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

To: T10 Membership
From: Ralph Weber / John Lohmeyer
Subject: Minutes of T10 Plenary Meeting #57 -- September 11, 2003
            Seattle, WA

Agenda

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Results of Meeting

1.   Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:05 a.m., Thursday September 11, 2003. He thanked Rob Haydt and Emily Hill of Microsoft Corp. 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 via the meeting web site. 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 9 people from 5 organizations informing them that their membership was in jeopardy due to non-attendance (see 03-260r0) and that their membership would be terminated if they did not attend this meeting. The following organizations were in attendance jeopardy:

Crossroads Systems, Inc.
General Dynamics
Honda Connectors
KnowledgeTek, Inc.
Veritas Software

The following organizations were not present at the meeting:

Honda Connectors
KnowledgeTek, 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:

SBS Technologies

The T10 membership during the meeting was 41 organizations down 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 noted that because no letter ballots have closed since June, the letter ballot jeopardy status is unchanged since the July meeting.

4. Approval of Minutes - July 2003 Meeting - Colorado Springs, CO (T10/03-248r0)

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 September 18, 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.

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

Mark Evans noted that 03-288 had been posted regarding U.S. Patent No. 5,282,247 and the draft SBP-3 standard. A similar letter (97-271) had been posted regarding this patent and SBP-2.

Pat Thaler noted that she had posted 03-292r0 and 03-293r0 saying that Agilent believes it does not have a patent on the proposed Data Integrity 16-bit CRC, 0x18bb7 polynomial and that it has applied for a patent on CRC calculation acceleration.

Craig Carlson noted that QLogic has a patent application on CRC Methodology as documented in 03-312r0.

Keiji Katata noted that 03-296r0 states the Pioneer patent position regarding their patent application related to section 4.6 of MMC-4.

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

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. *Complete*
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. *Complete*
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. *Carryover*
535   John Lohmeyer will forward SSC-2 revision 09 to INCITS for processing towards first Public Review. *Complete.*
536   John Lohmeyer will forward SAS revision 05 for processing toward second Public Review. *Complete.*
537   John Lohmeyer will contact INCITS regarding courtesy copies of EPI, PIP, SSM-2, and SPI-5. *Complete.*
538   Bill McFerrin took an action item provide the SPC-3 editor with document references for USB-1, USB-2, and USB Mass. *Complete*
539   Rob Elliott will send a warning message to the T10 Reflector regarding the removal of the SES Array Control and Array Status pages. *Complete*
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. *Carryover*
541   Rob Elliott will prepare a proposal updating the SAS Device Element Status descriptor based on discussions in the CAP working group. *Carryover*
542   Bob Snively will provide the ISO format SES PDF and sources to the IR. *Carryover*
544   Gary Robinson will communicate the T10 JTC1/SC25 delegation recommendation to the INCITS Executive Board. *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 noted that his annual report to INCITS is due in October, so he will be paying particular attention to forwarding letter ballot dates during this meeting.

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 revision 8 was uploaded to the T10 web site on 4 September. Revision 8 contains 98% of the technical specifications that the SNIA OSD technical working group believes should be in the letter ballot version of OSD. One additional feature, an object version numbering mechanism, is felt by some to be an open issue.

Ralph reported that the SNIA OSD group heard the concerns about CDB size and reduced it from 236 bytes in revision 7 to 164 bytes in revision 8. Other issues of concern to T10 were also addressed.

A brief presentation of OSD will be made at the November CAP meeting.

Additional editorial work is expected and an OSD editing session will be held on Friday of the next meeting week.

After these activities are completed, a letter ballot will be requested.

Ralph Weber moved that OSD revision 8 be accepted as a committee draft. John Lohmeyer 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 03-326). Erich noted that the working group unanimously recommended acceptance of the letter ballot resolution.

