

Accredited Standards Committee\*

## InterNational Committee for Information Technology Standards (INCITS)

**Doc. No.:** T10/04-135r0

**Date:** May 8, 2004

**Reply to:** John Lohmeyer

To: T10 Membership  
From: Ralph Weber / John Lohmeyer  
Subject: Minutes of T10 Plenary Meeting #61 -- May 6, 2004  
Seaside, CA

### Agenda

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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](mailto:incits@itic.org) Telephone: 202-737-8888 FAX: 202-638-4922

- 11.2 ISO/IEC Business [Robinson]
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- 13. Review of Action Items
- 14. Meeting Schedule
  - 14.1 Authorization of Working Group Meetings
- 15. Adjournment

## Results of Meeting

### 1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Thursday May 6, 2004. He thanked Bob Snively of Brocade for hosting the meeting.

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

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

### 2. Approval of Agenda

No additions/changes were made to the draft agenda.

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

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

### 3. Attendance and Membership

The membership requirements were reviewed. INCITS rules permit one vote per organization. An individual from a new organization must attend two out of three consecutive plenary meetings. He/she may apply for voting membership the second meeting via a letter to the Chair of T10. The individual may begin voting at the beginning of his/her second meeting.

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

John briefly discussed the mailing fees. Complete pricing information is contained in the 2004 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 7 people from 3 organizations informing them that their membership was in jeopardy due to non-attendance (see 04-098r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Cisco Systems, Inc.  
 General Dynamics  
 Microsoft Corp.

All the organizations in attendance jeopardy were present.

Had any of the organizations in jeopardy failed to attend the meeting, the members from that organization would have had their membership changed to non-voting status.

The AMCC membership was changed to advisory at the request of Paul von Stamwitz who has replaced Neil Wanmaker. This decreases the voting membership by one organization.

The following organizations became voting members of T10 at this meeting:

CNT  
 Dot Hill Systems Corp.

The T10 membership during the meeting was 39 organizations up from the 38 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 no organizations are currently in Letter Ballot jeopardy.

Two organizations will be in letter ballot jeopardy if they do not return the next letter ballot (except that AMCC has changed their membership to advisory):

T10 Letter Ballot Jeopardy Report -- 2004/04/26

	Ballot:	04-102r0	04-106r0	04-109r0
	Report:	04-103r0	04-107r0	04-110r0
	Acronym:	SAM-3	MMC-4	ADT
Organization				
-----				
Agilent Technologies	Yes	DNV	Yes	
AMCC	Yes	Abs	DNV	

Key:  
 Yes Organization voted Yes  
 No Organization voted No  
 Abs Organization voted Abstain  
 DNV Organization failed to return letter ballot

#### **4. Approval of Minutes - March 2004 Meeting - Dana Point, CA (T10/04-085r0)**

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

#### **5. Document Distribution**

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

John Lohmeyer requested that all documents for the next mailing be uploaded to the T10 web site by 10:30 a.m. on Thursday May 13, 2004. 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](mailto:majordomo@t10.org) with the line 'subscribe t10' in the message body.

The INCITS Secretariat maintains a World Wide Web page at:

<http://www.incits.org/>.

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

<http://www.t10.org/>

There is also a mirror site at:

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

The T10 document register is available at:

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

## 6. Call for Patents

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

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](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](mailto: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.

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

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

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

## 7. Review of Old Action Items

- 545 David Black will ensure that RFCs are written defining URLs for SNMP, CIM over HTTP/HTTPS, and SSH. *Carry over.*
- 566 John Lohmeyer will forward 04-055r1 to INCITS for further processing as a new project proposal for SAM-4. *Complete.*
- 567 John Lohmeyer will notify INCITS that T10 recommends the reaffirmation of INCITS.131:1994 [R1999] (SCSI-2). *Complete.*
- 568 Gary Robinson will notify the JTC1/SC25 TAG that T10 reviewed project 1.25.13.11.27: FDIS 14776-452: SCSI SPC-2, and recommends that the JTC1/SC25 TAG vote to approve said FDIS. *Complete.*
- 569 Gary Robinson will notify the JTC1/SC25 TAG that T10 has recommended ISO/IEC 14776-411:1999, Information technology -- Small Computer System Interface-3 -- Part 411: SCSI-3 Architecture Model (SCSI-3 SAM) be confirmed and that the five questions be answered as shown in document T10/04-085 (the minutes of T10 meeting #60). *Complete.*
- 570 Gary Robinson will inform the JTC1/SC25 TAG that T10 has reviewed the new work item proposal, and recommends the NWIP for ATA/ATAPI-7 (T10/04-091r0) as a US contribution to JTC1/SC25 and to approve the NP to be issued by SC25, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor. *Complete.*

Regarding action item 545, David Black reported that SNMP URL draft is close to done. The DMTF has written an initial document for CIM over HTTP/HTTPS that has not been taken up by the IETF. In the mean time, the CIM port numbers should be used with HTTP/HTTPS. The SSH URL draft is in progress.

## 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 said that he had presented the T10 Annual Report (04-113) to the INCITS Standards Development Board last week. He and Gary Robinson had also attended the INCITS TC Symposium and the Awards Banquet.

Rob Elliott won an INCITS Technical Excellence Award. Rob has served as Project Editor on the SCSI Block Commands - 2, the SCSI Enclosure Commands - 2, Serial Attached SCSI, and Serial Attached SCSI - 1.1. Rob was especially prodigious editing the Serial Attached SCSI standard, producing 27 revisions in 14 months! SAS began development in May 2002 and was published 18 months later in November 2003 with 464 well-written pages. Beyond SAS, Rob is one of the most active contributors to the work of T10 having submitted nearly 200 proposals since he joined the committee in 1998.

Gary Robinson won an INCITS Merit Award for many contributions to INCITS and the standards community for over 25 years. Some of the positions held by Gary include Chair of X3T9.3; International Representative for X3T9 and, later, International Representative for T10 and T11; member of the IEEE Registration Authority Committee; and member of the ANSI Standards Review Board. Gary was also a member of the committee that developed the original Ethernet standard.

