247) and that all the proposals were approved unanimously except 03-227r1 where an 18:0:2 approval vote was recorded.

Ralph Weber moved that 03-203r0, 03-209r0, 03-227r1, and 03-230r3 be approved for inclusion in SPC-3. Mark Evans seconded the motion. The motion passed on a vote of 30:0:0:12=42.

Rob Elliott described the following proposals recommended for inclusion in SES-2:

- 03-215r0 (SES-2 Array Control and Status changes) [Elliott] {12:0:4}
- 03-214r1 (SES-2 Updated SAS Device Element Status descriptor) [Elliott] {r0 as modified, 14:0:4}

It was noted that 03-215r0 was recommended by a 12:0:4 vote. It was noted that 03-214r1 was modified by the CAP working group (minutes in 03-247) and recommended by a 14:0:4 vote.

Rob Elliott moved that 03-215r0 and 03-214r1 be approved for inclusion in SES-2. Mark Evans seconded the motion. The motion passed on a vote of 30:0:0:12=42.

Rob Elliott took an action item to send a warning message to the T10 Reflector regarding the removal of the SES Array Control and Array Status pages. Rob Elliott took an action item to send a warning message to the T10 Reflector in September regarding the removal of the SES Array Control and Array Status pages. Rob Elliott took an action item to prepare a proposal updating the SAS Device Element Status descriptor based on discussions in the CAP working group.

10.3 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 (03-238) [Robinson]

Gary Robinson provided an electronic report in 03-238.

Bob Snively took an action item to provide the ISO format SES PDF and sources to the IR.

11.2 ISO/IEC Business [Robinson]

Gary Robinson reported that Bob Snively has agreed to go to the ISO meeting as the U.S. head of delegation.

Gary Robinson moved that T10 recommend Gary Robinson and Bob Snively as delegates to the JTC1/SC25 meeting for 2003. Bob Snively seconded the motion. The motion passed on a roll call vote of 31:0:0:11=42. The detailed results of the roll call vote were as follows:

| Organization | Stat | Name | Yes | No | Abs | NP |
|------------------------------|------|-------------------------|-----|----|-----|---------|
| Adaptec, Inc. | P | Mr. Ron Roberts | 1 | | | |
| Agilent Technologies | P | Ms. Pat Thaler | 1 | | | |
| Amphenol Interconnect | P | Mr. Michael Wingard | 1 | | | |
| Andiamo Systems, Inc. | P | Dr. Claudio DeSanti | 1 | | | |
| Brocade Comm. Systems, Inc. | P | Mr. Robert Snively | 1 | | | |
| Congruent Software, Inc. | | | | | | 1 |
| Crossroads Systems, Inc. | | | | | | 1 |
| Dallas Semiconductor | P | Mr. James A. Lott, Jr. | 1 | | | |
| Dell Computer Corp. | P | Mr. Kevin Marks | 1 | | | |
| EMC Corp. | P | Mr. Gary S. Robinson | 1 | | | |
| Emulex | P | Mr. Robert H. Nixon | 1 | | | |
| ENDL Texas | P | Mr. Ralph O. Weber | 1 | | | |
| FCI | P | Mr. Douglas Wagner | 1 | | | |
| Fujitsu | P | Mr. Mike Fitzpatrick | 1 | | | |
| General Dynamics | | | | | | 1 |
| Hewlett Packard Co. | P | Mr. Rob Elliott | 1 | | | |
| Hitachi Cable Manchester | | | | | | 1 |
| Hitachi Global Storage Tech. | P | Mr. Dan Colegrove | 1 | | | |
| Honda Connectors | | | | | | 1 |
| IBM / Tivoli Systems | P | Mr. George O. Penokie | 1 | | | |
| Intel Corp. | P | Mr. Cris Simpson | 1 | | | |
| Iomega Corp. | P | Mr. Hiromichi Oribe | 1 | | | |
| KnowledgeTek, Inc. | P | Mr. Dennis Moore | 1 | | | |
| LSI Logic Corp. | P | Mr. John Lohmeyer | 1 | | | |
| Madison Cable Corp. | | | | | | 1 |
| Maxtor Corp. | P | Mr. Mark Evans | 1 | | | |
| Microsoft Corp. | P | Ms. Emily Hill | 1 | | | |
| Molex Inc. | P | Mr. Jay Neer | 1 | | | |
| Network Appliance Inc. | | | | | | 1 |
| Panasonic Technologies, Inc | P | Dr. Terence J. Nelson | 1 | | | |
| Philips Electronics/CD Edge | P | Mr. William P. McFerrin | 1 | | | |
| Pivot3, Inc. | | | | | | 1 |
| QLogic Corp. | A# | Mr. Craig W. Carlson | 1 | | | |
| Quantum Corp. | P | Mr. Paul Entzel | 1 | | | |
| Seagate Technology | P | Mr. Gerald Houlder | 1 | | | |
| Storage Technology Corp. | P | Mr. Erich Oetting | 1 | | | |
| Sun Microsystems, Inc. | P | Mr. Vit Novak | 1 | | | |
| Texas Instruments | A. | Mr. Robert Kando | 1 | | | |
| Toshiba | | | | | | 1 |
| UNISYS Corporation | | | | | | 1 |
| Veritas Software | | | | | | 1 |
| Vixel Corp. | P | Mr. Kenneth Hirata | 1 | | | |
| | | | 31 | 0 | 0 | 11 = 42 |

Gary Robinson took an action item to communicate the T10 JTC1/SC25 delegation recommendation to the INCITS Executive Board.

12. Liaison Reports

12.1 T11 Liaison Report (03-252) [Snively]

Bob Snively presented the T11 liaison report contained in T10/03-252r0.

12.2 T13 Liaison Report [Colegrove]

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

12.3 SFF Industry Group [Allan]

In the absence of Dal Allan, Vit Novak reported on two SFF SSWG meetings. One SSWG was on single voltage drives the other was on four-lane SAS internal cabling and connectors.

12.4 IEEE 1394 [Johansson]

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

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 03-256r0.

12.6 IETF SCSI over IP [Black/Robinson]

David Black reported that IETF work on iSCSI has gotten to the point where no meeting will be held during the IETF meeting next week. He noted that assignment of an iSCSI RFC is pending completion work on a couple of security drafts.

12.7 SNIA [Cummings]

In the absence of Roger Cummings, David Black reported that SMI-S version 1.0 has been published and work is in progress to fast track it through INCITS. Technical development is in progress on SMI-S version 1.1 with a goal of completing the technical work by early fall.

12.8 SATA II [open/Cox]

The SATA II group has not yet designated an official liaison to T10. John Lohmeyer noted that an effort is underway to get a waiver to protect SATA II liaisons from liability regarding disclosing confidential information obtained at SATA II meetings.

Alvin Cox reported on the four lane internal connection work, work on new speed definitions, increased signal launch levels, and SATA backplane applications.

John and Alvin discussed future requirements for liaisons between SATA II and SAS. John and Alvin discussed future meeting requirements for the SAS Phy working group.