Erich Oetting moved that 03-052r5 be approved as resolving the letter ballot comments on SMC-2 and that SMC-2 Rev 6, which incorporates the letter ballot resolutions, be forwarded to INCITS for further processing toward first public review. Dave Peterson seconded the motion. The motion passed 28:0:1:12=41, meeting the two-thirds rule.

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

Rob Elliott, Hewlett Packard,
Paul Entzel, Quantum,
Gerry Houlder, Seagate Technology, and
Erich Oetting, Storage Technology.

John Lohmeyer took an action item to forward SMC-2 revision 06 for processing toward first Public Review.

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

Ralph Weber reported that revision 15 of SPC-3 will be available in time for the mailing and will contain all the proposals approved by this meeting.

Because of the pending OSD Letter Ballot, Ralph asked the committee's consent to move the SPC-3 letter ballot target date from November 2003 to March 2004.

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

Rob Elliott reported that SBC-2 revision 10 containing all the proposals approved by this meeting will be available in time for the next mailing. Rob asked committee members to prepare for an SBC-2 editing meeting to be held immediately following the November plenary meeting in Austin.

Rob reported that the target date for an SBC-2 letter ballot is unclear owing to uncertainty about when the end-to-end data protection work will be ready for incorporation in SBC-2.

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

John Lohmeyer reported that the first public review on SSC-2 had closed on September 1st with no comments received. SSC-2 will now go to INCITS for management review and letter ballot.

Dave Peterson asked that operating system developers look seriously at updating their drivers to conform to SSC-2 because there are many reliability improvements in SSC-2.

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

John Lohmeyer reported that the SBP-3 Public Review closed in July, but the SBP-3 group requested substantive changes after Public Review that the committee will consider under item 10.4.

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

Cris Simpson reported that no progress has been made on SRP-2. He stated that the target letter ballot date for SRP-2 is July 2004.

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

George Penokie reported that some interest has been expressed on moving MSC forward. He noted that the status of the project remains uncertain and that serious movement toward proposed content for MSC is needed by the time of the November plenary or he will recommend that the MSC project be cancelled.

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

Bill McFerrin reported on the activities of the MMC-4 working group. The group reached agreement on the definition of the "features" feature and a variation of asynchronous notification. The group has voted to stabilize clauses 1 through 3. The goal for next time is to stabilize clause 4 and four annexes.

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

Paul Entzel reported on the activities of the ADI working group (minutes in 03-295). The plan is to take ADT to letter ballot after the November meeting. A new revision of ADT will be available soon, maybe in time for the next mailing.

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

John Lohmeyer reported that the letter ballot on ADC closes on 22 September.

8.13 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 03-306). He noted that the current SES-2 revision is 4. He stated that an editing session is planned for SES-2 following the editing session for SBC-2 in November, if time is available.

Rob reported that the target letter ballot date for SES-2 is March 2004.

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

Dave Peterson reported on the activities of the FCP-3 working group (minutes in 03-324). The document describing proposed FCP-3 changes is 03-313.

FCP-3 is not expected to go to letter ballot during the next year.

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

Ralph Weber reported that revision 9 will be available in time for the mailing and will contain all proposals approved by this meeting.

No target letter ballot date has been set for SAM-3. The earliest possible letter ballot date is November 2004.

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

John Lohmeyer reported that the SAS second Public Review closed on September 1st with no comments received. SAS will now go to INCITS for management review and letter ballot.

8.17 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 03-304). He stated that SAS-1.1 containing the proposals approved by this meeting will be available in time for the next mailing.

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

Dave Peterson reported that SSC-3 is in limbo because of the work load in the ADI working group.

SSC-3 is not expected to go to letter ballot during the next year.

9. Old Business

9.1 ANSI INCITS 330-2000 Defect Report (03-021) (RBC AM1) [Atkinson, Roberts]

John Lohmeyer reported that the RBC Amendment first public review closes September 29, 2003. Assuming no comments are received, this amendment should be published before the end of the year.