Bob Snively won the INCITS Gene Milligan Award for Effective Committee Management. Bob began participating on the X3T9.2 task group in 1984. He has since participated on T10, T11, and various subgroups of these committees. He has been an active participant in the international program of work for both these groups. Bob has served as project editor for SCSI Enclosure Services and Fibre Channel Protocol. Bob is the current Chair of T11, the largest INCITS TC, with three active task groups. He has performed an excellent job managing T11 following the approved procedures in an exemplary fashion.

Ed Grivna (former T11 Vice Chair) and Craig Carlson (T11.3 Chair) also won awards. Ed's award was presented at the INCITS Awards Banquet and Craig's award will be presented at the next T11 meeting.

INCITS was especially responsive in listening to the gripes and needs of the Technical Committees. They promised prompt action to the issues that were disclosed during the course of the meetings.

INCITS asked for feed back on standards pricing. They are considering significantly raising the price of standards above today's \$18 PDF price.

### **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 comments resolution on the OSD letter ballot is ongoing. The latest revision of the comments resolution document is 04-108r2. There were 595 comments received on the letter ballot. The SNIA OSD Technical Working Group will be discussing about 75 of these comments during the SNIA symposium on 20 May. About 20 comments have proposed resolutions in 04-108r2. The remaining 500 comments have yet to be processed.

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

John Lohmeyer reported SMC-2 is headed to BSR for approval.

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

Ralph Weber reported that SPC-3 revision 19 will be prepared based on proposals approved by this meeting and will be posted before the next meeting but probably not in time for the mailing. A forwarding Letter Ballot is planned for November 2004.

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

Rob Elliott reported SBC-2 revision 14 will be based on the proposals accepted at this meeting, probably not in time for the mailing. Rob agreed to consider holding the SBC-2 Letter Ballot before the SPC-3 Letter Ballot.

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

John Lohmeyer reported that SBP-3 is headed to BSR for approval.

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

John Lohmeyer reported that Cris Simpson has indicated a desire to resume work on SRP-2 in the July time frame.

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

George Penokie reported that revision 0 will be prepared before the next meeting based on a proposal to be accepted by this meeting. He noted that the first MSC revision will not be available in time for the mailing.

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

Bill McFerrin was absent. John Lohmeyer reported that the MMC-4 letter ballot closed April 23, 2004. It passed 27:4:6:1=38 as documented in 04-107. There are a significant number of comments that now need to be resolved.

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

Paul Entzel reported on the activities of the ADI working group (minutes in 04-120). The ADT forwarding letter ballot closed April 26, 2004. It passed 30:3:4:1=38 as documented in 04-110. Comment resolution is underway but no comments resolution document has been posted yet.

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

Paul Entzel reported that the ADC letter ballot resolution document is 03-385r1.

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

Rob Elliott reported that SES-2 revision 8 will be prepared including proposals approved by this meeting in time for the mailing. He noted that a letter ballot should be held sometime late this summer.

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

Dave Peterson reported on the activities of the FCP-3 working group (minutes in 04-158). He noted that proposals recommended to this meeting will be discussed under agenda item 10.5.

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

Ralph Weber reported that the letter ballot on revision 13 closed April 21, 2004. It passed 36:2:0:0=38 as documented in 04-103. Comment resolution has begun and the current revision of the comments resolution document is 04-116r0.

The letter ballot responses included 406 comments. Of these about 150 need to be discussed in T10 meetings, a handful have proposed resolutions, and the remainder have yet to be processed.

Around 10 comments were resolved during the CAP working group meeting. A SAM-3 letter ballot comments resolution meeting will begin after the plenary finishes. A new revision of 04-116 will be posted reflecting the results of this week's discussions.

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

Rob Elliott reported that SAS-1.1 revision 5 will incorporate all the proposals (if any, see agenda item 10.3) approved by this meeting.

He noted that the plan is to keep SAS-1.1 open until sufficient interoperability information is available from the plugfests.

He stated that a SAS-1.1 telephone conference call is being planned for June 3.

Alvin Cox reported on the SAS PHY working group meeting (minutes in 04-139). Alvin reported that the SAS PHY working group is planning bi-weekly conference calls starting in two-weeks. Details will be announced on the T10 reflector.

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

Dave Peterson reported on the activities of the SSC-3 working group (minutes in 04-153).

Discussion items included:

- Explicit Address Commands Lessons Learned
- TapeAlert Functionality
- 04-144r0: Veritas Input on SSC-3 Features
- 04-104r0: Add report to Report Density Support
- 04-119r0: DTD Status Log Page
- 04-123r0: Exclude Report LUNs from resetting Test bit

**8.17 MultiMedia Command Set - 5 (MMC-5) {Project 1675-D} [McFerrin]**

In the absence of Bill McFerrin, there was no report.

**8.18 SCSI Architecture Model - 4 (SAM-4) {Project 1683-D} [Penokie]**

George Penokie reported that there will be no revisions of SAM-4 until the SAM-3 Letter Ballot resolution completes.

**9. Old Business**

There was no old business.



## 10. New Business

### 10.1 SCSI to ATA Translation Study Group (04-151) [Elliott]

John Lohmeyer reported that the group agreed that work needs to be done. A project proposal will be prepared for consideration in July. Minutes of the study group are in 04-151. The group is considering meetings co-located with T13 and regular teleconference calls in addition to time during T10 week.

### 10.2 Actions on SAS Protocol Working Group Recommendations

George Penokie reported that the SAS working group forwarded no recommendations to the committee (minutes in 04-133).

### 10.3 Actions on SAS PHY Working Group Recommendations

The recommendations from the SAS PHY working group (minutes in 04-139) were presented to the committee.

George Penokie reviewed the following proposals recommended for inclusion in SAS-1.1:

- 04-128r1 (SAS-1.1 OOB Signal Rate @ 1,5G only) [Lye]
- 04-150r0 (SAS TCF update) [Cox/Jenkins]

George Penokie requested that consideration of 04-128r1 and 04-150r0 be deferred based on the proposals not having been available for consideration for two weeks.

Rob Elliott noted that these actions will result in no new revision of SAS-1.1 being posted before the next meeting.

### 10.4 Actions on CAP Working Group Recommendations

The recommendations from the CAP working group (minutes in 04-134) were presented to the committee.