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.
- 533 George Penokie will announce on the T10 Reflector the T10 intention to withdraw the MSC project unless
proposals for MSC content are received by the November T10 meeting week.
- 534 George Penokie will announce on the T10 Reflector during the September T10 meeting week the T10
intention to withdraw the MSC project unless proposals for MSC content are received by the November
T10 meeting week.
- 535 John Lohmeyer will forward SSC-2 revision 09 to INCITS for processing towards first Public Review.
- 536 John Lohmeyer will forward SAS revision 05 for processing toward second Public Review.
- 537 John Lohmeyer will contact INCITS regarding courtesy copies of EPI, PIP, SSM-2, and SPI-5.
- 538 Bill McFerrin took an action item provide the SPC-3 editor with document references for USB-1, USB-2,
and USB Mass.
- 539 Rob Elliott will send a warning message to the T10 Reflector regarding the removal of the SES Array
Control and Array Status pages.
- 540 Rob Elliott will send a warning message to the T10 Reflector in September regarding the removal of the
SES Array Control and Array Status pages.
- 541 Rob Elliott will prepare a proposal updating the SAS Device Element Status descriptor based on discus-
sions in the CAP working group.
- 542 Bob Snively will provide the ISO format SES PDF and sources to the IR.
- 544 Gary Robinson will communicate the T10 JTC1/SC25 delegation recommendation to the INCITS
Executive Board.

14. Meeting Schedule

The next plenary meeting of T10 will be Thursday September 11, 2003 in Seattle, WA at the Renaissance Hotel (800-278-4159), hosted by Microsoft Corp. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

September 2003 Meeting Map
(2003/07/10 Version)

| | | | | | | | | | | | | | | |
|----------------|---|-------------------------------------|----|----|----|---|---|---|---|---|---|---|---|------|
| Monday 9/08 | | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | +=====+ | | | | | | | | | | | | |
| | | SMC-2 / ADI WG | | | | | | | | | | | | (15) |
| | | +=====+ | | | | | | | | | | | | |
| | | SAS Protocol WG | | | | | | | | | | | | (40) |
| | | +=====+ | | | | | | | | | | | | |
| | | SAS PHY WG | | | | | | | | | | | | (20) |
| | | +=====+ | | | | | | | | | | | | |
| Tuesday 9/09 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | +=====+ | | | | | | | | | | | | |
| | | SAS Prot FCP-3 WG SCSI CAP WG | | | | | | | | | | | | (40) |
| | | +=====+ | | | | | | | | | | | | |
| | | ADI WG | | | | | | | | | | | | (15) |
| | | +=====+ | | | | | | | | | | | | |
| | | MMC WG | | | | | | | | | | | | (10) |
| | | +=====+-----+ | | | | | | | | | | | | |
| | | T11 Ad hocs | | | | | | | | | | | | (15) |
| | | +-----+-----+ | | | | | | | | | | | | |
| | | Plugfest Adm * STA Marcom * | | | | | | | | | | | | (20) |
| | | +-----+-----+ | | | | | | | | | | | | |
| Wednesday 9/10 | | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | +=====+ | | | | | | | | | | | | |
| | | SCSI Commands, Arch., & Protocol WG | | | | | | | | | | | | (35) |
| | | +=====+ | | | | | | | | | | | | |
| | | MMC WG | | | | | | | | | | | | (10) |
| | | +=====+-----+ | | | | | | | | | | | | |
| | | SFF: SSWG / 8425 | | | | | | | | | | | | (20) |
| | | +-----+-----+ | | | | | | | | | | | | |
| | | STA Plenary * / Plugfest TCC * | | | | | | | | | | | | (20) |
| | | +-----+-----+ | | | | | | | | | | | | |
| | | T11.5 FAIS WG | | | | | | | | | | | | (20) |
| | | +-----+-----+ | | | | | | | | | | | | |
| Thursday 9/11 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | +=====+ | | | | | | | | | | | | |
| | | T10 Plenary | | | | | | | | | | | | (45) |
| | | +=====+ | | | | | | | | | | | | |
| Friday 9/12 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | | No meetings are planned for Friday. | | | | | | | | | | | | |

Meetings marked with == are T10-authorized meetings.

Meetings marked with -- are other groups and may change without notice.

Meetings marked with (*) are STA closed meetings.

Other T10-authorized meetings:

| Meeting | Date | Location / Contact |
|----------------|--------------------|-----------------------------------|
| ----- | ----- | ----- |
| Data Integrity | Aug 19 1:00 - 6:00 | Denver, CO / Lohmeyer |
| SG | Aug 20 9:00 - 5:00 | |
| ADI Calls | Bi-weekly | To be announced via T10 reflector |
| SAS Prot Calls | | To be announced via T10 reflector |
| SAS PHY Calls | | To be announced via T10 reflector |

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:

| Activity | Contact | Telephone/Email |
|----------------------------|-----------------|---|
| ADT | Paul Entzel | (720) 406-5782 paul.entzel@quantum.com |
| ADC | Rod Wideman | (720) 249-5796 rod.wideman@adic.com |
| SBC-2, SES-2, SAS, SAS-1.1 | Rob Elliott | (281) 518-5037 Elliott@hp.com |
| MMC-4 | Bill McFerrin | (303) 651-5400 bmcferrin@aol.com |
| SBP-3 | Peter Johansson | (510) 527-3926 PJohansson@ACM.org |
| MSC | George Penokie | (507) 253-5208 gpenokie@tivoli.com |
| SMC-2 | Erich Oetting | (303) 673-2178 Erich_Oetting@Stortek.com |
| SPC-3, SAM-2, SAM-3, OSD | Ralph Weber | (214) 912-1373 roweber@acm.org |
| SSC-2, SSC-3, FCP-2, FCP-3 | Dave Peterson | (612) 802-3299 dap@sbs.com |
| SRP-2 | Cris Simpson | (503) 712-4333 cris.simpson@intel.com |
| Other Activities | John Lohmeyer | (719) 533-7560 lohmeier@t10.org |

The long-term T10 meeting week schedule is:

| Date | Location | Host/Comments |
|----------------------|------------------------------|---------------|
| Sep 8-12, 2003 | Seattle, WA | Microsoft |
| Nov 3-7, 2003 | Austin, TX | Crossroads |
| Jan 12-16, 2004 | Chandler, AZ | Intel |
| Mar 8-12, 2004 | Dana Point, CA | QLogic |
| May 3-7, 2004 | Toronto, Montreal, or Ottawa | Brocade |
| Jul 12-16, 2004 | Colorado Springs, CO | LSI Logic |
| Sep 13-17, 2004 | Nashua, NH | Hitachi Cable |
| Nov 8-12, 2004 | Austin, TX | Crossroads |
| 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 | | |

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.

Erich Oetting moved that T10 authorize the T10-related meetings and events in the list above that had not previously been approved through the end of October 2003. Mark Evans 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 11:00 a.m. on Thursday July 10, 2003.

