

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

**Doc. No.:** T10/07-316r3

**Date:** August 27, 2007

**Reply to:** John Lohmeyer

To: T10 Membership  
From: Ralph Weber / John Lohmeyer  
Subject: Minutes of T10 Plenary Meeting #80 -- July 12, 2007  
Colorado Springs, CO

## Agenda

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## Results of Meeting

### 1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 1:30 p.m., Thursday July 12, 2007. He thanked LSI 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. 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 or modified in the agenda 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 mem-

bership the second meeting via a letter to the Chair of T10. The individual may begin voting at the beginning of his/her second meeting. People who continue to attend T10 meetings are expected to join T10 and to pay INCITS Service Fees.

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

John briefly discussed the mailing fees. Complete pricing information is contained in the 2007 membership form (available at [http://www.t10.org/ftp/t10/mem\\_form.txt](http://www.t10.org/ftp/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 emails to 1 person from 1 organization informing him that the organization's membership was in jeopardy due to non-attendance (see 07-251r0) and that their membership would be terminated if they did not attend this meeting. The following organization was in attendance jeopardy:

Foxconn Electronics

All organizations in attendance jeopardy were present. If an organization had not been present, their representatives would have been changed to Advisory (non-voting) status.

John called for requests to join the committee. No organizations joined at this meeting.

Note: Immediately after the meeting, ATL Technology joined T10 with Jeremy Flake as the Principal member and Tom Johnson as the Alternate member.

The T10 membership during the meeting was 40 organizations, unchanged from the 40 member organizations extant at the time the meeting was convened. Enclosure (1) is the list of the people present at the meeting and enclosure (3) is the current T10 membership list.

John Lohmeyer reminded members that failure to vote on two out of the last three letter ballots also would result in membership jeopardy. The current letter ballot jeopardy status is as shown:

T10 Letter Ballot Jeopardy Report -- 2006/11/03

Ballot:	06-080r0	06-184r0	06-446r0
Report:	06-081r0	06-185r0	06-447r0
Acronym:	SAT	MMC-5	ADC-2

Organization

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Iomega Corp.	Yes	Yes	DNV
Nvidia Corp.	No	Yes	DNV
Vitesse Semiconductor	Abs	Abs	DNV

Key:

- Yes Organization voted Yes
- No Organization voted No
- Abs Organization voted Abstain
- DNV Organization failed to return letter ballot
- Organization was not a voting member for the letter ballot
- (\*) Organization is in letter ballot jeopardy

**4. Approval of Minutes - May 2007 - Bellevue, WA (T10/07-213r1)**

John Lohmeyer moved and Ralph Weber seconded that the minutes be approved as written. 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 Barbara Bennett (bbennett@itic.org) (202) 626-5743. A subscription form is included on the meeting disk.

John Lohmeyer requested that all documents for the next mailing be uploaded to the T10 web site by 10:30 a.m. on Thursday July 19, 2007. 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 Portable Document Format (PDF) and/or native-format electronic originals with proper identification must be submitted.

People can obtain T10 document numbers for new and revised T10 documents 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.

For additional information on ANSI procedures and the ANSI patent policy, please see the INCITS web page at <http://www.incits.org/call.htm>. The contact for INCITS patent issues is Lynn Barra (lbarra at itic dot org) or (202) 626-5739. Gene Milligan prepared a useful "Handy dandy Technical Committee's Patents Guide", which is available at <ftp://ftp.t10.org/t10/document.99/99-291r0.pdf>.

John Lohmeyer presented a summary of the ANSI patent policy prepared by Gary Robinson. The summary is also included on the Rules and Procedures (plus Patent Information) page on the T10 web site.

Mark Seidel 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**

658 John Lohmeyer will add the ADC-3 project proposal to the July T10 agenda. *Complete.*

659 John Lohmeyer will inform INCITS that T10 recommends withdrawal of GPP (INCITS TR-16). *Complete.*

660 Gary Robinson will recommend that the SC25 TAG vote to approve 25N1319, CD ISO/IEC 14776-151 Information technology Small Computer System Interface Part 151: Serial Attached SCSI - 1.1 (SAS-1.1). *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 INCITS will be meeting in San Jose next week.

#### **8.1.1 INCITS Antitrust Guidelines**

All T10 members should be aware of the INCITS antitrust guidelines available at <http://www.incits.org/inatrust.htm>.

John reminded committee members that all persons present at a T10 meeting are 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 Bridge Controller Commands (BCC) Project 1528-D [Elliott]**

Rob Elliott reported that there has been no activity on BCC.

### **8.3 SCSI Enclosure Services - 2 (SES-2) Project 1559-D [Elliott]**

Rob Elliott reported that SES-2 r18 containing all approved proposals will be uploaded in time for the mailing.

### **8.4 SCSI Stream Commands - 3 (SSC-3) Project 1611-D [Peterson]**

In the absence of Dave Peterson, Kevin Butt reported on the activities of the SSC-3 working group (minutes in 07-332). He noted that September is the anticipated last technical input on SSC-3. Dave Peterson supplemented this with an electronic report in 07-341r0.

### **8.5 MultiMedia Command Set - 5 (MMC-5) Project 1675-D [McFerrin]**

John Lohmeyer reported that MMC-5 (INCITS 430-200x) should have been sent to ANSI BSR for approval and publication last week.