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

- 04-105r2 (SPC-3 Persistent Reservation Fix Fix) [Penokie]
- 03-386r4 (SPC-3 Report LUNS Clarification) [Binford]
- 04-119r0 (SSC-3 DTD Status Log Page) [Banther]
- 04-122r1 (SPC-3 Add Preference to Report Target Port Groups) [Binford]

Ralph Weber moved that 04-105r2, 03-386r4, 04-119r0, and 04-122r1 be approved for inclusion in SPC-3. Vit Novak seconded the motion. The motion passed on a vote of 27:0:1:11=39.

George Penokie reviewed the following proposal recommended for inclusion in SPC-3, SAS-1.1, FCP-3, and SRP-2:

- 04-099r1 (SAS-1, FCP-3, SRP-2 Per-Command Priority Tagging) [Penokie]

George Penokie moved that 04-099r1 be approved for inclusion in SPC-3, SAS-1.1, FCP-3, and SRP-2. Vit Novak seconded the motion.

Mark Evans stated that the proposal represents an odious requirement on targets.

The motion passed on a vote of 10:2:18:9=39.

George Penokie reviewed the following proposals recommended for inclusion in SPC-3 and SBC-2:

- 03-388r3 (SPC-3 SBC-2 Nonvolatile caches) [Elliott]
- 03-307r7 (SBC, 32 Byte Commands for End-to-End Data Protection) [Coomes]

Rob Elliott moved that 03-388r3 be approved for inclusion in SPC-3 and SBC-2. Bob Nixon seconded the motion. The motion passed on a vote of 20:0:9:10=39.

Jim Coomes moved that 03-307r7 be approved for inclusion in SPC-3 and SBC-2. Bob Sheffield seconded the motion. The motion passed on a vote of 14:5:13:7=39.

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

- 03-361r4 (Command Classification Field) [Penokie]
- 04-075r2 (SBC-2 Obsolete more features) [Elliott]
- 04-082r1 (SBC-2 Obsolete Notch and Partition mode page) [Elliott]
- 04-111r0 (SBC-2 - Protection Information Checking within Service Delivery Subsystem) [Penokie]
- 04-114r0 (SBC-2 option to check only the Logical Block Guard) [Holt]

Rob Elliott moved that 04-075r2, 04-082r1, and 04-111r0 be approved for inclusion in SBC-2. Bob Nixon seconded the motion. The motion passed on a vote of 26:0:3:10=39.

George Penokie moved that 03-361r4 be approved for inclusion in SBC-2. Bob Nixon seconded the motion.

Mark Evans noted that this is another odious requirement on targets.

The motion passed on a vote of 5:3:21:10=39.

John Lohmeyer moved that 04-114r0 be approved for inclusion in SBC-2. Jim Coomes seconded the motion. The motion passed on a vote of 13:1:17:8=39.

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

- 04-130r1 (SES-2 - Array Device element Status and Control page Clarifications) [Marks]

Kevin Marks moved that 04-130r1 be approved for inclusion in SES-2. Rob Elliott seconded the motion. The motion passed on a vote of 16:0:15:8=39.

George Penokie reviewed the following proposal recommended for inclusion in MSC:

- 03-364r1 (MSC Report Bridge Mapping command) [Elliott]

Rob Elliott moved that 03-364r1 be approved for inclusion in MSC. George Penokie seconded the motion. The motion passed on a vote of 15:0:14:10=39.

### **10.5 Actions on Other Working Group Recommendations**

The recommendations from the FCP-3 working group (minutes in 04-158) were presented to the committee.

Dave Peterson reviewed the following proposals recommended for inclusion in FCP-3:

- 04-068r2 (Impact of protection information on data length fields) [Coomes]
- 04-129r0 (TPRLO behavior) [Peterson]
- 04-112r0 (Task Management Function to Unknown LUN) [Penokie]

Jim Coomes moved that 04-068r2 and 04-129r0 be approved for inclusion in FCP-3. Dave Peterson seconded the motion. The motion passed on a vote of 18:0:10:11=39.

George Penokie moved that 04-112r0 be approved for inclusion in FCP-3. Bob Nixon seconded the motion. The motion passed on a vote of 19:1:10:9=39.

## 10.6 Trusted Computing Group Introduction (T11/04-278v0) [Fitzpatrick]

Mike Fitzpatrick presented an introduction to the Trusted Computing Group (T11/04-278v0), noting that the group intends to forward proposals to T10.

Mike closed by requesting that new agenda item be added for a Trusted Computing Group liaison report.

## 11. ISO/IEC

### 11.1 ISO/IEC Report [Robinson]

Gary Robinson presented the ISO/IEC report (04-124r2).

Gary Robinson reported that the U.S. Delegation to SC 25 meeting in June will be Bob Snively (head of delegation) and Roger Cummings. Gary noted that he will be attending as the SC 25 working group 4 convener.

### 11.2 ISO/IEC Business [Robinson]

#### 11.2.1 Recommendation to approve FCD 14776-351: SCSI SMC [Robinson]

Gary Robinson moved that T10 has reviewed project 1.25.13.11.13: FCD 14776-351: SCSI SMC, and recommends that the JTC1/SC25 TAG vote to approve said FCD. John Lohmeyer seconded the motion.

The roll call motion passed with a tally of 29:0:0:10=39. Details of the roll call were as follows:

Organization	Voter	Vote
Adaptec, Inc.	Tim Symons	Yes
Agilent Technologies	Pat Thaler	Yes
Amphenol Interconnect		(not present)
Brocade	Robert Snively	Yes
Cisco Systems, Inc.	Claudio DeSanti	Yes
CNT	David Peterson	Yes
Crossroads Systems, Inc.	Dexter Anderson	Yes
Dallas Semiconductor	James A. Lott, Jr.	Yes
Dell, Inc.	Kevin Marks	Yes
Dot Hill Systems Corp	Phil Colline	Yes
EMC Corp.	Gary S. Robinson	Yes
Emulex	Robert H. Nixon	Yes
ENDL	Ralph O. Weber	Yes
FCI	Douglas Wagner	Yes
Fujitsu	Mike Fitzpatrick	Yes
General Dynamics	Tim Mackley	Yes
Hewlett Packard Co.	Rob Elliott	Yes
Hitachi Cable Manchester		(not present)
Hitachi Global Storage Tech.	Dan Colegrove	Yes
IBM Corp.	George O. Penokie	Yes
Intel Corp.	Robert Sheffield	Yes
Iomega Corp.	David Hawks	Yes

