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

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Date: March 14, 2002
Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber and John Lohmeyer
Subject: SCSI Commands, Architecture, & Protocol Working Group Meeting -- March 13, 2002
              Dallas, TX

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SCSI Architecture Model Topics
    4.1   It's the I_T Nexus, Stupid (01-093) [Weber]
    4.2   Liaison report on SCSI MIB activities (02-043) [Krueger]
    4.3   SAM-2 Data Transfer Ordering Requirements (01-309) [Gardner]
    4.4   SAM-2 Remove TAGGED OVERLAPPED TASKS additional sense code (02-067) [Elliott]
    4.5   SAM-2 Execute Command output descriptions (02-070) [Elliott]
    4.6   SAM-2 Asynchronous event reporting RPC (02-071) [Elliott]
    4.7   SAM-2 Task State Transitions [Weber]
    4.8   Reservations & Nexus (02-078) [Chadalapaka & Haagens]
    4.9   SAM-2 to Letter Ballot [Penokie]
5. Command Set Topics
    5.1   SCSI Device Memory Export Protocol (00-312) [Barry]
    5.2   REPORT ADDRESSABLE TARGETS well-known LUN Function [Terrell]
    5.3   SPC-3 Letting persistent reservations ignore initiator ports (01-100) [Elliott]
    5.4   Limiting 3rd-party Reservations to a Single Protocol (02-056) [Penokie]
    5.5   MSC Management commands proposal (02-037) [Griswold]
    5.6   Logical Unit Unique Identifier/Type (02-035) [Peterson]
    5.7   SPC-3 table 230 incorrect (02-115) [Houlder]
    5.8   EUI-48 protocol ID VPD page (02-075) [Johansson]
    5.9   Logical Unit Unique Identifier/Type (02-035) [Peterson]
    5.10 SPC-3 Persistent reservations corrections (02-065) [Elliott]
    5.11 SMC-2 Proposal: Read Element Status Device Identifier (02-104) [Banther]
    5.12 Obsolete Reserve/Release (02-108) [Peterson]
6. SCSI Protocol Topics
7. Old Business
8. New Business
    8.1   Project Proposal for AV Direct-access Commands (AVD) (01-337) [Johansson]
    8.2   Questions from the ADI working group [Griswold]
9. Review of Documents
    9.1   SBC-2 Review [Elliott]
10. Review of Recommendations to the Plenary
11. Meeting Schedule
12. Adjournment

Results of Meeting

1.   Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Wednesday March 13, 2002. He thanked Paul Aloisi of Texas Instruments for hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated.

2.   Approval of Agenda

The draft agenda was approved with the following changes:

4.9   SAM-2 to Letter Ballot [Penokie]
5.7   SPC-3 table 230 incorrect (02-115) [Houlder]
5.12   Obsolete Reserve/Release (02-108) [Peterson]
8.2   Questions from the ADI working group [Griswold]

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

3.   Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for T10 membership. Working group meetings are open to any person or organization directly and materially affected by T10's scope of work. The following people attended the meeting:

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        Name            S       Organization         Electronic Mail Address
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Mr. Ron Roberts        P  Adaptec, Inc.             Ron_Roberts@adaptec.com
Mr. Brian Forbes       P  Brocade Comm. Systems,    bforbes@brocade.com
                          Inc.
Mr. David Peterson     P  Cisco Systems, Inc.       dap@cisco.com
Mr. Robert C. Elliott  P  Compaq Computer Corp.     Robert.Elliott@compaq.com
Mr. Wayne Bellamy      V  Compaq Computer Corp.     wayne.bellamy@compaq.com
Mr. Peter Johansson    P  Congruent Software, Inc.  PJohansson@ACM.org
Mr. Robert Griswold    P  Crossroads Systems, Inc.  rgriswold@crossroads.com
Mr. Robert H. Nixon    P  Emulex                    bob.nixon@emulex.com
Mr. Ralph O. Weber     P  ENDL Texas                roweber@acm.org
Mr. Joe Breher         P  Exabyte Corp.             joebre@exabyte.com
Mr. Eugene Lew         P  Fujitsu                   elew@fcpa.fujitsu.com
Mr. Nathan Hastad      P  General Dynamics          nathan.hastad@gd-ais.com
Mr. Randy Haagens      P  Hewlett Packard Co.       randy_haagens@hp.com
Mr. Michael Banther    A# Hewlett Packard Co.       michael_banther@hp.com
Mr. George O. Penokie  P  IBM / Tivoli Systems      gop@us.ibm.com
Mr. Kevin Butt         AV IBM Corp.                 kdbutt@us.ibm.com
Mr. Cris Simpson       P  Intel Corp.               cris.simpson@intel.com
Mr. John Lohmeyer      P  LSI Logic Corp.           lohmeyer@t10.org
Mr. Mark Evans         P  Maxtor Corp.              mark_evans@maxtor.com
Mr. Charles Monia      P  Nishan Systems Inc.       cmonia@nishansystems.com
Mr. Edward A. Gardner  P  Ophidian Designs          eag@ophidian.com
Mr. Charles Binford    P  Pirus Networks            charles.binford@pirus.com
Mr. Paul Entzel        P  Quantum Corp.             paul.entzel@quantum.com
Mr. Gerald Houlder     P  Seagate Technology        gerry_houlder@seagate.com
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Mr. Erich Oetting      P  Storage Technology Corp.  erich_oetting@stortek.com
Mr. Vit Novak          P  Sun Microsystems, Inc.    vit.novak@sun.com
Mr. Paul D. Aloisi     P  Texas Instruments         Paul_Aloisi@ti.com
Mr. Donald R. Getty    A  Texas Instruments         donald_getty@ti.com
Mr. Roger Cummings     P  Veritas Software          roger.cummings@veritas.
                                                    com


29 People Present

Status Key:  P    -  Principal
             A,A# -  Alternate
             AV   -  Advisory Member
             L    -  Liaison
             V    -  Visitor
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4. SCSI Architecture Model Topics

4.1 It's the I_T Nexus, Stupid (01-093) [Weber]

Ralph Weber requested that this topic be removed from this and future agendas.

4.2 Liaison report on SCSI MIB activities (02-043) [Krueger]

In the absence of Marjorie Krueger, George Penokie reported that revision 2 of the SCSI MIB will be reviewed at the IETF meeting in Minneapolis, MN, March 18 and 19. The IP Storage Protocols working group is planning a working group last call for sometime before the July IETF meeting (which coincides with July T10 week).

Bob Nixon asked if George is comfortable with the SCSI MIB and George responded that he is comfortable with MIB but disappointed that the UML model cannot be applied directly to SAM. In response to further questioning, George stated that he understood why the UML model for the MIB is not applicable to SAM and that further changes to the UML model for the MIB would be inappropriate.

4.3 SAM-2 Data Transfer Ordering Requirements (01-309) [Gardner]

Ed Gardner asked that this topic be removed from this and future agendas.

4.4 SAM-2 Remove TAGGED OVERLAPPED TASKS additional sense code (02-067) [Elliott]

Rob Elliott presented 02-067r0, a proposal that SAM-2 eliminate the reporting of overlapping tag values using ASCQ values. Ralph Weber moved that 02-067r0 be recommended for inclusion in SAM-2. Erich Oetting seconded the motion. In the absence of any objections, the motion passed unanimously.

4.5 SAM-2 Execute Command output descriptions (02-070) [Elliott]

Rob Elliott presented 02-070r0, a proposal to clarify the contents of output parameters of an Execute Command procedure call in the event of a service delivery subsystem error. Rob Elliott moved that 02-070r0 be recommended for inclusion in SAM-2. Charles Monia seconded the motion. In the absence of any objections, the motion passed unanimously.

4.6 SAM-2 Asynchronous event reporting RPC (02-071) [Elliott]

Rob Elliott presented 02-071r0 a proposal to add protocol remote procedure calls for asynchronous event reporting. The proposal encountered difficulties covering the parallel SCSI asynchronous event reporting model and Rob agreed to bring proposal back in May for further consideration.