**8.6 SCSI Architecture Model - 4 (SAM-4) Project 1683-D [Penokie]**

George Penokie reported that a new revision of SAM-4 will be posted to incorporate all the proposals accepted at this meeting. He further noted that the SAM-4 revision may or may not be posted in time for the mailing

George reminded the committee of the goal to send SAM-4 to Letter Ballot within the next few meeting cycles.

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

John Lohmeyer reported that SAT (INCITS 431-200x) should have been sent to ANSI BSR for approval and publication last week. Mark Overby described the plans being made to start an amendment project for SAT.

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

Ralph Weber reported that OSD-2 r02 incorporating all proposals approved by this meeting will be posted prior to the September meeting but may be not in time for the mailing.

**8.9 SCSI Media Changer Command Set - 3 (SMC-3) Project 1730-D [Banther]**

Michael Banther reported on the activities of the SMC-3 working group (minutes in 07-324) as well as the June teleconference (minutes in 07-276) and provided an electronic report in 07-336r0.

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

Ralph Weber reported that SPC-4 r11 incorporating all approved proposals from the May meeting week was posted in time for the May mailing. SPC-4 r12 will be posted prior to the September meeting but maybe not in time for the mailing. SPC-4 r12 will incorporate all approved proposals.

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

Rob Elliott noted that there has been no activity on this project. He asked if there is still any interest in SDI. Mark Overby asked that the project be kept open at least until November.

**8.12 Automation/Drive Interface - Commands - 2 (ADC-2) Project 1741-D [Suhler]**

Paul Entzel reported on the activities of the ADI working group (minutes in 07-319) and provided an electronic report in 07-322r0. He complemented the ADI working group on the completion of letter ballot comments processing on ADC-2.

Paul Entzel moved that 06-475r6 be approved as resolving the letter ballot comments on ADC-2 and that ADC-2 revision 8, which incorporates the comment resolutions, be forwarded to INCITS for further processing toward first public review. Michael Banther seconded the motion. The motion passed on a vote of 35:0:1:4=40.

Based on the successful resolution of the letter ballot comments, the following people requested that their original No votes on the ADC-2 letter ballot be changed to Yes:

- Kevin Marks, Dell, Inc.;
- Ralph Weber, ENDL Texas;
- Rob Elliott, Hewlett Packard Co.;
- George Penokie, IBM Corp.; and
- Paul Entzel, Quantum Corp.

John Lohmeyer took an action item to forward ADC-2 revision 8 to INCITS for further processing toward first public review.

**8.13 Automation/Drive Interface - Transport Protocol - 2 (ADT-2) Project 1742-D [Suhler]**

Paul Entzel reported on the activities of the ADI working group (minutes in 07-319) and provided an electronic report in 07-322r0.

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

Rob Elliott reported that several proposals have been recommended by the SAS protocol working group (minutes in 07-313). The SAS-2 physical working group (minutes in 07-338) recommended some SAS-2 changes too. See agenda items 10.2 and 10.3.

SAS-2 revision 11 will be posted containing all approved proposals, probably in time for the mailing.

**8.15 SCSI Block Commands - 3 (SBC-3) Project 1799-D [Penokie]**

George Penokie reported that a new revision of SBC-3 containing the proposal approved by this meeting will be uploaded, but maybe not in time for the mailing.

**8.16 SCSI / ATA Translation - 2 (SAT-2) Project 1826-D [Overby]**

Mark Overby reported that work is progressing well on SAT-2 (minutes in 07-314). The SAT working group will meet with T13 in August, but will not be meeting in September. The group will hold a conference call in October and return to its regular meeting schedule in November.

**8.17 Fibre Channel Protocol - 4 (FCP-4) Project 1828-D [Peterson]**

Dave Peterson reported on the activities of the FCP-4 working group (minutes in 07-335) and provided an electronic report in 07-342r0. He noted that three proposals are on the committee's agenda for approval (see agenda item 10.6).

**8.18 MultiMedia Command Set - 6 (MMC-6) Project 1836-D [McFerrin]**

Bill McFerrin reported that the Mt. Fuji group and MMC WG are meeting jointly. He stated that the group is working the TCG storage class for optical devices. Bill noted that he is the MMC-6 editor.

**9. Old Business**

There was no old business.

**10. New Business****10.1 Approval of ADC-3 project proposal (07-264r1) [Suhler]**

Paul Entzel led a review of the ADC-3 project proposal (07-264r1).

Paul Entzel moved that T10 approve 07-264r1 as a new project proposal for Automation/Drive Interface Commands - 3 (ADC-3). Bob Nixon seconded the motion. The motion passed a two-thirds vote of 35:0:0:5=40.

John Lohmeyer took an action item to forward 07-264r1 to INCITS for further processing as a new project proposal for ADC-3.