LSI Logic Corp.	John Lohmeyer	Yes
Madison Cable Corp.		(not present)
Maxtor Corp.	Mark Evans	Yes
Microsoft Corp.	Emily Hill	Yes
Molex Inc.	Jay Neer	Yes
Panasonic Technologies, Inc		(not present)
Philips Electronics		(not present)
Pivot3, Inc.		(not present)
QLogic Corp.		(not present)
Quantum Corp.	Paul Entzel	Yes
Seagate Technology	Jim Coomes	Yes
Storage Technology Corp.		(not present)
Sun Microsystems, Inc.	Vit Novak	Yes
Texas Instruments		(not present)
Toshiba		(not present)
UNISYS	Ron Mathews	Yes
Veritas Software	Roger Cummings	Yes

This two-thirds roll call vote passed (29:0:0:10=39).

Gary Robinson took an action item to notify the JTC1/SC25 TAG that T10 has reviewed project 1.25.13.11.13: FCD 14776-351: SCSI SMC, and recommends that the JTC1/SC25 TAG vote to approve said FCD.

### 11.2.2 ISO NWIP for SBC-2 (04-125) [Elliott]

Gary Robinson moved that T10 has reviewed the new work item proposal, and recommends the NWIP for SBC-2 (T10/04-125r0) as a US contribution to JTC1/SC25 and to approve the NP to be issued by SC25, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor. John Lohmeyer seconded the motion.

The roll call motion passed with a tally of 29:0:0:10=39. Details of the roll call were as follows:

Organization	Voter	Vote
Adaptec, Inc.	Tim Symons	Yes
Agilent Technologies	Pat Thaler	Yes
Amphenol Interconnect		(not present)
Brocade	Robert Snively	Yes
Cisco Systems, Inc.	Claudio DeSanti	Yes
CNT	David Peterson	Yes
Crossroads Systems, Inc.	Dexter Anderson	Yes
Dallas Semiconductor	James A. Lott, Jr.	Yes
Dell, Inc.	Kevin Marks	Yes
Dot Hill Systems Corp	Phil Colline	Yes
EMC Corp.	Gary S. Robinson	Yes
Emulex	Robert H. Nixon	Yes
ENDL	Ralph O. Weber	Yes
FCI	Douglas Wagner	Yes
Fujitsu	Mike Fitzpatrick	Yes
General Dynamics	Tim Mackley	Yes
Hewlett Packard Co.	Rob Elliott	Yes
Hitachi Cable Manchester		(not present)
Hitachi Global Storage Tech.	Dan Colegrove	Yes
IBM Corp.	George O. Penokie	Yes
Intel Corp.	Robert Sheffield	Yes
Iomega Corp.	David Hawks	Yes
LSI Logic Corp.	John Lohmeyer	Yes
Madison Cable Corp.		(not present)
Maxtor Corp.	Mark Evans	Yes
Microsoft Corp.	Emily Hill	Yes

Molex Inc.	Jay Neer	Yes
Panasonic Technologies, Inc		(not present)
Philips Electronics		(not present)
Pivot3, Inc.		(not present)
QLogic Corp.		(not present)
Quantum Corp.	Paul Entzel	Yes
Seagate Technology	Jim Coomes	Yes
Storage Technology Corp.		(not present)
Sun Microsystems, Inc.	Vit Novak	Yes
Texas Instruments		(not present)
Toshiba		(not present)
UNISYS	Ron Mathews	Yes
Veritas Software	Roger Cummings	Yes

This two-thirds roll call vote passed (29:0:0:10=39).

Gary Robinson took an action item to inform the JTC1/SC25 TAG that T10 has reviewed the new work item proposal, and recommends the NWIP for SBC-2 (T10/04-125r0) as a US contribution to JTC1/SC25 and to approve the NP to be issued by SC25, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor, after T10 Letter Ballot on SBC-2 closes.

## 12. Liaison Reports

### 12.1 T11 Liaison Report [Snively]

Bob Snively presented the T11 liaison report contained in T10/04-142r0.

### 12.2 T13 Liaison Report [Colegrove]

Dan Colegrove provided an oral report to the committee on the activities of T13. ATA/ATAPI-7 has been forwarded to first Public Review. Project proposals were approved for ATA/ATAPI-8, using a document structure similar to that used by T10 (i.e., architecture, transport, etc.) For details regarding T13 activities see [www.t13.org](http://www.t13.org).

### 12.3 SFF Industry Group [Allan]

In the absence of Dal Allan no report was available.

### 12.4 IEEE 1394 [Johansson]

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

### 12.5 SCSI Trade Association (STA) [Czekalski]

Marty Czekalski provided an electronic report on the activities of the SCSI Trade Association. The report is available in 04-152r0.

### 12.6 IETF SCSI over IP [Black/Robinson]

David Black reported that iSCSI is published as RFC 3720. A number of iSCSI supporting documents also have been published as RFCs. Several other IPS drafts are nearing publication.

### 12.7 SNIA [Cummings]

Roger Cummings provided an electronic report in 04-157r0 that was displayed for the committee to review.

### **12.8 SATA II [Cox/open]**

The SATA II group has not yet designated an official liaison to T10.

Alvin Cox reported that both the CAPCON and PHY documents are at the end of their 30-day internal review and should be out for public review soon.

### **13. Review of Action Items**

- 545 David Black will ensure that RFCs are written defining URLs for SNMP, CIM over HTTP/HTTPS, and SSH.
- 571 Gary Robinson will notify the JTC1/SC25 TAG that T10 has reviewed project 1.25.13.11.13: FCD 14776-351: SCSI SMC, and recommends that the JTC1/SC25 TAG vote to approve said FCD.
- 572 After the T10 Letter Ballot on SBC-2 has closed, Gary Robinson will inform the JTC1/SC25 TAG that T10 has reviewed the new work item proposal, and recommends the NWIP for SBC-2 (T10/04-125r0) as a US contribution to JTC1/SC25 and to approve the NP to be issued by SC25, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor.