Enclosure(1) -- Meeting Attendees

| Name | S | Organization | Electronic Mail Address |
|-------------------------|----|------------------------------|---------------------------------|
| Mr. Walter Rassbach | V | | rassbach@nilenet.com |
| Mr. Ron Roberts | P | Adaptec, Inc. | rkroberts@aol.com |
| Ms. Pat Thaler | P | Agilent Technologies | pat_thaler@agilent.com |
| Mr. Michael Wingard | P | Amphenol Interconnect | mikwingard@aol.com |
| Dr. Claudio DeSanti | P | Andiamo Systems, Inc. | cds@andiamo.com |
| Mr. Robert Snively | P | Brocade Comm. Systems, Inc. | rsnively@brocade.com |
| Mr. James A. Lott, Jr. | P | Dallas Semiconductor | jim.lott@dalsemi.com |
| Mr. Kevin Marks | P | Dell Computer Corp. | kevin_marks@dell.com |
| Mr. Gary S. Robinson | P | EMC Corp. | robinson_gary@emc.com |
| Mr. David Black | A | EMC Corp. | black_david@emc.com |
| Mr. Robert H. Nixon | P | Emulex | bob.nixon@emulex.com |
| Mr. Ralph O. Weber | P | ENDL Texas | roweber@acm.org |
| Mr. Douglas Wagner | P | FCI | dwagner@fciconnect.com |
| Mr. Mike Fitzpatrick | P | Fujitsu | mfitzpatrick@fcpa.fujitsu.com |
| Mr. Rob Elliott | P | Hewlett Packard Co. | Elliott@hp.com |
| Dr. William Ham | A | Hewlett Packard Co. | bill_ham@ix.netcom.com |
| Mr. Dan Colegrove | P | Hitachi Global Storage Tech. | dcolegro@us.ibm.com |
| Mr. Werner Glinka | AV | Hitachi Global Storage Tech. | werner.glinka@attglobal.net |
| Mr. Kinji Kashio | A | Honda Connectors | kkashio@hondaconnectors.com |
| Mr. George O. Penokie | P | IBM / Tivoli Systems | gop@us.ibm.com |
| Mr. Cris Simpson | P | Intel Corp. | cris.simpson@intel.com |
| Mr. Hiromichi Oribe | P | Iomega Corp. | oribe@iomega.com |
| Mr. Dennis Moore | P | KnowledgeTek, Inc. | dmoore@ix.netcom.com |
| Mr. John Lohmeyer | P | LSI Logic Corp. | lohmeyer@t10.org |
| Mr. Mark Evans | P | Maxtor Corp. | mark_evans@maxtor.com |
| Mr. Martin Czekalski | V | Maxtor Corp. | marty_czekalski@maxtor.com |
| Ms. Emily Hill | P | Microsoft Corp. | emhill@microsoft.com |
| Mr. Jay Neer | P | Molex Inc. | jneer@molex.com |
| Mr. Edward A. Gardner | AV | Ophidian Designs | eag@ophidian.com |
| Dr. Terence J. Nelson | P | Panasonic Technologies, Inc. | terry@tjnelson.com |
| Mr. William P. McFerrin | P | Philips Electronics/CD Edge | bmcFerrin@aol.com |
| Mr. Craig W. Carlson | A# | QLogic Corp. | craig.carlson@qlogic.com |
| Mr. Paul Entzel | P | Quantum Corp. | paul.entzel@quantum.com |
| Mr. Mark A. Green | AV | Roxio, Inc. | mark_green@roxio.com |
| Mr. David Peterson | AV | SBS Technologies | dap@sbs.com |
| Mr. Gerald Houlder | P | Seagate Technology | gerry.houlder@seagate.com |
| Mr. Alvin Cox | V | Seagate Technology | Alvin.Cox@seagate.com |
| Mr. Erich Oetting | P | Storage Technology Corp. | erich_oetting@stortek.com |
| Mr. Vit Novak | P | Sun Microsystems, Inc. | vit.novak@sun.com |
| Mr. Robert Kando | A. | Texas Instruments | Robert_Kando@ti.com |
| Mr. Hiroshi Suzuki | P | Toshiba | hiroshi.suzuki@tais.toshiba.com |
| Mr. Kenneth Hirata | P | Vixel Corp. | Ken.Hirata@Vixel.com |

42 People Present

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

Enclosure(2) -- T10 Attendance Database

Generated on 2003/07/11 at 09:45:23

| | |
|--|---|
| Mr. Ron Roberts (P) Adaptec, Inc. 691 S. Milpitas Blvd. Milpitas, CA 95035 | Phone: (530) 677-5714 Fax: (530) 677-1218 Email: rkroberts@aol.com |
| Mr. Ram Rangarajan (AV) Advansys 1150 Ringwood Ct. San Jose, CA 95131 | Phone: (408) 383-5719 Fax: (408) 383-9612 Email: rrangarajan@advansys.com |
| Mr. Bernhard Laschinsky (AV) Agere Systems Room 12D-225B 1110 American Parkway NE Allentown, PA 18109-9138 | Phone: (610) 712-7937 Fax: (610) 712-4574 Email: blaschinsky@agere.com |
| Mr. Ken Paist (AV) Agere Systems Room 12D-225B 1110 American Parkway NE Allentown, PA 18109-9138 | Phone: (610) 712-3265 Fax: Email: paist@agere.com |
| Ms. Pat Thaler (P) Agilent Technologies 1101 Creekside Ridge Dr Suite 100, MS RG-10 Roseville, CA 95678 | Phone: (916) 788-5662 Fax: Email: pat_thaler@agilent.com |
| Mr. Litko Chan (AV) Agilent Technologies 3175 Bowers Ave., MS 88R Santa Clara, CA 95054 | Phone: (408) 970-3020 Fax: Email: lito_chan@agilent.com |
| Mr. Michael Wingard (P) Amphenol Interconnect 20 Valley St. Endicott, NY 13760 | Phone: (607) 786-4241 Fax: (607) 786-4311 Email: mikwingard@aol.com |
| Mr. John Majernik (A) Amphenol Interconnect 20 Valley St. Endicott, NY 13760 | Phone: (607) 786-4249 Fax: (607) 786-4311 Email: john.majernik@aipce.com |
| Mr. Bart Raudebaugh (AV) Ancot Corp. 1024 Hamilton Court Menlo Park, CA 94025 | Phone: (415) 322-5322 Fax: (415) 322-0455 Email: bart@ancot.com |
| Mr. Ward Winburn (AV) Ancot Corp. | Phone: (650) 322-5322 Fax: (650) 322-0455 |

1024 Hamilton Court
Menlo Park, CA 94025

Email: ward@ancot.com

Dr. Claudio DeSanti (P)
Andiamo Systems, Inc.
375 E. Tasman Dr.
San Jose, CA 95134

Phone: (408) 853-9172
Fax: (408) 853-9172
Email: cds@andiamo.com

Mr. Fabio Maino (A)
Andiamo Systems, Inc.
375 E. Tasman Dr.
San Jose, CA 95134

Phone: (408) 853-7530
Fax: (408) 853-7530
Email: fmaino@andiamo.com

Mr. Harlan Andrews (AV)
Apple Computer
6 Infinite Loop MS 306-2MS
Cupertino, CA. 95014