## 10.2 Actions on SAS Protocol Working Group Recommendations

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

- 07-284r0 (OPEN\_REJECT\_ZONE VIOLATION priority) [Elliott]
- 07-293r0 (Zoning interaction with enclosure services) [Elliott]
- 07-306r1 (Route table discovery process) [Symons]
- 07-307r1 (Zone group valid bit) [Symons]
- 07-312r2 (Zone group table entries for subtractive ports) [Symons]
- 07-039r4 (Self-Configuration Status Updates) [Hartshorn, Johnson]
- 07-075r5 (REPORT\_BROADCAST function) [Penokie]
- 07-102r3 (Changes to Report Phy Event logging and reporting) [Hartshorn]
- 07-277r0 (SMP\_PHY\_CONTROL and affiliations) [Elliott]
- 07-280r1 (SMP\_DISCOVER virtual phy clarifications) [Elliott]
- 07-287r0 (SMP function result tweaks) [Elliott]
- 07-300r1 (Configurable expander table-to-table error handling) [Elliott]
- 07-091r3 (SMP\_DISCOVER support for SNW-3 phy capabilities) [Elliott]
- 07-214r1 (Mode and log page support for SNW-3 phy capabilities) [Elliott]
- 07-130r4 (CRC fixes) [Tuikov]
- 07-285r0 (STP bus inactivity time limit clarification) [Elliott]
- 07-288r0 (TARGET\_PORT\_TRANSFER\_TAG ST\_T state machine fix) [Day]
- 07-311r1 (More Transport Layer Retries Fixes) [Penokie]

Rob Elliott moved that 07-284r0, 07-293r0, 07-306r1, 07-307r1, 07-312r2, 07-039r4, 07-075r5, 07-102r3, 07-277r0, 07-280r1, 07-287r0, 07-300r1, 07-091r3, 07-214r1, 07-130r4, 07-285r0, 07-288r0, and 07-311r1 be approved for inclusion in SAS-2. Kevin Marks seconded the motion. The motion passed on a vote of 35:0:0:5=40.

## 10.3 Actions on SAS PHY Working Group Recommendations

George Penokie and Rob Elliott reviewed 07-297r1 (CJTPAT usage) [Elliott] a proposal recommended for inclusion in SAS-2.

Steve Finch noted that the last two subclauses should be made informative, not normative.

Rob Elliott moved that 07-297r1 be approved for inclusion in SAS-2. Joel Silverman seconded the motion. The motion passed on a vote of 21:2:12:5=40.

## 10.4 Actions on SAT Working Group Recommendations

Mark Overby reviewed the following proposals recommended for inclusion in SAT-2:

- 07-298r0 (Error Translation mapping for ATA IDNF) [Wolford]
- 07-201r2 (Translation of large block sizes) [Hatfield and Elliott]

Mark Overby moved that 07-298r0 and 07-201r2 be approved for inclusion in SAT-2. Rob Elliott seconded the motion. The motion passed on a vote of 29:0:3:8=40.

## 10.5 Actions on CAP Working Group Recommendations

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

- 07-266r0 (No UA on NOTIFY\_DATA\_TRANSFER\_DEVICE command) [Entzel]
- 06-026r4 (TASK\_ABORTED status clarifications) [Elliott]
- 07-223r0 (Peripheral device and logical unit addressing errors) [Elliott]



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

- 07-269r1 (Update Annex C for ADC-2 changes) [Entzel]
- 06-362r7 (Error History proposal) [Houlder]
- 07-295r1 (Request for TrustedFlash Security Protocol ID Value) [Shimor]
- 07-215r0 (Protocol-Specific log page subpages) [Elliott]
- Minutes of the CAP working group, 07-315, (SECURITY CONFLICT IN TRANSLATED DEVICE additional sense code for block devices) [Weber]

George Penokie reviewed 07-281r1 ("Except INQUIRY, REPORT LUNS, and REQUEST SENSE") [Evans] a proposal recommended for inclusion in SPC-4 and SBC-3.

George Penokie reviewed 07-153r1 (Protocol-Specific VPD pages) [Elliott] a proposal recommended for inclusion in SPC-4 and SAS-2.

George Penokie reviewed 07-257r1 (Prohibited needed as a keyword in SPC-4) [Weber] a proposal recommended for inclusion in SPC-4 and T10 Style Guide.

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

- 07-302r1 (WRITE LONG Additional Sense code option to support SAT-2) [Wolford]
- 07-271r1 (Clarifications for Background Scan Results log page) [Evans]

George Penokie reviewed 07-118r2 (Enclosure element Power Cycle request) [Elliott] a proposal recommended for inclusion in SES-2.

Ralph Weber reviewed the following proposals recommended for inclusion in OSD-2:

- 07-273r3 (Attributes Enhancements) [Weber]
- 07-270r2 (Several OSD-2 Corrections and Clarifications) [Weber]
- 07-274r1 (CLEAR command, PUNCH command, & range-based FLUSH) [Weber]
- 07-275r2 (Task Management Function Catchup) [Weber]

Rob Elliott moved that:

- 07-266r0, 06-026r4, and 07-223r0 be approved for inclusion in SAM-4;
- 07-269r1, 06-362r7, and 07-215r0 be approved for inclusion in SPC-4;
- 07-281r1 be approved for inclusion in SPC-4 and SBC-3;
- 07-153r1 be approved for inclusion in SPC-4 and SAS-2;
- 07-257r1 be approved for inclusion in SPC-4 and T10 Style Guide;
- 07-302r1 and 07-271r1 be approved for inclusion in SBC-3;
- 07-118r2 be approved for inclusion in SES-2; and
- 07-273r3, 07-270r2, 07-274r1, and 07-275r2 be approved for inclusion in OSD-2.