### **14. Meeting Schedule**

The next plenary meeting of T10 will be Thursday July 14, 2004 in Colorado Springs, CO at the Doubletree World Arena Hotel (719-576-8900), hosted by LSI Logic. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

Monday 7/12	9	10	11	12	1	2	3	4	5	6	7	8	
	+=====+												
													ADI WG   (10)
	+=====+												
													SAS Protocol WG   (40)
	+=====+												
Tuesday 7/13	8	9	10	11	12	1	2	3	4	5	6	7	8
	+=====+												
													SAS Physical WG   (25)
	+=====+												
													SCSI/ATA Trans SG  CAP WG   (40)
	+=====+												
													FCP-3 WG   STA Marcom *   (20)
	+-----+												
													T11.5 FAIS WG   (30)
	+-----+												
													Reception   (All)
	+-----+												
Wednesday 7/14	9	10	11	12	1	2	3	4	5	6	7	8	
	+=====+												
													CAP WG   (40)
	+=====+												
													MMC WG   (25)
	+=====+												
													SSC-3   SFF   (30)
	+-----+												
													STA Plenary * /Adm*/ TCC*   (20)
	+-----+												
Thursday 7/15	8	9	10	11	12	1	2	3	4	5	6	7	8
	+=====+												
													T10 Plenary   SAM-3 LB Res   (45/15)
	+=====+												
													FCIA Board Meeting *   (12)
	+-----+												
Friday 7/16	8	9	10	11	12	1	2	3	4	5	6	7	8
	+=====+												
													SAM-3 LB Res   (15)
	+=====+												

Meetings marked with == are T10-authorized meetings.  
 Meetings marked with -- are other groups and may change without notice.  
 Meetings marked with (\*) are closed meetings of other groups.

Other T10-authorized meetings:

Meeting	Date	Location / Contact
-----		
ADI Calls		To be announced via T10 reflector
MSC Call	TBD	To be announced via T10 reflector
SAS Prot Call	June 3	TBA via T10 reflector / Penokie
SAS Prot Calls	TBD	To be announced via T10 reflector
SAS PHY Calls	Bi-weekly	TBA via T10 reflector / Cox
SAT Call	June 4	TBA via T10 reflector / Sheffield

## 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: SCSI Storage Interfaces Technical Committee  
 T11: Device Level Interfaces Technical Committee  
 WG: Working Group (same as Ad Hoc Group)



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

Activity	Contact	Telephone/Email
ADT	Paul Entzel	(720) 406-5782 paul.entzel@quantum.com
ADC	Rod Wideman	(720) 249-5796 rod.wideman@adic.com
SBC-2, SES-2, SAS-1.1	Rob Elliott	(281) 518-5037 Elliott@hp.com
MMC-4, MMC-5	Bill McFerrin	(325) 423-1560 billmc@tstar.net
SBP-3	Peter Johansson	(510) 527-3926 PJohansson@ACM.org
MSC, SAM-4	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-3, FCP-3	Dave Peterson	(763) 268-6139 david_peterson@cnt.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
Jul 12-16, 2004	Colorado Springs, CO	LSI Logic
Sep 13-17, 2004	Nashua, NH	Hitachi Cable
Nov 8-12, 2004	Austin, TX	Crossroads
Jan 17-21, 2005	Las Vegas, NV	Hitachi GST
Mar 7-11, 2005	Dana Point, CA	QLogic
May 2-6, 2005	Oklahoma City, OK	Fujitsu
Jul 11-15, 2005	Colorado Springs, CO	LSI Logic
Sep 12-16, 2005	Vancouver, BC	PMC Sierra
Nov 7-11, 2005	Austin, TX	Crossroads
Proposed dates for 2006:		
Jan 9-13, 2006		
Mar 6-10, 2006		
May 8-12, 2006		
Jul 10-14, 2006		
Sep 11-15, 2006		
Nov 6-10, 2006		

John Lohmeyer moved that the September 2005 meeting in Vancouver, BC be approved. Mark Evans seconded the motion. John noted that this motion requires a two-thirds vote for approval per the Policy for T10 Plenary Meetings and Accompanying Meeting Weeks. The motion passed 26:1:11=39.

John Lohmeyer asked the group to review the proposed 2006 dates and organizations interested hosting one of the meetings in 2006 to contact him.

#### **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.

Jim Coomes moved that T10 authorize the T10-related meetings and events in the list above that had not previously been approved through the end of June 2004. Bob Nixon 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 11:35 a.m. on Thursday May 6, 2004.

**Enclosure(1) -- Meeting Attendees**

Name	S	Organization	Electronic Mail Address
Mr. Tim Symons	P	Adaptec, Inc.	Timothy_Symons at adaptec dot com
Ms. Pat Thaler	P	Agilent Technologies	pat_thaler at agilent dot com
Mr. Robert Snively	P	Brocade Comm. Systems, Inc.	rsnively at brocade dot com
Dr. Claudio DeSanti	P	Cisco Systems, Inc.	cds at cisco dot com
Mr. David Peterson	P	CNT	david_peterson at cnt dot com
Mr. Dexter Anderson	P	Crossroads Systems, Inc.	danderson at crossroads dot com
Mr. James A. Lott, Jr.	P	Dallas Semiconductor	jim dot lott at dalsemi dot com
Mr. Kevin Marks	P	Dell, Inc.	kevin_marks at dell dot com
Mr. Phil Colline	P	Dot Hill Systems Corp	Phil dot Colline at dothill dot com
Mr. David Black	A	EMC Corp.	black_david at emc dot com
Mr. Gary S. Robinson	P	EMC Corp.	robinson_gary at emc dot com
Mr. Robert H. Nixon	P	Emulex	bob dot nixon at emulex dot com
Mr. Ralph O. Weber	P	ENDL Texas	roweber at ieee dot org
Mr. Douglas Wagner	P	FCI	dwagner at fciconnect dot com
Mr. Elwood Parsons	AV	Foxconn Electronics	elwood dot parsons at foxconn dot com
Mr. Mike Fitzpatrick	P	Fujitsu	mfitzpatrick at fcpa dot fujitsu dot com
Mr. Tim Mackley	A	General Dynamics	timothy dot mackley at gd-ais dot com
Mr. Rob Elliott	P	Hewlett Packard Co.	Elliott at hp dot com
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.	daniel dot colegrove at hgst dot com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gop at us dot ibm dot com
Mr. Robert Sheffield	P	Intel Corp.	robert dot l dot sheffield at intel dot com
Mr. David Hawks	P	Iomega Corp.	hawks at iomega dot com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier at t10 dot org
Ms. Ashlie Fan	P	Madison Cable Corp.	afan at madisoncable dot com
Mr. Martin Czekalski	A	Maxtor Corp.	marty_czekalski at maxtor dot com
Mr. Mark Evans	P	Maxtor Corp.	mark_evans at maxtor dot com
Ms. Emily Hill	P	Microsoft Corp.	emhill at microsoft dot com
Mr. Jay Neer	P	Molex Inc.	jneer at molex dot com
Ms. Rachelle Trent	AV	PMC-Sierra	rachelle_trent at pmc-sierra dot com
Mr. Paul Entzel	P	Quantum Corp.	paul dot entzel at quantum dot com