4.7 SAM-2 Task State Transitions [Weber]

Ralph Weber led the group in a review of the SAM-2 state transitions section. Ed Gardner proposed enhancing the state diagram to include acceptance of new tasks into the task set. Rob Elliott proposed editorial corrections in both the state transitions discussion and the contingent allegiance rewrite. Ralph agreed to make all the changes in the next SAM-2 revision.

4.8 Reservations & Nexus (02-078) [Chadalapaka & Haagens]

Randy Haagens presented 02-078r0, a discussion of issues related to Reserve/Release reservations in iSCSI and the newer packetized protocols in general. Differences in interpretation arose when I_T nexus was tied to a protocol login that was in turn tied to clearing things such as Reserve/Release reservations and mode page values. The concern was refined by some to be a question of when (or whether) transport events are allowed to affect the state observed by commands.

The group discussed defining a "protocol clearing event" that has an architectural presence in SAM-2 as a conduit for the protocol to command set behaviors garnered some support. In some ways, the "protocol clearing event" has a similarity to (but not identity with) the currently defined "bus reset event".

Declaring the task management functions as "signals" for clearing actions was also proposed as an approach.

Randy Haagens agreed to arrange teleconference discussions regarding a detailed proposal to address the issues.

4.9 SAM-2 to Letter Ballot [Penokie]

George Penokie proposed that SAM-2 be sent to letter ballot for first public review. He explained that SPI-5 is the last parallel SCSI protocol document and there is a need to have a SAM to fit with that protocol, while there also is a need for an new SAM (SAM-3) to address the serial packetized protocols without carrying the parallel bus baggage.

George Penokie moved that SAM-2 (as revised by the actions of this meeting) be recommended to T10 for processing toward first public review, including a letter ballot. Ed Gardner seconded the motion. The motion passed on a vote of 18:1:1.

5.   Command Set Topics

5.1 SCSI Device Memory Export Protocol (00-312) [Barry]

Ralph Weber moved that DEVICE LOCKS operation code be deassigned if a new proposal is not presented to the May CAP working group. George Penokie seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2 REPORT ADDRESSABLE TARGETS well-known LUN Function [Terrell]

In the absence of Bill Terrell for several meetings, this item was removed from this and future agendas.

5.3 SPC-3 Letting persistent reservations ignore initiator ports (01-100) [Elliott]

Rob Elliott presented the latest revision of the proposal to allow multiple initiators to be registered by a single PERSISTENT RESERVE OUT command, 02-100r3. The group requested minor changes and Rob agreed to prepare a new revision.

Ed Gardner moved that 01-100r4 (r3 as revised) be recommended to T10 for inclusion in SPC-3. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

5.4 Limiting 3rd-party Reservations to a Single Protocol (02-056) [Penokie]

George Penokie presented a proposal to restrict 3rd party reservations to a single domain, 02-056r1.

He noted that, because Reserve/Release is being made obsolete (see item 5.12), the proposal is being made as changes to the ISO version of SPC-2. George was asked to revise the proposal to clearly state that it is for SPC-2 and he agreed to prepare a new revision. Editorial corrections were identified and George agreed to make them in the revised proposal.

George Penokie moved that 02-056r2 (r1 as revised) be recommended for inclusion in the ISO version of SPC-2. Dave Peterson seconded the motion. In the absence of any objections, the motion passed unanimously.

5.5 MSC Management commands proposal (02-037) [Griswold]

Bob Griswold presented 02-037r1. Rather than proposing specific commands, the revised proposal contains only lists of things to be accomplished in the command set working draft. Bob discussed many of the topics in the lists.

Bob stated that the presentation was informative. Owing to needs to work on other projects, Bob stated an expectation that no further action will be taken on the proposal for several meetings.

5.6 Logical Unit Unique Identifier/Type (02-035) [Peterson]

Dave Peterson presented 02-035r1, a proposal to add a new identifier using MD5 hashing in the Device Identifier VPD page. Dave was asked to include an example and to make other substantive changes. He agreed to revise the proposal.

Dave Peterson moved that 02-035r2 (r1 as modified) be recommended for inclusion in SPC-3. Bob Griswold seconded the motion. In the absence of any objections, the motion passed unanimously.