Ralph Weber seconded the motion. The motion passed on a vote of 33:0:1:6=40.

Citing the motion made in the CAP working group (minutes in 07-315), Ralph Weber moved that the SPC-4 editor be instructed to add an additional sense code definition for SECURITY CONFLICT IN TRANSLATED DEVICE that is applicable only to block devices. Kevin Marks seconded the motion. The motion passed on a vote of 34:0:0:6=40.

Avraham Shimor moved that 07-295r1 be approved for inclusion in SPC-4. Joel Silverman seconded the motion.

Concerns were raised about the closed nature of the group developing the protocol for which 07-295r1 allocated a security protocol code.

The motion passed on a vote of 4:3:27:6=40.

## 10.6 Actions on Other Working Group Recommendations

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

- 07-072r2 (QUERY TASK task management function) [Elliott]
- 07-143r1 (QUERY TASK SET task management function) [Elliott]
- 07-144r0 (QUERY UNIT ATTENTION task management function) [Elliott]

Rob Elliott moved that 07-072r2, 07-143r1, and 07-144r0 be approved for inclusion in FCP-4. Dave Peterson seconded the motion. The motion passed on a vote of 29:0:7:4=40.

## 11. ISO/IEC

### 11.1 ISO/IEC Report [Robinson]

Gary Robinson presented the ISO/IEC report (see enclosure (2)).

### 11.2 ISO/IEC Business [Robinson]

#### 11.2.1 2007 Systematic Review of International Standards (07-310) [Bennett]

John Lohmeyer said that the 07-310 document identifies five international standards that are up for five-year review: SPI-3, RBC, SSC, SPI-2, and SBC. He noted that T10 has withdrawn the ANSI version of SPI-3.

Gary Robinson explained that T10 may make recommendations on other international standards. He drafted a motion on IPI-3 Tape, a T11 project, should anyone at T10 have an opinion on this IS. The committee strongly expressed a preference for leaving the IPI-3 Tape decision for T11 to make.

Gary Robinson moved and Mark Evans seconded the motion that T10 recommends that the JTC1 TAG vote to withdraw 14776-113:2002 Information technology -- Small Computer System Interface (SCSI) -- Part 113:2002 Parallel Interface-3 (SPI-3).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were as follows:

Organization	Voter	Vote
Adaptec, Inc.	Chris Fore	Yes
AMCC	Paul von Stamwitz	Yes
Amphenol Interconnect		(not present)
Brocade	David Peterson	Yes
Dallas Semiconductor	Gregory Tabor	Yes
Dell, Inc.	Kevin Marks	Yes
EMC Corp.	Gary S. Robinson	Yes
Emulex	Robert H. Nixon	Yes
ENDL	Ralph O. Weber	Yes
FCI		(not present)
Foxconn Electronics	Elwood Parsons	Yes
Fujitsu	Mike Fitzpatrick	Yes
General Dynamics		(not present)
Hewlett Packard Co.	Rob Elliott	Yes
Hitachi Global Storage Tech.	Dan Colegrove	Yes
IBM Corp.	George O. Penokie	Yes
Intel Corp.	Mark Seidel	Yes
Iomega Corp.		(not present)
Kawasaki Microelectronics Am	Joel Silverman	Yes
KnowledgeTek, Inc.		(not present)
Lexar Media, Inc.	John Geldman	Yes

LSI Corp.	John Lohmeyer	Yes
Marvell Semiconductor, Inc.	David Geddes	Yes
Microsoft Corp.	Mark Benedikt	Yes
Molex Inc.	Galen Fromm	Yes
NeoScale Systems Inc.	Landon Noll	Yes
Network Appliance	Frederick Knight	Yes
Nvidia Corp.	Mark Overby	Yes
Panasonic Technologies, Inc	Takaharu Ai	Yes
PMC-Sierra	Tim Symons	Yes
Quantum Corp.	Paul Entzel	Yes
Samsung	Michael Rogers	Yes
SanDisk Corporation	Avraham Shimor	Yes
Seagate Technology	Gerald Houlder	Yes
STMicroelectronics, Inc.	Stephen Finch	Yes
Sun Microsystems, Inc.	Erich Oetting	Yes
Symantec	Raymond Gilson	Yes
TycoElectronics	Dan Gorenc	Yes
Vitesse Semiconductor	Jim Scott	Yes
Western Digital	Mark Evans	Yes

This two-thirds international roll call vote passed (35:0:0:5=40).

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to withdraw 14776-113:2002 Information technology -- Small Computer System Interface (SCSI) -- Part 113:2002 Parallel Interface-3 (SPI-3).

Gary Robinson moved and Mark Evans seconded the motion that T10 recommends that the JTC1 TAG vote to revise 14776-326:2003 Information technology -- Small Computer System Interface (SCSI) -- Part 326:2002 Reduced Block Commands (RBC).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the first motion above.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to revise 14776-326:2003 Information technology -- Small Computer System Interface (SCSI) -- Part 326:2002 Reduced Block Commands (RBC).