10. New Business

10.1 Actions on SAS Protocol Working Group Recommendations

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

    03-249r2 (First Burst Simplification) [Nixon]
    03-287r0 (New additional sense code for NOTIFY (ENABLE SPINUP) REQUIRED) [Evans]
    03-311r0 (BackoffRetry priority for XL state machine) [Hoglund]
    03-266r0 (Delay AIP (NORMAL) in XL state machine) [Elliott]
    03-267r0 (New BROADCAST (SES) primitive) [Elliott]
    03-268r0 (BROADCAST (CHANGE) on virtual phy enable and disable) [Elliott]

Rob Elliott moved that 03-249r2, 03-287r0, 03-311r0, 03-266r0, 03-267r0, and 03-268r0 be approved for inclusion in SAS-1.1. Cris Simpson seconded the motion. The motion passed on a vote of 32:0:0:9=41.

As the result of the approval, Ralph Weber took an action item to add the additional sense code named in 03-287r0 to the lists in SPC-3.

10.2 Actions on CAP Working Group Recommendations

George Penokie reviewed 03-243r2 (Optional INQUIRY command processing before entering task set).

George Penokie moved that 03-243r2 be approved or inclusion in SAM-3, SPC-3, and SBC-2. Mark Evans seconded the motion.

Mark Evans stated that the proposal increases the difficulty of parsing incoming commands. George Penokie noted that the feature is optional.

The motion passed on a vote of 22:3:8:8=41.

George Penokie and Mark Evans reviewed 03-244r2 (SAM-3, new Terminate Data Transfer transport protocol service).

Mark Evans moved that 03-244r2 be approved or inclusion in SAM-3. Rob Elliott seconded the motion.

Dave Peterson expressed concerns about how the proposal affects protocols other than SAS. George stated that it does not affect other protocols.

The motion passed on a vote of 23:1:8:9=41.

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

    03-303r0 (ADT Protocol Identifier) [Banther]
    03-257r0 (SPC-3 Queue Algorithm Modifier default value) [Elliott]
    03-254r0 (Obsolete the Control mode page Disable Queueing bit) [Weber]
    03-299r0 (Additional Sense Codes for OSD r08) [Weber]

Ralph noted that 03-210r3 (PERSISTENT RESERVE OUT SPEC_I_PT additional parameter data) had been recommended by CAP but he was returning it to working group for further consideration because he could not make the changes exactly as requested by the working group.

Rob Elliott moved that 03-303r0, 03-257r0, 03-254r0, and 03-299r0 be approved for inclusion in SPC-3. Mark Evans seconded the motion. The motion passed on a vote of 34:0:0:7=41.

10.3 Actions on Other Working Group Recommendations

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

10.4 SBP-3 isochronous data transfer greater than 64 kiB (03-265) [Johansson]

John Lohmeyer described the isochronous data transfer changes proposed in 03-265r0 and said that these changes are incorporated in SBP-3 Rev 04a with change bars. He noted that the SBP-3 participants support these changes and that Peter Johansson has offered to prepare SBP-3 Rev 05 without the change bars.

John Lohmeyer moved that SBP-3 revision 05, containing the substantive changes, be forwarded to INCITS for processing toward second Public Review. Ron Roberts seconded the motion. The motion passed on a roll call vote of 32:0:0:9=41,meeting the two-thirds rule. Details of the roll call vote were as follows:

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

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Peter Johansson was given an action item to prepare SBP-3 revision 05. John Lohmeyer took an action item to forward SBP-3 revision 05 for processing toward second Public Review.

11. ISO/IEC

11.1 ISO/IEC Report (03-300) [Robinson]

Although Gary Robinson was unable to attend, he provided an electronic report in 03-300r0. This document also includes seven motions that were considered in item 11.2.

