Accredited Standards Committee*
National Committee for Information Technology Standards (NCITS)

To: T10 Membership

From: Ralph Weber, T10 Secretary
            Larry Lamers, T10 Vice Chair
            John Lohmeyer, T10 Chair

Subject: Minutes of SCSI Working Group Meetings
            Palm Springs, CA -- November 4-5, 1997

Agenda

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    5.11 Proposal for Reduced Block Commands (RBC) (97-260) [Bryan]
    5.12 Proposal for Contingent Allegiance / ACA (97-225r1) [Milligan]
    5.13 Making the Terminate Task Management Function Obsolete [Milligan]

6.   Enclosure Profile Study Group
    6.1   SCSI Enclosure Profile (97-264r0) [Weber/DeKoning]

7.   Meeting Schedule

8.   Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Tuesday November 4, 1997.
He thanked Norm Harris of Adaptec for hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated.
Copies of the draft agenda and general information on T10 were made available to those attending.

2. Approval of Agenda

The draft agenda was approved with the following additions:

>   5.12 Proposal for Contingent Allegiance / ACA (97-225r1) [Milligan]
>   5.13 Making the Terminate Task Management Function Obsolete [Milligan]

3. Attendance and Membership

John reminded the group that attendance at working group meetings does not count toward minimum attendance
requirements for T10 membership. He noted that 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. Lawrence J. Lamers P  Adaptec, Inc.            ljlamers@ix.netcom.com
Mr. Vincent Bastiani   A# Adaptec, Inc.            bastiani@corp.adaptec.com
Mr. Tak Asami          V  Adaptec, Inc.            asami@itc.adaptec.com
Mr. Charles Brill      P  AMP, Inc.                cebrill@amp.com
Mr. Bob Atkinson       O  AMP, Inc.                rdatkins@amp.com
Mr. Ronald W. McDowell O  AMP, Inc.                rwmcdowe@amp.com
Mr. Richard Wagner     P  Cable Design Technologies rwagner@montrose-cdt.com
Mr. Edward Haske       O  CMD Technology           haske@cmd.com
Mr. Peter Johansson    P  Congruent Software, Inc. pjohansson@aol.com
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Mr. Thomas R. Colligan V  Dell Computers           tom_colligan@dell.com
Mr. Douglas Hagerman   P  Digital Equipment Corp.  hagerman@mail.dec.com
Dr. William Ham        A# Digital Equipment Corp.  bill.ham@digital.com
Mr. Keith W. Parker    P  Diogenes SCSI            diogenes@europa.com
Ms. Constance Kephart  P  Exabyte Corp.            conniek@exabyte.com
Mr. Don Vohar          A  Fujitsu (FCPA)           dvohar@fcpa.fujitsu.com
Mr. Dominique          O  Harting Interface        d.desourteaux.harting@
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Mr. Marcos Barrionuevo P  Harting, Inc. of N.      Marcos.Barrionuevo@
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Mr. George Penokie     P  IBM Corp.                gop@us.ibm.com
Mr. Dennis Moore       P  KnowledgeTek, Inc.       dmoore@netcom.com
Mr. Dean Wallace       P  Linfinity Micro          75671.3443@compuserve.com
Mr. Alan Littlewood    P  LSI Logic Corp.          alanl@lsil.com
Mr. Robert Bellino     P  Madison Cable Corp.      robert_bellino@
                                                   madisonusa.ccmail.
                                                   compuserve.com
Mr. Pete McLean        P  Maxtor Corp.             pete_mclean@maxtor.com
Mr. E. Jake Berzon     O  NEC Electronics, Inc.    jberzon@asic.mtv.nec.com
Mr. Edward A. Gardner  P  Ophidian Designs         eag@ophidian.com
Mr. Bruce Leshay       V  Quantum Corp.            bleshay@tdh.qntm.com
Mr. Richard Uber       V  Quantum Corp.            duber@tdh.qntm.com
Mr. Pak Seto           V  Quantum Corp.            pseto@tdh.qntm.com
Mr. John A. Fobel      O  Rancho Technology, Inc.  johnf@rancho.com
Mr. Gene Milligan      P  Seagate Technology       Gene_Milligan@notes.
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Mr. Gerald Houlder     A  Seagate Technology       Gerry_Houlder@notes.
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Mr. Daniel (Dan) F.    O  Seagate Technology      daniel_f_smith@notes.
Smith                                     seagate.com
Mr. Vit Novak          A  Sun Microsystems, Inc.  vit.novak@sun.com
Mr. John Lohmeyer      P  Symbios Logic Inc.      john.lohmeyer@symbios.com
Mr. Ralph O. Weber     A  Symbios Logic Inc.      roweber@acm.org
Mr. Patrick Mercer     P  SyQuest Technology, Inc. patrick.mercer@syquest.
                                          com
Mr. Arlan P. Stone     A  UNISYS Corporation      arlan.stone@unisys.com
Mr. Dave Wehrman       O  UNISYS Corporation      dwehrman@unisys.com
Mr. Paul D. Aloisi     P  Unitrode Corporation    aloisi@unitrode.com
Mr. Jeffrey L.         P  Western Digital         Jeffrey.L.Williams@wdc.
Williams                  Corporation             com
Ms. Vicki Pipal        O  Western Digital         pipal@wdroc.com
                          Corporation