Gary Robinson moved and Dave Peterson seconded the motion that T10 recommends that the JTC1 TAG vote to confirm 14776-331: Information technology -- Small Computer System Interface (SCSI) -- Part 331:2002 Stream Commands (SSC).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the first motion above.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to confirm 14776-331: Information technology -- Small Computer System Interface (SCSI) -- Part 331:2002 Stream Commands (SSC).

Gary Robinson moved and George Penokie seconded the motion that T10 recommends that the JTC1 TAG vote to confirm 14776-112: Information technology -- Small Computer System Interface (SCSI) -- Part 112:2002 Parallel Interface-2 (SPI-2).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the first motion above.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to confirm 14776-112: Information technology -- Small Computer System Interface (SCSI) -- Part 112:2002 Parallel Interface-2 (SPI-2).

Gary Robinson moved and Mark Evans seconded the motion that T10 recommends that the JTC1 TAG vote to confirm 14776-321: Information technology -- Small Computer System Interface-3 (SCSI-3) -- Part 321:2002 SCSI-3 Block Commands (SBC).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the first motion above.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to confirm 14776-321: Information technology -- Small Computer System Interface-3 (SCSI-3) -- Part 321:2002 SCSI-3 Block Commands (SBC).

Gary described the responses to the ISO procedural questions for each of the motions above:

#### **Question 1**

Recommended action: withdraw, revise/amend, confirm, confirm with correction of errors, abstain, stabilize, per the motion.

#### **Question 2**

Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication?

YES

#### **Question 3**

Is the national publication identical to the International Standard or was it modified?

Identical

#### **Question 4**

Is this International Standard used in your country without national adoption or are products used in your country based on this standard?

YES

#### **Question 5**

Is this International Standard, or its national adoption, referenced in regulations in your country?

Do not know

#### **11.2.2 Call for delegates to SC25 WG4 [Robinson]**

In the absence of any responses, Gary noted that no one from T10 will participated in the ISO delegation.

#### **11.2.3 FDIS ballot 25 N 1352 ISO/IEC FDIS 14776-121, Information technology - Small Computer System Interface (SCSI) – Part 121: Passive interconnect performance (PIP)**

Gary Robinson moved and Gerry Houlder seconded the motion that T10 recommends that the JTC1 TAG vote to Approve FDIS ballot 25 N 1352 Subject: Imminent FDIS (two-months only) letter ballot, ISO/IEC FDIS 14776-121, Information technology - Small Computer System Interface (SCSI) – Part 121: Passive interconnect performance (PIP).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the motions in 11.2.1.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to Approve FDIS ballot 25 N 1352 Subject: Imminent FDIS (two-months only) letter ballot, ISO/IEC FDIS 14776-121, Information technology - Small Computer System Interface (SCSI) – Part 121: Passive interconnect performance (PIP).

#### **11.2.4 FCD ballot SC: 25 N 1337 ISO/IEC CD 14776-453: Information technology - Small Computer System Interface (SCSI) - Part 453:SCSI Primary Commands - 3 (SPC-3)**

Gary Robinson moved and Gerry Houlder seconded the motion that T10 recommends that the JTC1 TAG vote to Approve FCD ballot SC: 25 N 1337 Date Due to TAG Administrator: 2007-08-30 Subject: For 1st FCD Letter Ballot, ISO/IEC CD 14776-453: Information technology - Small Computer System Interface (SCSI) - Part 453:SCSI Primary Commands - 3 (SPC-3).

The motion passed on a roll call vote of 35:0:0:5=40. The details of the roll call vote were the same as shown for the motions in 11.2.1.

Gary Robinson took an action item to notify the JTC1 TAG that T10 recommends a vote to Approve FCD ballot SC: 25 N 1337 Date Due to TAG Administrator: 2007-08-30 Subject: For 1st FCD Letter Ballot, ISO/IEC CD 14776-453: Information technology - Small Computer System Interface (SCSI) - Part 453:SCSI Primary Commands - 3 (SPC-3).

## **12. Liaison Reports**

### **12.1 T11 Liaison Report [Snively]**

Dave Peterson presented the T11 electronic liaison report that Bob Snively had prepared (07-299r0).

### **12.2 T13 Liaison Report [Colegrove]**

Dan Colegrove provided an oral report to the committee on the activities of T13. 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 SFF Industry Group liaison report was available.

### **12.4 SCSI Trade Association (STA) [Czekalski]**

Marty Czekalski reviewed an electronic report (07-246r0) on the activities of the SCSI Trade Association.

### **12.5 IETF SCSI over IP [Black]**

David Black reported briefly on the status of the IPS working group.

### **12.6 SNIA [open]**

No report was made.

### **12.7 Trusted Computing Group [Fitzpatrick]**

In the absence of Mike Fitzpatrick, Gerry Houlder reported that the TCG has published its core spec and some supporting documents (e.g., FAQ document). It can be accessed at the following web site:

<https://www.trustedcomputinggroup.org/specs/Storage/>

### **12.8 MIPI Alliance [Shimor]**

Avraham reported that the MIPI Alliance met last in Brussels and a subset of OSD is still in consideration as a referenced technology.