11.2 ISO/IEC Business [Robinson]

11.2.1   FCD Ballot for FCD 14776-150: IT - Small Computer System Interface (SCSI) -Part 150: Serial Attached SCSI (SAS)

John Lohmeyer moved that T10 has reviewed project 1.25.13.11.36: FCD 14776-150: IT - Small Computer System Interface (SCSI) -Part 150: Serial Attached SCSI (SAS) and recommends that the JTC1/SC25 TAG vote to approve said FCD. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 34:0:0:7=41. Details of the roll call vote were:

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Organization                Name                   Yes No Abs NP
Adaptec, Inc.               Mr. Ron Roberts         1
Agilent Technologies        Ms. Pat Thaler          1
Amphenol Interconnect                                         1
Andiamo Systems, Inc.       Dr. Claudio DeSanti     1
Brocade Comm. Systems, Inc.                                   1
Congruent Software, Inc.                                      1
Crossroads Systems, Inc.    Mr. Robert Griswold     1
Dallas Semiconductor        Mr. James A. Lott, Jr.  1
Dell Computer Corp.         Mr. Kevin Marks         1
EMC Corp.                   Mr. David Black         1
Emulex                      Mr. Robert H. Nixon     1
ENDL Texas                  Mr. Ralph O. Weber      1
FCI                         Mr. Douglas Wagner      1
Fujitsu                     Mr. Mike Fitzpatrick    1
General Dynamics            Mr. Tim Mackley         1
Hewlett Packard Co.         Mr. Rob Elliott         1
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Organization	Representative		
Hitachi Cable Manchester			1
Hitachi Global Storage Tech.	Mr. Dan Colegrove	1	
IBM / Tivoli Systems	Mr. George O. Penokie	1	
Intel Corp.	Mr. Cris Simpson	1	
Iomega Corp.	Mr. Hiromichi Oribe	1	
LSI Logic Corp.	Mr. John Lohmeyer	1	
Madison Cable Corp.	Ms. Jie Fan	1	
Maxtor Corp.	Mr. Martin Czekalski	1	
Microsoft Corp.	Ms. Emily Hill	1	
Molex Inc.	Mr. Jay Neer	1	
Network Appliance Inc.			1
Panasonic Technologies, Inc	Dr. Terence J. Nelson	1	
Philips Electronics/CD Edge	Mr. William P. McFerrin	1	
Pivot3, Inc.			1
QLogic Corp.	Mr. Craig W. Carlson	1	
Quantum Corp.	Mr. Paul Entzel	1	
SBS Technologies	Mr. David Peterson	1	
Seagate Technology	Mr. Gerald Houlder	1	
Storage Technology Corp.	Mr. Erich Oetting	1	
Sun Microsystems, Inc.	Mr. Vit Novak	1	
Texas Instruments	Mr. Robert Kando	1	
Toshiba			1
UNISYS Corporation	Mr. Ron Mathews	1	
Veritas Software	Mr. Roger Cummings	1	
Vixel Corp.	Mr. Kenneth Hirata	1	
		34 0 0 7 = 41	

Gary Robinson was given an action item notify INCITS that T10 recommends approval of the FCD 14776-150 (SAS) to JTC/SC25 TAG.

11.2.2   FDIS Ballot for FDIS 14776-362: IT - Small Computer System Interface (SCSI) -Part 362: MMC-2

John Lohmeyer moved that T10 has reviewed project 1.25.13.11.17: FDIS 14776-362: IT - Small Computer System Interface (SCSI) -Part 362: MMC-2 and recommends that the JTC1/SC25 TAG vote to approve said FDIS. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 34:0:0:7=41. Details of the roll call vote were the same as documented in 11.2.1

Gary Robinson was given an action item to notify INCITS that T10 recommends approval of the FDIS 14776-362 (MMC-2) to JTC/SC25 TAG.

11.2.3   FCD Ballot for ISO/IEC FCD 14776-452 IT - Small Computer System Interface (SCSI) - Part 452:SCSI Primary Commands-2 (SPC-2)

John Lohmeyer moved that T10 has reviewed project 1.25.13.11.27: FCD 14776-452: IT - Small Computer System Interface (SCSI) -Part 452: SPC-2 and recommends that the JTC1/SC25 TAG vote to approve said FCD. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 34:0:0:7=41. Details of the roll call vote were the same as documented in 11.2.1

Gary Robinson was given an action item to notify INCITS that T10 recommends approval of the FDIS 14776-452 (SPC-2) to JTC/SC25 TAG.