43 People Present

Status Key:  P   -  Principal
             A,A# - Alternate
             O   -  Observer
             L   -  Liaison
             V   -  Visitor
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4. EPI

4.1 EPI Review

Bill Ham gave the group a preview of the contents of EPI revision 12. He noted changes in the "Addition and Removal" clause, specifically "Operational State Changes", changes in operational state not directly associated with an addition or removal. He reviewed the entire document, highlighting places where more work is needed. He expressed a desire to complete the document and requested that people not send any more ideas for additional EPI topics, but expressed his goal is for completing the writing work on the EPI topics already identified.

Bill reviewed the EPI discussion of bridging expanders, starting with some comments about potential deadlocks if cache memory is used in a bridging expander. Vit Novak questioned the 945 devices on a SCSI bus with a bridging expander, and Bill responded that it is derived from 15 bridging expander devices times 63 LUNs each. The group discussed error cases and handling for several different types of unusual events.

Bill promised to complete revision 12 in time for the mailing, with as much new meat as possible. John Lohmeyer pressed Bill for a target forwarding date. Bill expressed the belief that the scheduled May 1998 date is still practical. The possibility of an editing meeting in early December was discussed and rejected as being too soon.

4.2 SCAM on LUN Bridge secondary bus [Lohmeyer]

John Lohmeyer reminded the group of the list of unit attention ASC/ASCQ choices for LUN Bridges when a configuration change occurs on the secondary side of the bridge presented to the group during the September meeting:

    3F 00 TARGET OPERATING CONDITIONS HAVE CHANGED
    3F 0E REPORT LUNS DATA HAS CHANGED
    6B 00 STATE HAS CHANGED

He expressed the belief that one of the choices should be selected for inclusion in EPI. Gerry Houlder questioned the need for a unit attention condition at all. John noted that a unit attention condition is critical if the LUN-to-devices relationships changed. This was observed to be a SCAM issue, but John noted that LUN bridge designs may exist where other conditions might change the LUN-to-devices relationships.

The group recommended REPORT LUNS DATA HAS CHANGED.

5. Command Set Topics

5.1   SAM-2 changes for multi-port devices (97-250) [Monia]

In view of Charles Monia's retirement and departure from the committee, this item was dropped from this and future agendas.

5.2   Additional Persistent Reservation Type (97-242r1) [Snively]

Bob Snively presented his request for a "exclusive access, registrants only" persistent reservation type code. He noted a correction in the proposed table 42. Bob discussed preserving persistent reservations across power failures with Jeff Williams. The group unanimously recommended that 97-242r1 be accepted for inclusion in SPC-2.

5.3   SCSI Socket/SSL Services (SSS) Review (97-267r0) [Parker]

Keith Parker presented a review of his progress on the SSS project (97-267). The group reviewed the some issues regarding the project. Concerns were raised about potential requirements for host target mode support that may be a byproduct of SSS. Keith noted that while less efficient, only one of the two devices need support target role.

5.4   QErr Recovery in HAP (97-187) []

Stating that he had not yet found time to review the QErr recovery issues, Doug Hagerman requested that this item be deferred to the next meeting.

5.5   High-Availability Profile (HAP) [Hagerman]

Doug Hagerman reported that version 5 is the latest version of HAP and described efforts to prepare version 6.