Phone: (408) 974-6430
Fax: (408) 862-7577
Email: hea@apple.com

Mr. James R. Bergsten (AV)
Ark Research Corp.
1190 Saratoga Ave. #110
San Jose, CA 95129-3433

Phone: (408) 260-5900
Fax: (408) 260-5908
Email: bergsten@arkres.com

Mr. Brian A. Berg (AV)
Berg Software Design
P.O. Box 3488
14500 Big Basin Way, Suite F
Saratoga, CA 95070

Phone: (408) 741-5010
Fax: (408) 741-5234
Email: bberg@bswd.com

Mr. Robert Snively (P)
Brocade Comm. Systems, Inc.
1745 Technology Drive
San Jose, CA 95110

Phone: (408) 487-8135
Fax: (408) 392-6655
Email: rsnively@brocade.com

Mr. Steven Wilson (A)
Brocade Comm. Systems, Inc.
1745 Technology Drive
San Jose, CA 95110

Phone: (408) 333-8128
Fax: (408) 392-6655
Email: swilson@brocade.com

Mr. Joseph Basista (AV)
C&M Corp.
49 Middle Road
Owego, NY 13827

Phone: (607) 687-1044
Fax: (607) 687-7534
Email: joebasista@aol.com

Mr. Gerry Johnsen (AV)
Ciprico Inc.
2800 Campus Dr. Suite 60
Plymouth, MN 55441

Phone: (612) 551-4000
Fax: (612) 551-4002
Email: gerry@ciprico.com

Mr. Leroy Fong (AV)

Phone: (949) 855-7887

Circuit Assembly Corp.
18 Thomas St.
Irvine, CA 92618

Fax: (949) 837-8660
Email: leroyf@circuitassembly.com

Mr. Dennis Lang (AV)
Circuit Assembly Corp.
18 Thomas St.
Irvine, CA 92618

Phone: (949) 855-7887
Fax: (949) 855-4298
Email: dennisl@circuitassembly.com

Mr. Ian Morrell (AV)
Circuit Assembly Corp.
18 Thomas St.
Irvine, CA 92718-2703

Phone: (949) 598-1780
Fax: (949) 855-4298
Email: ianm@circuitassembly.com

Mr. Ben Chang (AV)
Cirrus Logic Inc.
3100 W. Warren Ave.
Fremont, Ca 94538

Phone: (510) 226-2394
Fax:
Email: ben@corp.cirrus.com

Mr. Peter Johansson (P)
Congruent Software, Inc.
98 Colorado Avenue
Berkeley, CA 94707

Phone: (510) 527-3926
Fax: (510) 527-3856
Email: PJohansson@ACM.org

Mr. Robert Griswold (P)
Crossroads Systems, Inc.
8300 N. Mopac Blvd.
Austin, TX 78759

Phone: (512) 928-7272
Fax: (512) 928-7403
Email: rgriswold@crossroads.com

Mr. John Tyndall (A)
Crossroads Systems, Inc.
8300 North Mopac Expressway
Austin, TX 78749

Phone: (512) 928-7282
Fax:
Email: jtyndall@crossroads.com

Mr. James A. Lott, Jr. (P)
Dallas Semiconductor
4401 S. Beltwood Pkwy.
Dallas, TX 75244-3292

Phone: (972) 371-4939
Fax: (972) 371-4370
Email: jim.lott@dalsemi.com

Mr. Titkwan Hui (A)
Dallas Semiconductor
4401 S. Beltwood Pkwy.
Dallas, TX 75244-3292

Phone: (972) 371-4340
Fax: (972) 371-4370
Email: tk.hui@dalsemi.com

Mr. Bill Anderson (AV)
DDK Electronics
3001 Oakmead Village Dr.
Santa Clara, CA 95051

Phone: (408) 980-8344
Fax: (408) 980-9750
Email: bill_anderson@ddkconnectors.com

| | |
|---|--|
| Mr. Kevin Marks (P) Dell Computer Corp. One Dell Way Round Rock, TX 78682 | Phone: (512) 723-8784 Fax: (512) 723-6657 Email: kevin_marks@dell.com |
| Mr. James Benfer (AV) Digi-Data Corp. 8580 Dorsey Run Road Jessup, MD 20794 | Phone: (301) 498-0200 Fax: Email: |
| Mr. Robert Reisch (AV) Eastman Kodak Co. 460 Buffalo Road Rochester, NY 14652-3816 | Phone: (716) 588-0573 Fax: (716) 588-2624 Email: reisch@kodak.com |
| Mr. Terry Maezawa (AV) Electronic&Ind. Enterprises Suite 216 21 Eastbrook Bend Peachtree City, GA 30269 | Phone: (404) 487-5815 Fax: Email: |
| Mr. Bob Gannon (AV) Electronica Pantera 300 Carli Blvd. Colchester, CT 06415 | Phone: (860) 537-6800 Fax: (509) 278-7661 Email: rgannon@jpmco.com |
| Mr. Gary S. Robinson (P) EMC Corp. 228 South St. Hopkinton, MA 01748 | Phone: (617) 300-7242 Fax: Email: robinson_gary@emc.com |
| Mr. David Black (A) EMC Corp. 176 South St. Hopkinton, MA 01748 | Phone: (508) 293-7953 Fax: (508) 293-7786 Email: black_david@emc.com |
| Mr. Robert H. Nixon (P) Emulex 3535 Harbor Blvd Costa Mesa, CA 92626 | Phone: (714) 513-8117 Fax: (714) 513-8265 Email: bob.nixon@emulex.com |
| Mr. Dave Baldwin (A) Emulex 3535 Harbor Blvd Costa Mesa, CA 92626 | Phone: (714) 513-8176 Fax: (714) 513-8265 Email: Dave.Baldwin@Emulex.Com |
| Mr. I. Dal Allan (A) ENDL 14426 Black Walnut Ct. Saratoga, CA 95070 | Phone: (408) 867-6630 Fax: (408) 867-2115 Email: endlcom@acm.org |

Mr. Ralph O. Weber (P)
ENDL Texas
Suite 102#178
18484 Preston Rd.
Dallas, TX 75252

Phone: (214) 912-1373
Fax: (972) 596-2775
Email: roweber@acm.org

Mr. Alan Johnson (AV)
Eurologic Systems Ltd.
South County Business Park
Leopardstown
County Dublin Ireland