11.2.4 FCD Ballot for ISO/IEC FCD 14776-412 IT - Small Computer System Interface (SCSI) - Part 412:SCSI Architecture Model-2 (SAM-2)

John Lohmeyer moved that T10 has reviewed project 1.25.13.11.19: FCD 14776-412: IT - Small Computer System Interface (SCSI) -Part 412: SAM-2 and recommends that the JTC1/SC25 TAG vote to approve said FCD. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 34:0:0:7=41. Details of the roll call vote were the same as documented in 11.2.1

Gary Robinson was given an action item to notify INCITS that T10 recommends approval of the FDIS 14776-412 (SAM-2) to JTC/SC25 TAG.

11.2.5 FCD Ballot for ISO/IEC FCD 14776-115 IT - Small Computer System Interface (SCSI) - Part 115:Parallel Interface-5 (SPI-5)

John Lohmeyer moved that T10 has reviewed FCD 14776-115 IT - Small Computer System Interface (SCSI) - Part 115: Parallel Interface-5 (SPI-5) and recommends that the JTC1/SC25 TAG vote to approve said FCD. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 33:0:1:7=41. Details of the roll call vote were:

Organization	Name	Yes	No	Abs	NP
Adaptec, Inc.	Mr. Ron Roberts	1			
Agilent Technologies	Ms. Pat Thaler	1			
Amphenol Interconnect					1
Andiamo Systems, Inc.	Dr. Claudio DeSanti	1			
Brocade Comm. Systems, Inc.					1
Congruent Software, Inc.					1
Crossroads Systems, Inc.	Mr. Robert Griswold	1			
Dallas Semiconductor	Mr. James A. Lott, Jr.	1			
Dell Computer Corp.	Mr. Kevin Marks	1			
EMC Corp.	Mr. David Black	1			
Emulex	Mr. Robert H. Nixon	1			
ENDL Texas	Mr. Ralph O. Weber	1			
FCI	Mr. Douglas Wagner	1			
Fujitsu	Mr. Mike Fitzpatrick	1			
General Dynamics	Mr. Tim Mackley	1			
Hewlett Packard Co.	Mr. Rob Elliott	1			
Hitachi Cable Manchester					1
Hitachi Global Storage Tech.	Mr. Dan Colegrove	1			
IBM / Tivoli Systems	Mr. George O. Penokie	1			
Intel Corp.	Mr. Cris Simpson	1			
Iomega Corp.	Mr. Hiromichi Oribe	1			
LSI Logic Corp.	Mr. John Lohmeyer	1			
Madison Cable Corp.	Ms. Jie Fan	1			
Maxtor Corp.	Mr. Martin Czekalski	1			
Microsoft Corp.	Ms. Emily Hill	1			
Molex Inc.	Mr. Jay Neer	1			
Network Appliance Inc.					1
Panasonic Technologies, Inc	Dr. Terence J. Nelson	1			
Philips Electronics/CD Edge	Mr. William P. McFerrin	1			
Pivot3, Inc.					1
QLogic Corp.	Mr. Craig W. Carlson	1			
Quantum Corp.	Mr. Paul Entzel	1			
SBS Technologies	Mr. David Peterson	1			
Seagate Technology	Mr. Gerald Houlder	1			

```
Storage Technology Corp.       Mr. Erich Oetting       1
Sun Microsystems, Inc.         Mr. Vit Novak           1
Texas Instruments              Mr. Robert Kando        1
Toshiba                                                        1
UNISYS Corporation             Mr. Ron Mathews         1
Veritas Software               Mr. Roger Cummings           1
Vixel Corp.                    Mr. Kenneth Hirata      1

                                               33   0  1  7 = 41
```

Gary Robinson was given an action item to notify INCITS that T10 recommends approval of the FCD 14776-115 (SPI-5) to JTC/SC25 TAG.