5.7 SPC-3 table 230 incorrect (02-115) [Houlder]

Gerry Houlder presented a proposal to update SPC-3 protocol specific mode subpages to match the protocol identifier field placement found in SPI-4, 02-115r0. Gerry Houlder moved that 02-115r0 be recommended for inclusion in SPC-3. Mark Evans seconded the motion. In the absence of any objections, the motion passed unanimously.

5.8 EUI-48 protocol ID VPD page (02-075) [Johansson]

Peter Johansson presented a proposal to add a VPD page containing EUI-48 identifiers for the software interfaces implemented by a device, 02-075r1. Concerns were raised about using EUI-64 and Peter declined to modify his proposal.

Ed Gardner moved that 02-075r1 be recommended for inclusion SPC-3. Peter Johansson seconded the motion. The motion passed on a vote of 22:1:2.

5.9 Logical Unit Unique Identifier/Type (02-035) [Peterson]

This topic was covered under item 5.6.

5.10 SPC-3 Persistent reservations corrections (02-065) [Elliott]

Rob Elliott presented a proposal containing several disjoint corrections to the Persistent Reservations definition in SPC-3, 02-065r1. The group requested changes and Rob agreed to prepare a new revision.

Rob Elliott moved that 02-065r2 (r1 as revised) be recommended to T10 for inclusion in SPC-3. Roger Cummings seconded the motion. In the absence of any objections, the motion passed unanimously.

5.11 SMC-2 Proposal: Read Element Status Device Identifier (02-104) [Banther]

Michael Banther presented a proposal to clarify descriptor data returned by a READ ELEMENT STATUS command. Erich Oetting discussed other approaches for clarifying the text with Michael.

Paul Entzel requested that discussion of this proposal be deferred to the next meeting based on the two-week rule.

5.12 Obsolete Reserve/Release (02-108) [Peterson]

Dave Peterson presented 02-108r0, a proposal to make the Reserve/Release reservations method obsolete in SPC-3.

Ed Gardner moved that 02-108r0 be recommended to the May T10 meeting for inclusion in SPC-3. Erich Oetting seconded the motion. The motion passed on a vote of 19:1:4.

6.   SCSI Protocol Topics

No SCSI Protocol topics were brought before the meeting.

7.   Old Business

All old business was handled on the topic scheduled agenda.

8.   New Business

8.1   Project Proposal for AV Direct-access Commands (AVD) (01-337) [Johansson]

Peter Johansson asked that discussion of this topic be deferred to the next meeting.

8.2   Questions from the ADI working group [Griswold]

Bob Griswold presented several questions identified during the ADI working group meeting needing answers from the CAP working group (02-116r0). The group discussed the questions and provided answers.

Bob Griswold moved that a new device type be assigned to the ADC command set. Michael Banther seconded the motion. In the absence of any objections, the motion passed unanimously.

9.   Review of Documents

9.1 SBC-2 Review [Elliott]

Rob Elliott asked that this item be removed from this and future agendas.

10. Review of Recommendations to the Plenary

Ralph Weber noted that the following recommendations have been made to the T10 plenary:

SAM-2 Remove TAGGED OVERLAPPED TASKS additional sense code (02-067r0) [Elliott]
SAM-2 Execute Command output descriptions (02-070r0) [Elliott]
Logical Unit Unique Identifier/Type (02-035r2) [Peterson] {r1 as revised}
SPC-3 table 230 incorrect (02-115r0) [Houlder]
EUI-48 protocol ID VPD page (02-075) [Johansson] {22:1:2}
SPC-3 Persistent reservations corrections (02-065r2) [Elliott]
SPC-3 Letting persistent reservations ignore initiator ports (01-100r4) [Elliott]
Assign a new device type code to the ADI command set [Griswold]
Limiting 3rd-party Reservations to a Single Protocol (02-056r2) [Penokie] {for ISO SPC-2}
Obsolete Reserve/Release (02-108r0) [Peterson] {for consideration in May} 19:1:4

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, May 1, 2002 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be in Nashua, NH at the Sheraton Nashua Hotel (603-888-9970), hosted by Hitachi Cable Manchester.

12. Adjournment

The meeting was adjourned at 5:20 p.m. on Wednesday March 13, 2002.