Phone:
Fax: 43 53 1 206 1200
Email: ajohnson@eurologic.com

Mr. Carl Mozingo (AV)
Exabyte Corp.
1685 38th Street
Boulder, CO 80301

Phone:
Fax:
Email: carlm@exabyte.com

Mr. Douglas Wagner (P)
FCI
472 Delwood Ct.
Newbury Park, CA 91320-4819

Phone: (805) 498-0325
Fax: (805) 498-0702
Email: dwagner@fciconnect.com

Mr. Jim Koser (A)
FCI
825 Old Trail Road
Etters, PA 17319

Phone: (717) 938-7679
Fax: (717) 938-7991
Email: jkoser@fciconnect.com

Mr. Steve Wong (A#)
FCI
5700 Warland Dr.
Cypress, CA 90630

Phone: (562) 356-2527
Fax: (562) 356-2520
Email: sywong@fciconnect.com

Mr. Gene Whetstone (AV)
Foxconn Electronics
836 Cimarron Lane
Corona, CA 92879

Phone: (714) 890-8694
Fax:
Email: gene.whetstone@foxconn.com

Mr. Julian Ferry (AV)
Foxconn I/O
140 Coffeetown Rd.
Dillsburg, PA 17019

Phone: (717) 502-0784
Fax: (717) 502-1474
Email: julferry@aol.com

Mr. Don Soracco (AV)
Foxconn I/O
60 Pond St.
Dunstable, MA 01827

Phone: (978) 649-9997
Fax: (978) 649-9797
Email:

Mr. Mike Fitzpatrick (P)
Fujitsu
2904 Orchard Pkwy.
San Jose, CA 95134

Phone: (405) 820-5809
Fax: (405) 755-8073
Email: mfitzpatrick@fcpa.fujitsu.com

| | |
|---|--|
| Mr. Ben-Koon Lin (A) Fujitsu 2904 Orchard Pkwy. San Jose, CA 95134 | Phone: (408) 894-3979 Fax: (408) 894-3908 Email: blin@fcpa.fujitsu.com |
| Mr. Sumi Puri (A) Fujitsu 2904 Orchard Pkwy. San Jose, CA 95134 | Phone: Fax: Email: |
| Mr. Kazuo Nakashima (AV) Fujitsu Computer Products, Am 2904 Orchard Parkway San Jose, CA 95134 | Phone: (408) 894-3849 Fax: (408) 894-3907 Email: knakashima@fcpa.fujitsu.com |
| Mr. Bob Thornton (AV) Fujitsu Takamisawa America 250 E. Caribbean Dr. Sunnyvale, CA 94089 | Phone: (408) 745-4932 Fax: (408) 745-4971 Email: bthornto@fta.fujitsu.com |
| Mr. Nathan Hastad (P) General Dynamics 8800 Queen Ave. S. Bloomington, MN 55431 | Phone: (952) 921-6635 Fax: (952) 921-6345 Email: nathan.hastad@gd-ais.com |
| Mr. Tim Mackley (A) General Dynamics 8800 Queen Ave. S. Bloomington, MN 55431 | Phone: (952) 921-6866 Fax: Email: timothy.mackley@gd-ais.com |
| Mr. Donald Woelz (AV) Genroco, Inc. 255 Info Highway Slinger, WI 53086 | Phone: (262) 644-2505 Fax: (262) 644-6667 Email: don@genroco.com |
| Mr. Pak Chan (AV) Gigalabs Inc. 290 Santa Ana Court Sunnyvale, CA 94086 | Phone: (408) 481-3030 Fax: (408) 481-3045 Email: pchan@giglabs.com |
| Ms. Liza Hunt (XO) Global Engineering Documents 15 Inverness Way East Englewood, CO 80112-5704 | Phone: Fax: Email: |
| Mr. Rodger Burke (AV) Harting, Inc. of N. America 1370 Bowes Road | Phone: (847) 741-1500 x286 Fax: (847) 741-8257 Email: Rodger.Burke@harting.com |

Elgin, IL 60123

Mr. Rob Elliott (P)
Hewlett Packard Co.
MC150801
PO Box 692000
Houston, TX 77269-2000

Phone: (281) 518-5037
Fax: (281) 518-7135
Email: Elliott@hp.com

Dr. William Ham (A)
Hewlett Packard Co.
SHR3-2/W04
334 South Street
Shrewsbury, MA 01545

Phone: (978) 828-9102
Fax: (508) 841-5266
Email: bill_ham@ix.netcom.com

Mr. Brad Culp (AV)
Hewlett Packard Co.
700 71st. Ave.
Greeley, CO 80631

Phone: (970) 350-4592
Fax: (970) 352-3524
Email: brad-culp@hp.com

Mr. Martin Goldstein (AV)
Hewlett Packard Co.
10944 Tantau Ave.
M/S 4153
Cupertino, CA 95014

Phone: (408) 873-5677
Fax:
Email: martin_goldstein@hp.com

Mr. Zane Daggett (P)
Hitachi Cable Manchester
900 Holt Ave.
Manchester, NH 03109

Phone: (603) 669-4347 x236
Fax: (603) 669-9621
Email: zdaggett@hcm.hitachi.com

Mr. Dan Colegrove (P)
Hitachi Global Storage Tech.
2903 Carmelo Dr.
Henderson, NV 89052

Phone: (702) 614-6119
Fax: (702) 614-7955
Email: dcolegro@us.ibm.com

Mr. Werner Glinka (AV)
Hitachi Global Storage Tech.
214 Swett Rd.
Woodside, CA 94062

Phone: (650) 851-5909
Fax:
Email: werner.glinka@attglobal.net

Mr. Hitoshi Ogawa (AV)
Hitachi Ltd.
Data Storage Systems Div.
2880 Kozu, Odawara-shi,
Kanagawa-ken, Japan

Phone: +81-465-48-1111 (Ext:2899)
Fax: +81-465-48-5089
Email: h-ogawa@gm.str.hitachi.co.jp

Mr. Anthony Yang (AV)
Hitachi Storage Products
1971 Milmont Drive
Milpitas, CA 95035

Phone: (408) 941-7048
Fax: (408) 946-1062
Email: anthony.yang@hal.hitachi.com

Mr. David McFadden (P)
Honda Connectors

Phone: (847) 913-9566
Fax: (847) 913-9587

960 Corporate Woods Parkway
Vernon Hills, IL 60061

Email: dmcfadden@hondaconnectors.com

Mr. Kinji Kashio (A)
Honda Connectors
2801 Lakeside Dr., Suite 212
Bannockburn, IL 60015

Phone: (847) 810-6712
Fax: (847) 810-6730
Email: kkashio@hondaconnectors.com

Mr. George O. Penokie (P)
IBM / Tivoli Systems
MS 2C6
3605 Highway 52 N.
Rochester, MN 55901

Phone: (507) 253-5208
Fax: (507) 253-2880
Email: gop@us.ibm.com

Mr. John P. Scheible (A)
IBM Corp.
Bldg 815 MS 4051
11400 Burnett Rd.
Austin, TX 78758

Phone: (512) 918-3187
Fax: (512) 823-0758
Email: Scheible@vnet.ibm.com

Mr. Kevin Butt (AV)
IBM Corp.
M/S 9032-2 65U
9000 S. Rita Rd.
Tucson, AZ 85744

Phone: (520) 799-5280
Fax:
Email: kdbutt@us.ibm.com

Mr. Bill Troop (AV)
IBM Corp.
3039 Cornwallis Rd.
MS: FROA/B205
RTP, NC 27709

Phone: (919) 254-2695
Fax:
Email: troop@us.ibm.com

Mr. Cris Simpson (P)
Intel Corp.
2111 N.E. 25th Ave.
JF5-355
Hillsboro, OR 97124

Phone: (503) 712-4333
Fax: (503) 712-2200
Email: cris.simpson@intel.com

Mr. Robert Sheffield (A)
Intel Corp.
5000 W. Chandler Blvd.
Chandler, AZ 85226-3699