Mr. Jim Coomes	A	Seagate Technology	jim dot coomes at seagate dot com
Mr. Alvin Cox	V	Seagate Technology	Alvin dot Cox at seagate dot com
Mr. Vit Novak	P	Sun Microsystems, Inc.	vit dot novak at sun dot com
Mr. Robert Kando	A	Texas Instruments	Robert_Kando at ti dot com
Mr. Ron Mathews	P	UNISYS Corporation	ronald dot mathews at unisys dot com
Mr. Roger Cummings	P	Veritas Software	roger dot cummings at  veritas dot com

36 People Present

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

**Enclosure(2) -- T10 Attendance Database**

Generated on 2004/05/08 at 07:55:35

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

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

Mr. Ken Paist (AV) Phone: (610) 712-3265  
Agere Systems Fax:  
Room 12D-225B Email: paist at agere dot com  
1110 American Parkway NE  
Allentown, PA 18109-9138

Ms. Pat Thaler (P) Phone: (916) 788-5662  
Agilent Technologies Fax:  
1101 Creekside Ridge Dr Email: pat\_thaler at agilent dot com  
Suite 100, MS RG-10  
Roseville, CA 95678

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

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

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

Mr. Harlan Andrews (T) Phone: (408) 974-6430  
Apple Computer Fax: (408) 862-7577  
6 Infinite Loop MS 306-2MS Email: hea at apple dot com  
Cupertino, CA. 95014

Mr. Robert Snively (P) Phone: (408) 333-8135  
Brocade Comm. Systems, Inc. Fax:  
1745 Technology Drive Email: rsnively at brocade dot com  
San Jose, CA 95110

Mr. Steven Wilson (A) Phone: (408) 333-8128  
Brocade Comm. Systems, Inc. Fax: (408) 392-6655

1745 Technology Drive  
San Jose, CA 95110

Email: swilson at brocade dot com

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

Phone: (949) 855-7887  
Fax: (949) 855-4298  
Email: dennisl at circuitassembly dot com

Dr. Claudio DeSanti (P)  
Cisco Systems, Inc.  
170 W. Tasman Dr.  
San Jose, CA 95134

Phone: (408) 853-9172  
Fax: (408) 853-9172  
Email: cds at cisco dot com

Mr. Fabio Maino (A)  
Cisco Systems, Inc.  
170 W. Tasman Dr.  
San Jose, CA 95134

Phone: (408) 853-7530  
Fax: (408) 853-7530  
Email: fmaino at cisco dot com

Mr. David Peterson (P)  
CNT  
6000 Nathan Lane North  
Minneapolis, MN 55442

Phone: (763) 268-6139  
Fax:  
Email: david\_peterson at cnt dot com

Mr. Dexter Anderson (P)  
Crossroads Systems, Inc.  
8300 North MoPac Expressway  
Austin, TX 78759

Phone: (512) 928-7202  
Fax: (512) 928-7402  
Email: danderson at crossroads dot com

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

Phone: (512) 928-7282  
Fax:  
Email: jtyndall at crossroads dot 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 dot lott at dalsemi dot com

Mr. Doug Cole (A)  
Dallas Semiconductor  
4401 South Beltwood Pkwy  
Dallas, Texas  
75244

Phone: 972-371-3887  
Fax: 972-371-4370  
Email: doug dot cole at dalsemi dot com

Mr. Kevin Marks (P)  
Dell, Inc.  
One Dell Way - MS 8540  
Round Rock, TX 78682

Phone: (512) 723-9173  
Fax: (512) 723-6657  
Email: kevin\_marks at dell dot com

Mr. Phil Colline (P)

Phone: (760) 931-5524

Dot Hill Systems Corp  
6305 El Camino Real  
Carlsbad, CA 92009

Fax: (760) 931-5527  
Email: Phil dot Colline at dothill dot com

Ms. Elizabeth Rodriguez (A)  
Dot Hill Systems Corp  
6305 El Camino Real  
Carlsbad, CA 92009

Phone: (760) 431-4435  
Fax: (760) 931-5527  
Email: elizabeth dot rodriguez at dothill dot com

Mr. Gary S. Robinson (P)  
EMC Corp.  
85 East India Row  
Apt 18C  
Boston, MA, 02110

Phone: (617) 300-7242  
Fax:  
Email: robinson\_gary at emc dot com

Mr. David Black (A)  
EMC Corp.  
176 South St.  
Hopkinton, MA 01748

Phone: (508) 293-7953  
Fax: (508) 293-7786  
Email: black\_david at emc dot com

Mr. Robert H. Nixon (P)  
Emulex  
3333 Susan St.  
Costa Mesa, CA 92626

Phone: (714) 885-3525  
Fax: (714) 885-3794  
Email: bob dot nixon at emulex dot com

Mr. Kenneth Hirata (A)  
Emulex  
3333 Susan St  
Costa Mesa, CA 92626

Phone: (714) 662-5600  
Fax: (714) 885-3794  
Email: Ken dot Hirata at Emulex dot com