5.6   Proposal for Contingent Allegiance / ACA (97-225r0) [Milligan]

This item has been superseded by agenda item 5.12.

5.7   SPC-2 Changes complementary to RBC (97-256r1) [Johansson]

Peter Johansson presented specific proposed changes in SPC-2 (97-256r1) based on the general agreements made in support of RBC at the last working group meeting. The group revised the proposed wording that describes when the REQUEST SENSE command is optional. It was requested that a specific additional sense code be named for illegal values in the PC field in a MODE SENSE command. The group discussed current and saved mode page parameter values, but made no changes in the proposal. After a brief discussion, the group removed discussion of START STOP UNIT from the proposal.   In the absence of any objections, the working group unanimously recommended that 97-256r2 (r1 as revised) be approved for inclusion is SPC-2.

5.8   Get Configuration in MMC-2 (97-xxx) [Roberts]

Robert Sims presented excerpts from SFF 8090 revision 2 and proposed that the GET CONFIGURATION command be incorporated in SPC-2. The group discussed the pros and cons of the proposal. Rob agreed to bring a specific proposal for inclusion of the GET CONFIGURATION command in SPC-2 to the next working group meeting.

5.9   Error in LOCK/UNLOCK CACHE Command CDB in SBC [Milligan]

Gene Milligan reported that the professional editor's conversion of the LOCK/UNLOCK CACHE command incorrectly included byte 6 in logical block address field. He asked that the working group recommend that the plenary require the SBC technical editor get SBC corrected to show byte 6 as reserved during the final publication

process. In the absence of any objections, the group unanimously supported Gene's recommendation to the plenary.

5.10 SCC-2 Letter Ballot Comments Resolution (97-258) [Penokie]

George Penokie led a review of the letter ballot comments and resolutions for SCC-2. A few corrections were made in the comments resolution document (97-258) but no changes were made to the actual resolutions of the letter ballot comments. George agreed to revise 97-258 (producing r1). In the absence of any objections, the working group recommended that the plenary accept 97-258r1 as resolving the letter ballot comments for SCC-2.

5.11 Proposal for Reduced Block Commands (RBC) (97-260) [Bryan]

It was noted that RBC development work is being conducted in a separate working group. The group discussed the status of the RBC document, with some consideration for optical devices.

5.12 Proposal for Contingent Allegiance / ACA (97-225r1) [Milligan]

Gene Milligan presented his proposal with the corrections requested by the last working group meeting. Several additional substantial corrections were requested. Gene agreed to bring a revised proposal to the next meeting.

In SPI-2, Gene's proposal reported a problem with the rules about which messages can be the first sent after a successful selection. George Penokie, Jeff Williams and others discussed this with Gene, eventually reaching the conclusion that no technical changes were needed in SPI-2. George agreed to make editorial changes in SPI-2.

5.13 Making the Terminate Task Management Function Obsolete [Milligan]

In response to a comment in Gene's proposal, the working group recommended that the Terminate Task task management function be made obsolete for SAM-2, SPI-2 and related documents. Jeff Williams agreed to report this decision to the T10 Reflector. The group agreed to finalize its agreement at the March meeting, considering any input from the T10 Reflector.

6. Enclosure Profile Study Group

6.1 SCSI Enclosure Profile (97-264r0) [Weber/DeKoning]

Ralph Weber presented the project proposal for an SCSI Enclosure Profile Technical report (97-264r0). He noted that progress on developing a SEP draft might be slow, as several other projects needed attention. The group recommended several corrections in the project proposal and Ralph agreed to make the changes in 97-264r1. The group voted 8:2:1 to recommend that the plenary forward 97-264r1 to NCITS.

7. Meeting Schedule

The next meeting of SCSI Working Group will be March 17-18, 1998, in San Diego, CA at the Hyatt Islandia Hotel (619-224-1234), hosted by QLogic.

Doug Hagerman asked about the need for limiting tape issues to T10 meetings. The group discussed this and other procedural issues surrounding fibre channel tape activities.

John mentioned making the Monday meeting SPI-3 and folding the protocol topics in the SPI-3 meeting. John briefly mentioned the proposed meetings in December, January, and February (see the T10 minutes in 97-274 for the agreed-upon meetings).

8. Adjournment

The meeting was adjourned at 5:09 p.m. on Wednesday November 5, 1997.