Phone: (480) 554-8597
Fax: (480) 554-6617
Email: robert.l.sheffield@intel.com

Mr. Hiromichi Oribe (P)
Iomega Corp.
1821 Iomega Way
Roy, UT 84067

Phone: (801) 332-5360
Fax: (801) 332-4667
Email: oribe@iomega.com

Mr. Tim Bradshaw (A)
Iomega Corp.
1821 Iomega Way
Roy, UT 84067

Phone: (801) 332-4262
Fax: (801) 778-4170
Email: bradshat@iomega.com

Mr. Dennis Moore (P)

Phone: (303) 465-1800

KnowledgeTek, Inc.
7230 West 119th Pl, Suite C
Broomfield, CO 80020

Fax: (303) 426-1350
Email: dmoore@ix.netcom.com

Mr. Hayden Smith (AV)
Lasercard Systems Corp.
2644 Bayshore Parkway
Mountain View, CA 94043

Phone: (650) 969-4428
Fax: (650) 967-6524
Email: hsmith@lasercard.com

Mr. Louis Grantham (AV)
Linfinity Micro
101 W. McDermott
Allen, TX 75013

Phone: (972) 396-7002
Fax: (972) 396-7533
Email: lgrantham@linfinity.com

Mr. Joe Breher (AV)
Lingua Data
32 James Cir.
Longmont, CO 80501

Phone: (303) 651-7122
Fax:
Email: joe@q-music.com

Mr. John Lohmeyer (P)
LSI Logic Corp.
4420 ArrowsWest Dr.
Colorado Springs, CO 80907

Phone: (719) 533-7560
Fax: (719) 533-7183
Email: lohmeier@tl10.org

Mr. William Petty (A)
LSI Logic Corp.
4420 ArrowsWest Dr.
Colorado Springs, CO 80907

Phone: (719) 533-7461
Fax: (719) 533-7180
Email: william.petty@lsil.com

Ms. Jie Fan (P)
Madison Cable Corp.
125 Goddard Memorial Dr.
Worcester, MA 01603

Phone: (508) 926-4148
Fax: (508) 752-4230
Email: jie.fan@madisoncable.com

Mr. Marc Dupuis (A.)
Madison Cable Corp.
125 Goddard Memorial Drive
Worcester, MA 01603

Phone: (508) 752-7320
Fax: (508) 752-4230
Email: mdupuis@madisoncable.com

Mr. Andy Nowak (A)
Madison Cable Corp.
125 Goddard Memorial Drive
Worcester, MA 01603

Phone: (508) 926-4150
Fax: (508) 752-4230
Email: anowak@madisoncable.com

Mr. Himmeler Themistocle (A#)
Madison Cable Corp.
125 Goddard Memorial Dr.
Worcester, MA 01603

Phone: (508) 752-7320
Fax: (508) 752-4230
Email: hthemistocle@madisoncable.com

Mr. Martin Kwandou (AV)
Marvell Semiconductor
700 First Avenue
M/S 409
Sunnyvale CA 94089

Phone: (408) 222-9105
Fax:
Email: mkwandou@marvell.com

Mr. Kanting Tsai (AV)
Marvell Semiconductor
700 First Avenue
M/S 409
Sunnyvale CA 94089

Phone: (408) 222-9315
Fax:
Email: ktsai@marvell.com

Mr. Takaharu Ai (AV)
Matsushita Elec. Indust. Co.
4-16-12
Matsuo-cho
Kadoma, Osaka 571-8504 Japan

Phone: +81-6-6906-2330
Fax: +81-6-906-1549
Email: aiai@dsd.mei.co.jp

Mr. Hiroshi Ueda (AV)
Matsushita Electric
1006 Kadoma Kadoma-shi
Osaka, Japan

Phone: +81-6-6900 9259
Fax:
Email: hueda@isl.mei.co.jp

Mr. Mark Evans (P)
Maxtor Corp.
500 McCarthy Blvd.
Milpitas, CA 95035

Phone: (408) 894-5310
Fax: (408) 324-7432
Email: mark_evans@maxtor.com

Mr. Lance Flake (A#)
Maxtor Corp.
2190 Miller Dr.
Longmont, CO 80501

Phone: (303) 702-3802
Fax:
Email: lance_flake@maxtor.com

Mr. Pete McLean (A)
Maxtor Corp.
2190 Miller Dr.
Longmont, CO 80501

Phone: (303) 678-2149
Fax: (303) 678-2165
Email: pete_mclean@maxtor.com

Mr. Charley Riegger (A#)
Maxtor Corp.
510 Cottonwood Dr.
Milpitas, CA 95035

Phone: (408) 432-4571
Fax: (408) 432-4432
Email: charles_riegger@maxtor.com

Mr. LeRoy Leach (AV)
Maxtor Corp.
2190 Miller Dr.
Longmont, CO 80501-6744

Phone: (303) 678-2828
Fax: (303) 678-2308
Email: leroy_leach@maxtor.com

Mr. Randy Banton (AV)
Mercury Computer
199 Riverneck Road
Chelmsford, MA 01824

Phone: (508) 256-1300 x134
Fax:
Email:

| | |
|--|---|
| Mr. Joe Llorens (AV) Methode Electronics 7444 West Wilson Ave Chicago, IL 60706 | Phone: (708) 867-6777 Fax: (708) 867-3149 Email: jlllorens@methode.com |
| Mr. John Daly (AV) Methode Electronics, Inc. 7447 West Wilson Avenue Chicaco, IL 60706-4548 | Phone: (708) 457-3272 Fax: (708) 867-3149 Email: jdaly@methode.com |
| Ms. Emily Hill (P) Microsoft Corp. 1 Microsoft Way Redmond, WA 98052 | Phone: (425) 705-9595 Fax: (425) 936-7329 Email: emhill@microsoft.com |
| Mr. Rob Haydt (A) Microsoft Corp. 1 Microsoft Way Redmond, WA 98052 | Phone: (425) 705-7639 Fax: (425) 936-7329 Email: robhay@microsoft.com |
| Mr. Nathan Obr (A#) Microsoft Corp. One Microsoft Way Redmond, WA 98052-6399 | Phone: (425) 705-9157 Fax: (425) 936-7329 Email: natobr@microsoft.com |
| Mr. Jay Neer (P) Molex Inc. 399 W. Camino Gardens Blvd. Suite 103 Boca Raton, FL 33432 | Phone: (561) 447-2907 Fax: (561) 447-2908 Email: jneer@molex.com |
| Mr. Joe Dambach (A) Molex Inc. 2222 Wellington Court Lisle, IL 60532 | Phone: (708) 527-4546 Fax: (708) 969-1352 Email: jdambach@molex.com |
| Mr. Dan Dawiedczyk (A#) Molex Inc. 2222 Wellington Court Lisle, IL 60532 | Phone: (630) 718-5945 Fax: (630) 969-1352 Email: ggriessler@molex.com |
| Mr. Jerry Kachlic (A#) Molex Inc. 2216 Wellington Court Lisle, IL 60532 | Phone: (630) 718-5991 Fax: (630) 512-8622 Email: jkachlic@molex.com |
| Mr. Richard Wagner (AV) Montrose/CDT 28 Sword Street Auburn, MA 01501 | Phone: (508) 791-3161 Fax: (508) 798-8353 Email: rwagner@montrose-cdt.com |