Mr. I. Dal Allan (A)  
ENDL  
14426 Black Walnut Ct.  
Saratoga, CA 95070

Phone: (408) 867-6630  
Fax: (408) 867-2115  
Email: endlcom at acm dot 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 at ieee dot org

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

Phone:  
Fax:  
Email: carlm at exabyte dot com

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

Phone: (805) 498-0325  
Fax:  
Email: dwagner at fciconnect dot com

Mr. Steve Wong (A) Phone: (562) 356-2527  
FCI Fax: (562) 356-2520  
5700 Warland Dr. Email: sywong at fciconnect dot com  
Cypress, CA 90630

Mr. Elwood Parsons (AV) Phone: (717) 558-7518 x141  
Foxconn Electronics Fax: (717) 558-9306  
100 S. 38th St. Email: elwood dot parsons at foxconn dot  
com  
Harrisburg, PA 17105

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

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

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

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

Mr. Nathan Hastad (P) Phone: (952) 921-6635  
General Dynamics Fax: (952) 921-6345  
8800 Queen Ave. S. Email: nathan dot hastad at gd-ais dot com  
Bloomington, MN 55431

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

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

Mr. Rob Elliott (P) Phone: (281) 518-5037



Hewlett Packard Co.  
MC140801  
PO Box 692000  
Houston, TX 77269-2000

Fax: (281) 518-7135  
Email: Elliott at hp dot 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 at ix dot netcom dot 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 at hcm dot hitachi dot com

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

Phone: (702) 614-6119  
Fax: (702) 614-7955  
Email: daniel dot colegrove at hgst dot com

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

Phone: (650) 851-5909  
Fax:  
Email: werner dot glinka at attglobal dot net

Mr. Steven Wirtz (AV)  
I-TECH Corp.  
10300 Valley View Rd.  
Eden Prairie, MN 55344

Phone: (952) 941-5905  
Fax:  
Email: steve\_wirtz at i-tech dot 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 at us dot ibm dot 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 at vnet dot ibm dot com

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

Phone: (480) 554-8597  
Fax: (480) 554-7347  
Email: robert dot l dot sheffield at intel dot com

Mr. Cris Simpson (A)  
Intel Corp.  
2111 N.E. 25th Ave.  
JF5-355

Phone: (503) 712-4333  
Fax: (503) 712-2200  
Email: cris dot simpson at intel dot com

Hillsboro, OR 97124

Mr. David Hawks (P) Phone: (801) 332-4160  
Iomega Corp. Fax: (801) 778-4170  
1821 Iomega Way Email: hawks at iomega dot com  
Roy, UT 84067

Mr. John Lohmeyer (P) Phone: (719) 533-7560  
LSI Logic Corp. Fax: (719) 533-7183  
4420 ArrowsWest Dr. Email: lohmeier at t10 dot org  
Colorado Springs, CO 80907

Mr. Keith Holt (A) Phone: (316) 636-8665  
LSI Logic Corp. Fax:  
3718 N. Rock Rd. Email: keith dot holt at lsil dot com  
Wichita, KS 67226-1397

Ms. Ashlie Fan (P) Phone: (508) 926-4148  
Madison Cable Corp. Fax: (508) 752-4230  
125 Goddard Memorial Dr. Email: afan at madisoncable dot com  
Worcester, MA 01603

Mr. Andy Nowak (A) Phone: (508) 926-4150  
Madison Cable Corp. Fax: (508) 752-4230  
125 Goddard Memorial Drive Email: anowak at madisoncable dot com  
Worcester, MA 01603

Mr. Himmeler Themistocle (A#) Phone: (508) 752-7320  
Madison Cable Corp. Fax: (508) 752-4230  
125 Goddard Memorial Dr. Email: hthemistocle at madisoncable dot com  
Worcester, MA 01603

Mr. Martin Kwandou (AV) Phone: (408) 222-9105  
Marvell Semiconductor Fax:  
700 First Avenue Email: mkwandou at marvell dot com  
M/S 409  
Sunnyvale CA 94089

Mr. Kanting Tsai (AV) Phone: (408) 222-9315  
Marvell Semiconductor Fax:  
700 First Avenue Email: ktsai at marvell dot com  
M/S 409  
Sunnyvale CA 94089

Mr. Mark Evans (P) Phone: (408) 894-5310  
Maxtor Corp. Fax: (408) 324-7432  
500 McCarthy Blvd. Email: mark\_evans at maxtor dot com  
Milpitas, CA 95035

Mr. Martin Czekalski (A) Phone: (508) 770-3795  
Maxtor Corp. Fax: (508) 770-2299  
333 South Street Email: marty\_czekalski at maxtor dot com

Shrewsbury, MA 01545

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

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

Ms. Emily Hill (P)  
Microsoft Corp.  
1 Microsoft Way  
Redmond, WA 98052

Phone: (425) 705-9595  
Fax: (425) 936-7329  
Email: emhill at microsoft dot com

Mr. Jeff Mastro (A)  
Microsoft Corp.  
1 Microsoft Way  
Redmond, WA 98052

Phone: (425) 707-9254  
Fax: (425) 936-7329  
Email: jmastro at microsoft dot 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 at molex dot com

Mr. Jerry Kachlic (A)  
Molex Inc.  
2216 Wellington Court  
Lisle, IL 60532

Phone: (630) 718-5991  
Fax: (630) 512-8622  
Email: jerry dot kachlic at molex dot com

Dr. Terence J. Nelson (P)  
Panasonic Technologies, Inc  
167 Maple St.  
New Providence, NJ 07974

Phone: (908) 464-1652  
Fax: (908) 464-0149  
Email: terry at tjnelson dot com

Mr. Rudolf Vitti (A)  
Panasonic Technologies, Inc  
One Panasonic Way  
Panazip 1E-6  
Secaucus, NJ 07094

Phone: (201) 348-7064  
Fax: (201) 348-7807  
Email: vittir at panasonic dot com

Mr. William P. McFerrin (P)  
Philips Electronics/CD Edge  
PO Box 381  
Llano, TX 78643