## 12.9 IEEE P1619 [Ball]

Matt Ball prepared an electronic report (07-337r0), which Walt Hubis presented.

## 13. Review of Action Items

- 661 John Lohmeyer will forward ADC-2 revision 8 to INCITS for further processing toward first public review.
- 662 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Approve FDIS ballot 25 N 1352 Subject: Imminent FDIS (two-months only) letter ballot, ISO/IEC FDIS 14776-121, Information technology - Small Computer System Interface (SCSI) - Part 121: Passive interconnect performance (PIP).
- 663 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Approve FCD ballot SC: 25 N 1337 Date Due to TAG Administrator: 2007-08-30 Subject: For 1st FCD Letter Ballot, ISO/IEC CD 14776-453: Information technology - Small Computer System Interface (SCSI) - Part 453:SCSI Primary Commands - 3 (SPC-3).
- 664 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Withdraw 14776-113:2002 Information technology -- Small Computer System Interface (SCSI) -- Part 113:2002 Parallel Interface-3 (SPI-3).
- 665 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Revise 14776-326:2003 Information technology -- Small Computer System Interface (SCSI) -- Part 326:2002 Reduced Block Commands (RBC).
- 666 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Reaffirm 14776-331: Information technology -- Small Computer System Interface (SCSI) -- Part 331:2002 Stream Commands (SSC).
- 667 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Reaffirm 14776-112: Information technology -- Small Computer System Interface (SCSI) -- Part 112:2002 Parallel Interface-2 (SPI-2).
- 668 Gary Robinson will notify the JTC1 TAG that T10 recommends a vote to Reaffirm 14776-321: Information technology -- Small Computer System Interface-3 (SCSI-3) -- Part 321:2002 SCSI-3 Block Commands (SBC).
- 669 John Lohmeyer will forward 07-264r1 to INCITS for further processing as a new project proposal for ADC-3.

## 14. Meeting Schedule

The next plenary meeting of T10 will be Thursday September 20, 2007 in Vancouver, BC Canada at the Fours Seasons Hotel (Reservations: [vcr.reservations@fourseasons.com](mailto:vcr.reservations@fourseasons.com)) hosted by PMC-Sierra. The meeting will begin at 1:30 p.m. on Thursday.

The meeting list for the next plenary week is:

September 2007 Meeting Map  
(2007/07/12 Version)

	9	10	11	12	1	2	3	4	5	6	7	8	
Monday 9/17	+=====+												
	ADI-2 WG / SMC-3 WG												(15)
	+=====+												
	SAS Protocol WG												(40)
	+=====+												
	IEEE P1619.3/ P1619.1												(20)
	+-----+												
	STA Marcom *   STA Plenary *												(20)
	+-----+												
Tuesday 9/18	+=====+												
	SAS Physical WG												(45)
	+=====+												
	CAP WG     TCG SIIF *												(20)
	+=====+												
	FCP-4 / SSC-3 WG												(25)
	+=====+												
	Mt Fuji												(25)
	+-----+												
Wednesday 9/19	+=====+												
	CAP WG												(45)
	+=====+												
	SFF												(25)
	+=====+												
	MMC WG / Mt Fuji												(25)
	+=====+												
Thursday 9/20	+=====+												
	CAP WG  /////  T10 Plenary/SAM Edit												(50/10)
	+=====+												
Friday 9/21	+-----+												
	TCG KMSS *												(20)
	+-----+												

/ means the next meeting starts when the previous meeting concludes  
 Meetings marked with == are T10-authorized meetings.  
 Meetings marked with -- are other groups and may change without notice.  
 Meetings marked with (\*) are closed meetings of other groups.

Other T10-authorized meetings:

Meeting	Date	Location / Contact
SAS Protocol Call(s)	TBA	TBA via T10 reflector / Elliott
SAS PHY Calls	Weekly Thu 10a CDT (except 7/26 8/16)	TBA via T10 reflector / Cox
Security Calls	TBA	TBA via T10 reflector / Penokie
SAS-2 Prot Call	Aug 8 10a-1p CDT	TBA via T10 reflector / Elliott
SAS-2 PHY WG	Aug 15 8a - 5p Aug 16 8a - 12n	Lisle, IL / Neer
SAT WG	Aug 20 9a - 6p	Longmont, CO / Hatfield (w/T13)
SAT Call	Oct 17 1p - 4p PDT	TBA via T10 reflector / Overby

## Map Abbreviation Key:

ad hoc: a.k.a., working group  
 ADI: Automation Drive Interface (tape library interface)  
 Amnd: Amendment  
 CAP: Commands, Architecture, and Protocols  
 FC: Fibre Channel  
 FCP-4: Fibre Channel Protocol - 4  
 IEEE P1619: IEEE Security in Storage Working Group  
 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  
 PH or PHY: Physical (Connectors, Cables, Transceivers, etc.)  
 Prot: Protocol  
 Plenary: Full Committee Meeting  
 Res: Resolution  
 SAS: Serial Attached SCSI  
 SAT-2: SCSI / ATA Translation - 2  
 SBC-3: SCSI Block Commands - 3  
 SCSI: Small Computer System Interface  
 SES: SCSI Enclosure Services  
 SFF: SFF Industry Group (not an INCITS activity)  
 SG: Study Group  
 SMC-3: SCSI Medium Changer - 3 Commands  
 SPC-4: SCSI Primary Commands - 4 (4th generation)  
 SSC-3: SCSI Stream Commands - 2 (includes Tape)  
 STA: SCSI Trade Association (Closed meeting -- not an INCITS activity)  
 STA Marcom: STA Marketing Communications (Closed meeting -- not an INCITS activity)  
 T10: SCSI Storage Interfaces Technical Committee  
 T11: Fibre Channel Interfaces Technical Committee  
 T13: ATA Storage Interface  
 TCG: Trusted Computing Group  
 TCG SIIF: Trusted Computing Group Storage Interface Interactions Forum  
 WG: Working Group (same as Ad Hoc Group)