Mr. Dave Ford (AV) Phone: (781) 895-4949 x236
Network Appliance Fax: (781) 895-1195
375 Tatted Pond Rd. Email: dford@orca.com
Waltham, MA 02454

Mr. Tony Aiello (P) Phone: (408) 822-6515
Network Appliance Inc. Fax:
495 E. Java Drive Email: taiello@netapp.com
Sunnyvale, CA 94089

Mr. Gregg Neely (AV) Phone: (858) 453-9696
NSTOR Fax: (858) 453-9294
10140 Mesa Rim Rd. Email: greggn@nstor.com
San Diego, CA 92121

Mr. Edward A. Gardner (AV) Phone: (719) 593-8866
Ophidian Designs Fax: (719) 593-8989
1262 Hofstead Terrace Email: eag@ophidian.com
Colorado Springs, CO 80907

Dr. Terence J. Nelson (P) Phone: (908) 464-1652
Panasonic Technologies, Inc Fax: (908) 464-0149
167 Maple St. Email: terry@tjnelson.com
New Providence, NJ 07974

Mr. Rudolf Vitti (A) Phone: (201) 348-7064
Panasonic Technologies, Inc Fax: (201) 348-7807
One Panasonic Way Email: vittir@panasonic.com
Panazip 1E-6
Secaucus, NJ 07094

Mr. Randall C. Hines (A) Phone: (303) 651-5406
Philips Electronics Fax: (303) 682-3029
1860 Lefthand Circle Email: hinesr@worldnet.att.net
Longmont, CO 80501

Mr. William P. McFerrin (P) Phone: (720) 320-0790
Philips Electronics/CD Edge Fax:
841 Rocky Mtn Place Email: bmcFerrin@aol.com
Longmont, CO 80501

Mr. Frank Fang (AV) Phone: (408) 991-3348
Philips Semiconductors Fax: (408) 991-2600
811 E. Argues Ave. Email: frank.fang@philips.com
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)
QLogic Corp.
26600 Laguna Hills Dr.
Aliso Viejo, CA 92656

Phone: (949) 389-6368
Fax: (949) 389-6114
Email: skip.jones@qlogic.com

Mr. Craig W. Carlson (A#)
QLogic Corp.
6321 Bury Drive
Eden Prairie, MN 55346

Phone: (952) 932-4064
Fax:
Email: craig.carlson@qlogic.com

Mr. Greg Casey (A#)
QLogic Corp.
6321 Bury Drive
Eden Prairie, MN 55346

Phone: (952) 932-4098
Fax:
Email: greg.casey@qlogic.com

Mr. Dean Wallace (A)
QLogic Corp.
26600 Laguna Hills Dr.
Aliso Viejo, CA 92656

Phone: (949) 389-6480
Fax: (949) 389-6128
Email: dean.wallace@qlogic.com

Mr. Paul Entzel (P)
Quantum Corp.
4001 Discovery Dr.
Boulder, CO 80303

Phone: (720) 406-5782
Fax: (720) 406-5762
Email: paul.entzel@quantum.com

Mr. Jim Jones (A)
Quantum Corp.
4001 Discovery Dr., # 2100
Boulder, CO 80303

Phone: (720) 406-5611
Fax:
Email: jim.jones@quantum.com

Mr. John A. Fobel (AV)
Rancho Technology, Inc.
10783 Bell Court
Rancho Cucamonga, CA 91730

Phone: (909) 987-3966
Fax: (909) 989-2365
Email: johnf@rancho.com

Mr. Gregory Fry (AV)
Roxio Inc.
15188 NW Central Dr. #205
Portland, OR 97229

Phone: (503) 629-8874
Fax:
Email: gfry@roxio.com

Mr. Mark A. Green (AV)
Roxio, Inc.
1430 Nelson Rd., Ste 204
Longmont, CO 80501

Phone: (303) 651-9101
Fax: (303) 651-9224
Email: mark_green@roxio.com

Mr. Yau-Ting Mau (AV)
Roxio, Inc.

Phone: (408) 631-8177
Fax:

461 S. Milpitas Blvd.
Milpitas, CA 95035

Email: mau@roxio.com

Mr. Yasuyuki Suemori (AV)
Sanyo
900 N Arlington Heights Rd.
Suite 300
Itasca, IL 60143

Phone: (630) 875-3513
Fax:
Email: ysue@sanyosales.com

Mr. Ken-Ichi Kojima (AV)
Sanyo Electric Co., Ltd.
180 Ohmori Anpachi-Cho
Anpachi-Gun
Gifu-Ken 503-01 Japan

Phone: 584-64-4399
Fax: 584-64-5096
Email:

Mr. David Peterson (AV)
SBS Technologies
1284 Corporate Center Dr.
St. Paul, MN 55121-1245

Phone: (612) 802-3299
Fax: (651) 905-4701
Email: dap@sbs.com

Mr. Gerald Houlder (P)
Seagate Technology
Mailstop SHK231
1280 Disc Drive
Shakopee, MN 55379-1863

Phone: (952) 402-2869
Fax: (952) 402-3471
Email: gerry.houlder@seagate.com

Mr. A. Bruce Manildi (A)
Seagate Technology
4585 Scotts Valley Dr.
Scotts Valley, CA 95067

Phone: (831) 439-7229
Fax: (831) 438-8608
Email: bruce.manildi@seagate.com

Mr. Jon P. Baker (AV)
Seagate Technology
10323 W. Reno Ave.
Oklahoma City, OK 73116

Phone: (405) 324-3591
Fax:
Email: jon.baker@seagate.com

Mr. Daniel F. Smith (AV)
Seagate Technology
4585 Scotts Valley Dr.
Scotts Valley, CA 95066-4544

Phone: (831) 439-7146
Fax: (831) 439-7546
Email: daniel.f.smith@seagate.com

Mr. Paul Sweazey (AV)
Seagate Technology
4585 Scotts Valley Dr.
Scotts Valley, CA 95066-4544

Phone: (831) 439-7490
Fax:
Email: sweazey@cdg.stsv.seagate.com

Mr. Van T. Ton (AV)
Seagate Technology, LLC
4585 Scotts Valley Dr.
Mailstop: SV15D1
Scotts Valley, CA 95066

Phone: (831) 439-7005
Fax: (831) 439-7541
Email: Van.T.Ton@seagate.com

Mr. Yasunori Hiyoshi (AV)