Phone: (325) 423-1560  
Fax:  
Email: billmc at tstar dot net

Mr. Bill Galloway (P)  
Pivot3, Inc.  
14902 Mesita Dr.  
Houston, TX 77083

Phone: (281) 530-3063  
Fax: (281) 988-0358  
Email: billg at pivot3 dot com

Mr. Yuriy Greshishchev (AV)  
PMC-Sierra

Phone: 613-271-4034  
Fax: 613-271-7007

8555 Baxter Place  
Burnaby, BC  
Canada V5A 4V7

Email: Yuriy\_Greshishchev at pmc-sierra  
dot com

Mr. Bill Lye (AV)  
PMC-Sierra  
8555 Baxter Place  
Burnaby, BC  
Canada V5A 4V7

Phone: 604-415-6000  
Fax: 604-415-6001  
Email: lye at pmc-sierra dot com

Ms. Rachelle Trent (AV)  
PMC-Sierra  
8555 Baxter Place  
Burnaby, BC Canada V5A 4V7

Phone: (604) 415-6892  
Fax: (604) 415-6208  
Email: rachelle\_trent at pmc-sierra dot com

Mr. Skip Jones (P)  
QLogic Corp.  
26600 Laguna Hills Dr.  
Aliso Viejo, CA 92656

Phone: (949) 389-6368  
Fax: (949) 389-6114  
Email: skip dot jones at qlogic dot com

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

Phone: (952) 932-4064  
Fax:  
Email: craig dot carlson at qlogic dot 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 dot wallace at qlogic dot com

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

Phone: (720) 406-5782  
Fax: (720) 406-5762  
Email: paul dot entzel at quantum dot com

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

Phone: (720) 406-5611  
Fax:  
Email: jim dot jones at quantum dot 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 at rancho dot 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 at roxio dot com

Mr. Yau-Ting Mau (AV) Phone: (408) 631-8177  
Roxio, Inc. Fax:  
461 S. Milpitas Blvd. Email: mau at roxio dot com  
Milpitas, CA 95035

Mr. Gerald Houlder (P) Phone: (952) 402-2869  
Seagate Technology Fax: (952) 402-3471  
Mailstop SHK231 Email: gerry dot houlder at seagate dot com  
1280 Disc Drive  
Shakopee, MN 55379-1863

Mr. Jim Coomes (A) Phone: (952) 402-2665  
Seagate Technology Fax: (952) 402-3471  
1280 Disc Drive Email: jim dot coomes at seagate dot com  
M.S. SHK231  
Shakopee, MN 55379

Mr. Dave Deming (AV) Phone: (831) 336-6000  
Solution Technology Fax: (831) 336-6006  
9407 Mill St. Email: ddeming at soltechnology dot com  
Ben Lomond, CA 95005

Mr. Erich Oetting (P) Phone: (303) 673-2178  
Storage Technology Corp. Fax:  
2270 South 88th St. Email: erich\_oetting at storstek dot com  
Louisville, CO 80028-4272

Mr. Dennis Appleyard (A) Phone: (303) 673-6685  
Storage Technology Corp. Fax:  
One StorageTek Dr. Email: dennis\_appleyard at storstek dot com  
Louisville, CO 80028

Mr. Vit Novak (P) Phone: (510) 936-3284  
Sun Microsystems, Inc. Fax: (510) 936-2527  
MS NWK16-211 Email: vit dot novak at sun dot com  
7777 Gateway Blvd.  
Newark, CA 94560

Mr. Charles Binford (A) Phone: (316) 315-0382 x222  
Sun Microsystems, Inc. Fax: (509) 756-4425  
3450 N. Rock Rd., Suite 301 Email: Charles dot Binford at sun dot com  
Wichita, KS 67226

Mr. Paul D. Aloisi (P) Phone: (603) 222-8687  
Texas Instruments Fax: (603) 222-8700  
50 Phillipe Cote St. Email: Paul\_Aloisi at ti dot com  
Manchester, NH 03101

Mr. Robert Kando (A) Phone: (603) 222-8667  
Texas Instruments Fax:  
50 Phillipe Cote St. Email: Robert\_Kando at ti dot com  
Manchester, NH 03101

Mr. Hiroshi Suzuki (P)  
Toshiba  
9740 Irvine Blvd.  
Irvine, CA 92618  
Phone: (949) 462-7588  
Fax: (949) 581-1170  
Email: hiroshi dot suzuki at tais dot  
toshiba dot com

Mr. Tasuku Kasebayashi (A)  
Toshiba  
35 Hammond  
Irvine, CA 92618-1607  
Phone: (949) 462-7551  
Fax: (949) 458-7815  
Email: task dot kasebayashi at tais dot  
toshiba dot 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 dot mathews at unisys dot 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 dot shelton at unisys dot com

Mr. Roger Cummings (P)  
Veritas Software  
1001 Heathrow Park Lane  
Heathrow, FL 32746  
Phone: (407) 357-7257  
Fax:  
Email: roger dot cummings at veritas dot  
com

Mr. Ron Martin (A)  
Veritas Software  
400 International Parkway  
Heathrow, FL 32746  
Phone: (407) 531-7621  
Fax: (407) 531-7720  
Email: ron dot martin at veritas dot com

Mr. Sam Barnett (AV)  
Vitesse Semiconductor  
4323 ArrowsWest Drive  
Colorado Springs, CO 80907  
Phone: (719) 867-6200  
Fax: 719-867-6203  
Email: samb at vitesse dot com

Mr. Mark Miquelon (AV)  
Vitesse Semiconductor  
4323 ArrowsWest Drive  
Colorado Springs, CO 80907  
Phone: 719 867-4458  
Fax:  
Email: miquelon at vitesse dot com

Mr. Gregory Tabor (AV)  
Vitesse Semiconductor  
4323 ArrowsWest Drive  
Colorado Springs, CO 80907  
Phone: (719) 867-6200  
Fax: (719) 867-6203  
Email: greg at vitesse dot com

Mr. Steve Howe (AV)  
Phone:

Xiotech Corp.  
3535 40th Avenue, N.W.  
Rochester, MN 55901

Fax:  
Email:

Mr. Jeff Williams (AV)  
Xiotech Corp.  
3535 40th Avenue, N.W.  
Rochester, MN 55901

Phone: (507) 529-7026  
Fax: (507) 529-7010  
Email: jeff\_williams at xiotech dot com