11.2.6   NWIP for Serial Bus Protocol-2 (SBP-2) (03-301)

John Lohmeyer moved that T10 approve the NWIP Serial Bus Protocol-2, SBP-2, (T10/03-301r0) 1.25.13.11.39: 14776-233, 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. Ralph Weber seconded the motion.

The motion passed on a roll call vote of 34:0:0:7=41. Details of the roll call vote were the same as documented in 11.2.1

Gary Robinson was given an action item to notify INCITS that T10 recommends submission of the NWIP (T10/03-301r0) as a US contribution to JTC1/SC25 and recommends that the NP to be issued by SC25 be approved, answering the 6 questions 'Yes' and naming Gary S. Robinson as project editor.

11.2.7   Notification of transfer of Projects for JTC 1/SC25/WG4 Microprocessor TAG

John Lohmeyer said that a number of international projects were transferred to the IEEE Microprocessor TAG in February 2003. R. L. Pritchard requested the following projects also be transferred for consistency:

PROJECT	BRIEF TITLE:	ISO/IEC	BACKGROUND
26.02.06	Serial Subsysytem bus	60823	Developed within SC26
26.02.10	VICbus	11458	Introduced by a SC26 Liaison organization CERN.
26.02.14	STbus	14576	Developed by Japanese NB
26.02.16	VME64	15776	Introduced by USNB from SDO VITA.

The INCITS Secretariat has requested that T10 and T11 review these projects and respond to INCITS no later than September 12, 2003 if we have any objections. John Lohmeyer moved that T10 approves the transfer of projects listed in in031022 to IEEE Microprocessor TAG. Ralph Weber seconded the motion. The motion passed 33:0:0:8=41.

Gary Robinson was given an action item to notify the INCITS Secretariat that T10 does not object to the transfer of projects listed in in031022 to IEEE Microprocessor TAG.

12. Liaison Reports

12.1 T11 Liaison Report (03-297) [Snively]

Bob Snively was unable to attend, but Craig Carlson presented the T11 liaison report contained in T10/03-297r0 that Bob had prepared.

12.2 T13 Liaison Report [Colegrove]

Dan Colegrove provided an oral report to the committee on the activities of T13. He noted that the group is working to resolve ambiguities on ATA/ATAPI-7 and SATA. A letter ballot is anticipated in December. For details regarding T13 activities see www.t13.org.

12.3 SFF Industry Group [Allan]

In the absence of Dal Allan, Vit Novak reported that SFF 8425 v1.0 was posted for review. Editorial comments have been received and v1.1 is to be posted next week. Also, Bill Ham is holding a cable performance meeting next week in the bay area.

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 03-323r0.

12.6 IETF SCSI over IP [Black/Robinson]

David Black reported that an iSCSI errata is being discussed on the IPS reflector and that iSCSI, FCIP, and iFCP remain in the RFC editor's work queue pending resolution of incomplete RFCs that they reference.

12.7 SNIA [Cummings]

Roger Cummings reported orally to the committee and provided an electronic report in 03-325r0.

12.8 SATA II [Cox/open]

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

Alvin Cox reported that the pin-out for the external 4x cable is the subject of intense discussion. Alvin reviewed the current status of the discussions.

John Lohmeyer reported that the SATA II Steering Committee had agreed that oral information disclosed by T10 liaisons is not subject to the SATA II nondisclosure agreements. T10 liaisons must still get the Steering Committee's permission to release SATA II documents.

13. Review of Action Items

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.

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 discussions in the CAP working group.