Phone:

Seiko Epson Corp.
Corporate Res & Dev
3-3-5 Owa Suma-Shi
Nagano-Ken 392-8502 Japan

Fax:
Email: yasunori.hiyoshi@exc.epson.co.jp

Mr. Erhard Weiss (AV)
Siemens Nixdorf
Department: SNI PC SB ESW
Burgermeister-Ulrich-St
D-86199 Augsburg Germany

Phone: 49-821-804-3602
Fax: 49-821-804-2910
Email: weiss.abg@sni.de

Mr. Edward Haske (AV)
Silicon Image
9501 Jeronimo Rd.
Irvine, CA 92618-2032

Phone: (949) 699-3206
Fax:
Email: haske@siliconimage.com

Mr. Mark O'Dell (AV)
Silicon Image
9501 Jeronimo
Irvine, CA 92618

Phone: (949) 454-0800
Fax: (949) 454-0542
Email: odell@siliconimage.com

Mr. Greg Alvey (AV)
Solution Technology
P.O. Box 104
Boulder Creek, CA 95006

Phone: (408) 338-4285
Fax: (408) 338-4374
Email: kd6hnm@aol.com

Mr. Joe A. Maciel (AV)
Sony Electronic
3300 Zanker Rd. SJ2E2
San Jose, CA 95134-1901

Phone: (408) 955-5547
Fax:
Email: joe.maciel@am.sony.com

Mr. Dennis Pak (AV)
Sony Electronics, Inc.
3300 Zanker Rd. MS# SJ-3B2
San Jose, CA 95134

Phone: (408) 955-5247
Fax: (408) 955-5066
Email: dennis_pak@asd.sel.sony.com

Mr. Michael Jensen (AV)
ST Microelectronics
3300 Edinborough Way
Edina, MN 55435

Phone: (612) 669-3579
Fax: (952) 835-3555
Email: michael.jensenr@st.com

Mr. Rich Wahler (AV)
Standard Microsystems Corp.
300 Kennedy Drive
Hauppauge, NY 11788

Phone: (516) 435-6174
Fax: (516) 724-1505
Email:

Mr. Erich Oetting (P)
Storage Technology Corp.
2270 South 88th St.
Louisville, CO 80028-0268

Phone: (303) 673-2178
Fax: (303) 673-8196
Email: erich_oetting@stortek.com

Mr. Dennis Appleyard (A)
Storage Technology Corp.
One StorageTek Dr.
Louisville, CO 80028

Phone: (303) 673-6685
Fax:
Email: dennis_appleyard@stortek.com

Mr. Vit Novak (P)
Sun Microsystems, Inc.
MS NWK16-211
7777 Gateway Blvd.
Newark, CA 94560

Phone: (510) 936-3284
Fax: (510) 936-2527
Email: vit.novak@sun.com

Mr. Charles Binford (A)
Sun Microsystems, Inc.
3450 N. Rock Rd., Suite 301
Wichita, KS 67226

Phone: (316) 315-0382 x222
Fax: (509) 756-4425
Email: Charles.Binford@sun.com

Mr. Ken Plourde (AV)
Temp Flex Cable, Inc.
11 Depot St.
S. Grafton, MA 01560

Phone: (508) 839-5987
Fax: (508) 839-4128
Email: kplourde@tempflex.com

Mr. Paul D. Aloisi (P)
Texas Instruments
50 Phillippe Cote St.
Manchester, NH 03101

Phone: (603) 222-8687
Fax: (603) 222-8700
Email: Paul_Aloisi@ti.com

Mr. Steve Hemmah (A)
Texas Instruments
50 Phillippe Cote St.
Manchester, NH 03101

Phone: (603) 222-8561
Fax: (603) 222-8700
Email: steven_hemmah@ti.com

Mr. Jerry Rossman (AV)
The JPM Co.
155 North 15 St.
Lewisburg, PA 17837

Phone: (570) 524-8546
Fax: (570) 524-5660
Email: jrossman@jpmco.com

Ms. Dora M. Deivert (AV)
The JPM Company
2135 Ringwood Ave.
San Jose, CA 95131

Phone: (408) 952-3510
Fax: (408) 435-9775
Email: dmdeivert@jpmsj.com

Ms. Valentina Grigorieva (AV)
The JPM Company
155 N. 15th Street
Lewisburg, PA 17837

Phone: (570) 524-8535
Fax: (570) 524-5660
Email: vgrigoriev@jpmco.com

Mr. Bill Youngman (AV)
The JPM Company
2135 Ringwood Ave.
San Jose, CA 95131

Phone: (408) 952-3503
Fax: (408) 435-1109
Email: byoungman@jpmsj.com

| | |
|--|--|
| Ms. Tanya Huynh (AV) Thomas & Betts Corp. 76 Fairbanks Irvine, CA | Phone: (949) 707-2290 Fax: Email: tanya_huynh@tycoelectronics.com |
| Mr. Hiroshi Suzuki (P) Toshiba 9740 Irvine Blvd. Irvine, CA 92618 | Phone: (949) 462-7588 Fax: (949) 581-1170 Email: hiroshi.suzuki@tais.toshiba.com |
| Mr. Tasuku Kasebayashi (A) Toshiba 35 Hammond Irvine, CA 92618-1607 | Phone: (949) 462-7551 Fax: (949) 458-7815 Email: task.kasebayashi@tais.toshiba.com |
| Mr. Rick Casaly (AV) Troika Networks, Inc. 2829 Townsgate Rd. Suite 200 Westlake, CA 91361 | Phone: (805) 367-2738 Fax: Email: rcasaly@troikanetworks.com |
| Mr. William C. Terrell (AV) Troika Networks, Inc. 2829 Townsgate Rd. Suite 200 Westlake, CA 91361 | Phone: (805) 371-1377 Fax: (805) 371-1344 Email: terrell@TroikaNetworks.com |
| Mr. Ron Mathews (P) UNISYS Corporation MV201 25725 Jeronimo Road Mission Viejo, CA 92691 | Phone: (949) 380-5077 Fax: (949) 380-5858 Email: ronald.mathews@unisys.com |
| Mr. Phil Shelton (A) UNISYS Corporation MV201 25725 Jeronimo Road Mission Viejo, CA 92691 | Phone: (949) 380-5111 Fax: (949) 380-5858 Email: phil.shelton@unisys.com |
| Mr. Marq Elliott (AV) Verisys 335-H Spreckels Dr. Aptos, CA 95003 | Phone: (408) 662-7900 Fax: Email: |
| Mr. Roger Cummings (P) Veritas Software 400 International Parkway Heathrow, FL 32746 | Phone: (407) 357-7257 Fax: Email: roger.cummings@veritas.com |
| Mr. Ron Martin (A) Veritas Software 400 International Parkway Heathrow, FL 32746 | Phone: (407) 531-7621 Fax: (407) 531-7720 Email: ron.martin@veritas.com |

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
Fax:
Email: tom.hanan@wdc.com

Mr. Ben Chen (AV)
Wieson Electronic Co. Ltd.

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@yeu.com