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

Activity	Contact	Telephone/Email
ADT, ADC, ADT-2, ADC-2	Paul Entzel	(720) 406-5782 paul.entzel@quantum.com
SBC-2, SES-2, SAS-1.1, SAS-2, BCC, SDI	Rob Elliott	(281) 518-5037 Elliott@hp.com
MMC-5, MMC-6	Bill McFerrin	(325) 423-1560 billmc37@ctesc.net
SBP-3	Peter Johansson	(510) 527-3926 PJohansson@ACM.org
SAM-4, SBC-3	George Penokie	(507) 253-5208 gop@us.ibm.com
SAT-2	Mark Overby	(425) 417-9412 moverby@nvidia.com
SMC-2	Erich Oetting	(303) 673-2178 Erich_Oetting@Stortek.com
SMC-3	Noud Snelder	+31408446108 Noud.snelder@bdt.de
SPC-3, SAM-3, SPC-4, OSD-2	Ralph Weber	(214) 912-1373 roweber@acm.org
SSC-3, FCP-3, FCP-4	Dave Peterson	(763) 268-6139 david.peterson@brocade.com
Other Activities	John Lohmeyer	(719) 533-7560 lohmeyer@t10.org

The long-term T10 meeting week schedule is:

Date	Location	Host/Comments
Approved dates and locations for 2007:		
Sep 17-21, 2007	Vancouver, BC Canada	PMC-Sierra
Nov 5-9, 2007	Las Vegas, NV	Hitachi GST
Approved dates, locations, and hosts for 2008:		
Jan 14-18, 2008	Santa Ana, CA	Western Digital
Mar 10-14, 2008	Raleigh, NC	Network Appliance
May 5-9, 2008	Santa Clara, CA	Nvidia
Jul 14-18, 2008	Anchorage, AK	Emulex
Sep 8-12, 2008	Colorado Springs, CO	LSI
Nov 3-7, 2008	Orlando, FL	Symantec
Proposed dates and tentative locations and hosts for 2009:		
Jan 12-16, 2009		
Mar 9-13, 2009		
May 4-8, 2009	Seattle, WA	Microsoft
Jul 13-17, 2009	Colorado Springs, CO	LSI
Sep 7-11, 2009	Boston, MA	EMC
Nov 9-13, 2009	Las Vegas, NV	Hitachi GST

John Lohmeyer asked people interested hosting one of the above meetings 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. Working 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 August 2007. Gerry Houlder 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 3:20 p.m. on Thursday July 12, 2007.

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

Name	S	Organization
Mr. Chris Fore	P	Adaptec, Inc.
Mr. Paul von Stamwitz	P	AMCC
Mr. Gregory McSorley	P	Amphenol Interconnect
Mr. Jaremy Flake	AV	ATL Technology
Mr. David Peterson	P	Brocade
Mr. Gregory Tabor	P	Dallas Semiconductor
Mr. William McFerrin	V	DataPlay
Mr. Gideon Avida	P	Decru
Mr. Kevin Marks	P	Dell, Inc.
Mr. David Black	A	EMC Corp.
Mr. Gary S. Robinson	P	EMC Corp.
Mr. Robert H. Nixon	A	Emulex
Mr. Ralph O. Weber	P	ENDL Texas
Mr. David Freeman	AV	Finisar Corp.
Mr. Mike Lawson	AV	Finisar Corp.
Mr. Elwood Parsons	P	Foxconn Electronics
Mr. Mike Fitzpatrick	P	Fujitsu
Mr. Michael Banther	A	Hewlett Packard Co.
Mr. Rob Elliott	P	Hewlett Packard Co.
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. James Rockrohr	V	IBM
Mr. Kevin Butt	A	IBM Corp.
Mr. George O. Penokie	P	IBM Corp.
Dr. Mark Seidel	A	Intel Corp.
Mr. Joel Silverman	P	Kawasaki Microelectronics Am
Mr. John Geldman	P	Lexar Media, Inc.
Mr. Walt Hubis	V	LSI Corp.
Mr. John Lohmeyer	P	LSI Corp.
Mr. David Geddes	P	Marvell Semiconductor, Inc.
Mr. Mark Benedikt	P	Microsoft Corp.
Mr. Galen Fromm	A	Molex Inc.
Mr. Landon Noll	A	NeoScale Systems Inc.
Mr. Frederick Knight	A	Network Appliance
Mr. Mark Overby	P	Nvidia Corp.
Mr. Edward A. Gardner	V	Ophidian Designs
Mr. Takaharu Ai	A	Panasonic AVC Networks Co.
Mr. Tim Symons	P	PMC-Sierra
Mr. Paul Entzel	P	Quantum Corp.
Mr. Michael Rogers	A	Samsung
Mr. Avraham Shimor	P	SanDisk Corporation
Mr. Alvin Cox	A	Seagate Technology
Mr. Martin Czekalski	V	Seagate Technology
Mr. Gerald Houlder	P	Seagate Technology
Mr. Stephen Finch	P	STMicroelectronics, Inc.
Mr. Erich Oetting	P	Sun Microsystems, Inc.
Mr. Raymond Gilson	A	Symantec Corporation
Mr. Dan Gorenc	A	TycoElectronics
Mr. Scott Shuey	A#	TycoElectronics
Mr. Jim Scott	P	Vitesse Semiconductor
Mr. Mark Evans	P	Western Digital