542   Bob Snively will provide the SES PDF and sources to the IR.

545   David Black will ensure that RFCs are written defining URLs for SNMP, CIM over HTTP/HTTPS, and SSH.

546   Ralph Weber will add the additional sense code named in 03-287r0 to the lists in SPC-3.
547   John Lohmeyer will forward SMC-2 revision 06 for processing toward first Public Review.
548   Peter Johansson will prepare SBP-3 revision 05.
549   John Lohmeyer will forward SBP-3 revision 05 for processing toward second Public Review.
550   Gary Robinson will notify INCITS that T10 recommends approval of the FCD 14776-150 (SAS) to
        JTC/SC25 TAG.
551   Gary Robinson will notify INCITS that T10 recommends approval of the FDIS 14776-362 (MMC-2) to
        JTC/SC25 TAG.
552   Gary Robinson will notify INCITS that T10 recommends approval of the FDIS 14776-452 (SPC-2) to
        JTC/SC25 TAG.
553   Gary Robinson will notify INCITS that T10 recommends approval of the FDIS 14776-412 (SAM-2) to
        JTC/SC25 TAG.
554   Gary Robinson will notify INCITS that T10 recommends approval of the FCD 14776-115 (SPI-5) to
        JTC/SC25 TAG.
555   Gary Robinson will notify INCITS that T10 recommends submission of the NWIP (T10/03-301r0) as a US
        contribution to JTC1/SC25 and recommends that the NP to be issued by SC25 be approved, answering
        the 6 questions 'Yes' and naming Gary S. Robinson as project editor.
556   Gary Robinson will notify the INCITS Secretariat that T10 does not object to the transfer of projects listed
        in in031022 to IEEE Microprocessor TAG.

14. Meeting Schedule

The next plenary meeting of T10 will be Thursday November 6, 2003 in Austin, TX at the Driskill Hotel (512-474-5911), hosted by Crossroads Systems. The meeting will begin at 9:00 a.m. on Thursday.

The meeting list for the next plenary week is:

```
                        November 2003 Meeting Map
                           (2003/09/11 Version)
Monday 11/3           9   10  11  12  1   2   3   4   5   6   7   8
                      +======================================+
                      | ADI WG                               |        (15)
                      +======================================+
                      | SAS Protocol WG                      |        (40)
                      +======================================+

Tuesday 11/4    8   9   10  11  12  1   2   3   4   5   6   7   8
                      +========+========+===============+
                      | ADI WG |FCP-3 WG| SCSI CAP WG   |             (40)
                      +========+========+=============+==+
                      | MMC WG                         |             (10)
                      +==============+===============+---+
                      | T11 Ad Hocs                  |             (15)
                      +--------------+---------------+---+
                      | Plugfest Adm *| STA Marcom *  |             (20)
                      +--------------+---------------+

Wednesday 11/5        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                  |             (30)
                      +------------------------------+

Thursday 11/6   8   9   10  11  12  1   2   3   4   5   6   7   8
                      +===============+==================+
                      | T10 Plenary   | SBC-2/SES-2 Edit |      (45/10)
                      +===============+==================+

Friday 11/7     8   9   10  11  12  1   2   3   4   5   6   7   8
                      +=================+
                      | OSD Edit        |                        (10)
                      +=================+
```

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
--------------  ----------------  ------------------------------------
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
3rd party       TBD               Rob Elliott
persistent
reservations
```

```
  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, 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
                                             lohmeyer@t10.org
```

The long-term T10 meeting week schedule is:

```
Date               Location                 Host/Comments
------------------ ------------------------ ----------------------------
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, tentative hosts and locations:
Jan 17-21, 2005
Mar 7-11, 2005     Dana Point, CA           QLogic
May 2-6, 2005
Jul 11-15, 2005    Colorado Springs, CO     LSI Logic
Sep 12-16, 2005
Nov 7-11, 2005     Austin, TX               Crossroads
```

John Lohmeyer asked organizations interested hosting one of the meetings in 2005 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.

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 10:50 a.m. on Thursday September 11, 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
Mr. Tim Symons         A   Adaptec, Inc.            Timothy_Symons@adaptec.
                                                    com
Ms. Pat Thaler         P   Agilent Technologies     pat_thaler@agilent.com
Dr. Claudio DeSanti    P   Andiamo Systems, Inc.    cds@andiamo.com
Mr. Robert Griswold    P   Crossroads Systems, Inc. rgriswold@crossroads.com
Mr. James A. Lott, Jr. P   Dallas Semiconductor     jim.lott@dalsemi.com
Mr. Kevin Marks        P   Dell, Inc.               kevin_marks@dell.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. Tim Mackley        A   General Dynamics         timothy.mackley@gd-ais.
                                                    com
Mr. Rob Elliott        P   Hewlett Packard Co.      Elliott@hp.com
Mr. Dan Colegrove      P   Hitachi Global Storage   daniel.colegrove@hgst.com
                           Tech.
Mr. Werner Glinka      AV  Hitachi Global Storage   werner.glinka@attglobal.
                           Tech.                    net
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. John Lohmeyer      P   LSI Logic Corp.          lohmeyer@t10.org
Mr. Mark Miquelon      V   LSI Logic Corp.          Mark.Miquelon@lsil.com
Ms. Jie Fan            P   Madison Cable Corp.      jie.fan@madisoncable.com
Mr. Martin Czekalski   A   Maxtor Corp.             marty_czekalski@maxtor.
                                                    com
Mr. Mark Evans         P   Maxtor Corp.             mark_evans@maxtor.com
Ms. Emily Hill         P   Microsoft Corp.          emhill@microsoft.com
Mr. Jay Neer           P   Molex Inc.               jneer@molex.com
Dr. Terence J. Nelson  P   Panasonic Technologies,  terry@tjnelson.com
                           Inc
Mr. William P.         P   Philips Electronics/CD   bmcferrin@aol.com
McFerrin                   Edge
Mr. Craig W. Carlson   A#  QLogic Corp.             craig.carlson@qlogic.com
Mr. Paul Entzel        P   Quantum Corp.            paul.entzel@quantum.com
Mr. David Peterson     P   SBS Technologies         dap@sbs.com
Mr. Alvin Cox          V   Seagate Technology       Alvin.Cox@seagate.com
Mr. Gerald Houlder     P   Seagate Technology       gerry.houlder@seagate.com
Mr. Gary D. Moorhead   V   Seagate Technology       gary.moorhead@seagate.com
Dr. Erik Riedel        V   Seagate Technology       erik.riedel@seagate.com
Dr. Paul Suhler        V   Seagate Technology       Paul.A.Suhler@certance.
                                                    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       V   Texas Instruments        Robert_Kando@ti.com
Mr. Ron Mathews        P   UNISYS Corporation       ronald.mathews@unisys.com
Mr. Roger Cummings     P   Veritas Software         roger.cummings@veritas.
                                                    com
Mr. Kenneth Hirata     P   Vixel Corp.              Ken.Hirata@Vixel.com

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

Enclosure(2) -- T10 Attendance Database
     Generated on 2003/09/12 at 12:03:46

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

Mr. Tim Symons (A)   Phone: (719) 884 8704
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Mr. Bernhard Laschinsky (AV)   Phone: (610) 712-7937
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Mr. Litko Chan (AV)   Phone: (408) 970-3020
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```
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Mr. Robert Snively  (P)        Phone: (408) 487-8135
Brocade Comm. Systems, Inc.      Fax: (408) 392-6655
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Mr. Steven Wilson  (A)         Phone: (408) 333-8128
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Owego, NY 13827


Mr. Gerry Johnsen  (AV)        Phone: (612) 551-4000
```

```
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Mr. Leroy Fong  (AV)               Phone: (949) 855-7887
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Mr. Dennis Lang  (AV)              Phone: (949) 855-7887
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Mr. Ian Morrell  (AV)              Phone: (949) 598-1780
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Mr. Ben Chang  (AV)                Phone: (510) 226-2394
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Fremont, Ca 94538


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Congruent Software, Inc.             Fax: (510) 527-3856
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Berkeley, CA 94707


Mr. Robert Griswold  (P)           Phone: (512) 928-7272
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