Mr. Duncan Penman	V	Western Digital
Mr. Curtis Stevens	A	Western Digital

52 People Present

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

## Enclosure(2) -- ISO Status

## T10 ISO Status Report - 07/12/2007

ISO Proj.	Acronym	Part Num.	Last Step Completed	Comments
1.25.13.10.14	RL	24740	S3: FCD Ballot completed	FCD Approved, 25n1257, Japan needs to supply FDIS text
1.25.13.11.13	SMC	14776-351	S7: IS Published	Published
1.25.13.11.19	SAM-2	14776-412	S7: IS Published	Published
1.25.13.11.22	SES-2	14776-372	S2: NWIP Approved	Waiting for FCD text
1.25.13.11.28	SPI-4	14776-114	S8: WITHDRAWAL, INCITS as JTC1 TAG votes	INCITS Approved Withdrawal
1.25.13.11.31	SBC-2	14776-322	S7: IS Published	
1.25.13.11.33	SPC-3	14776-453	S3: SC25 started FCD ballot	Need FCD Ballot Motion
1.25.13.11.37	SSM-2	14776-132	S8: WITHDRAWAL, SC25 Resolution	Voted to remove from SC25 Program of Work., Resolution BL-WG4-11
1.25.13.11.38	PIP	14776-121	S5: SC25 requests JTC1 to start FDIS ballot	FDIS Ballot in process, need T10 motion
1.25.13.11.39	SBP-3	14776-233	S8: WITHDRAWAL, SC25 Resolution	Voted to remove from SC25 Program of Work, Resolution BL-WG4-13
1.25.13.11.45	SAM-3	14776-413	S5: INCITS votes on FDIS in JTC1	US approved FDIS, responded to pre-publishing questions 01/05/2007
1.25.13.11.46	SAS-1.1	14776-151	S3: INCITS sends FCD vote to SC25 TAG	Is out for CD ballot before FCD. (Comment should be CD not FCD)
1.25.13.11.47	FCP-3	14776-223	S2: FCD Text sent to INCITS	FCD Ballot in process, Will need T10 ballot
1.25.13.18-1	ATAPI-7-1	24739-1	S5: SC25 requests JTC1 to start FDIS ballot	FCD Approved, 25n1260, Sent FDIS text. Waiting for ballot This is volume 1 of 3.
1.25.13.18-2	ATAPI-7-2	24739-2	S2: SC25 TAG sent FCD to SC25	FCD text sent to SC25, ready for ballot
1.25.13.18-3	ATAPI-7-3	24739-3	S2: SC25 TAG sent FCD to SC25	FCD text sent to SC25, ready for ballot
1.25.13.____	RBC-2	14776-____		Integrate US RBC amendment into base document

**T10 ISO Status Report - 07/12/2007**

<b>ISO Proj.</b>	<b>Acronym</b>	<b>Part Num.</b>	<b>Last Step Completed</b>	<b>Comments</b>
1.25.13.____ —	SPC	14776- 311/451	S8: WITHDRAWAL, INCITS as JTC1 TAG votes	INCITS Approved Withdrawal

**Enclosure(3) -- T10 Attendance Database**

Generated on 2007/07/19 at 14:45:43

Dr. William Ham (E) Phone: (978) 828-9102  
Fax: (978) 470-0321  
92 Wildwood Road Email: bill\_ham at ix dot netcom dot com  
Andover, MA 01810

Mr. Chris Fore (P) Phone: (919) 287-2024  
Fax: (919) 287-2099  
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523 Davis Drive, Suite 500  
Durham, NC 27713

Mr. Tom Treadway (A) Phone: 321-207-1267  
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Adaptec, Inc. Email: tom\_treadway at adaptec dot com  
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Orlando, FL 32826

Mr. Paul von Stamwitz (P) Phone: (408) 542-8767  
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Mr. Gregory McSorley (P) Phone: 508-829-6523  
Fax: 508-829-6523  
Amphenol Interconnect Email: greg dot mcsorley at aipce dot com  
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Holden, MA 01520

Mr. Michael Wingard (A) Phone: (607) 786-4241  
Fax: (607) 786-4311  
Amphenol Interconnect Email: mike dot wingard at aipce dot com  
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Minneapolis, MN 55442 com

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Mr. Ben-Koon Lin (A)  
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