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ftp://ftp.t10.org/t10/document.01/01-330r0.pdf

Minutes of the SBP-3 Working Group meeting, October 22-23, 2001.  
Portsmouth, NH.

Attendees:

Lee Farrell	Canon	LFarrell@CISSC.Canon.com
John Fuller	Sony	JFuller@Computer.org
Peter Johansson	Congruent Software	PJohansson@ACM.org

The following agenda was presented by Johansson. In the minutes that follow, the start of discussion of items listed below is denoted by the index number listed within square brackets, for example [4.1]. Note that these references do not always appear in order and may not signify the conclusion of discussion of a previous agenda item.

1. Introductions and procedures
  - 1.1 T10 Membership and voting
  - 1.2 Document naming conventions
  - 1.3 Two-week rule
  - 1.4 Meeting fees
  - 1.5 Approval of prior minutes
2. Call for patents
3. Informal liaison
  - 3.1 IEEE P1394.1 [Johansson]
  - 3.2 IEEE P1394.3 [Johansson]
4. Prior action items
  - 4.1 Request AV/C expert to define track metadata [Fuller]
  - 4.2 Operational description of login (bus reset) [Johansson]
5. Review of changes in working draft
6. Old business
  - 6.1 New isochronous model [Johansson]
  - 6.2 Annex H
  - 6.3 Bridge scenarios
7. New business
  - 7.1 Isochronous data format [Green]
8. Meeting schedule
9. Review of new action items
  - 9.1 Track ID for AV/C disks [Fuller]
  - 9.2 T10 Technical Report for AV Direct-access (AVD)
10. Adjournment

[1] Johansson called the meeting to order and updated the agenda, as reflected above.

[1.3] Johansson briefly reviewed the two-week rule, explaining that it did not prevent the discussion of documents posted less than two weeks before a meeting.

[1.5] Minutes for the August 22 - 23 meeting in Cupertino, CA were not available.

[2] Johansson reviewed general T10 policies and procedures. In general, attendance and participation at T10 ad hoc meetings (such as this one) is open to both visitors and T10 members. When formal votes are taken, either in an ad hoc meeting or in the T10 plenary, one vote is permitted each organization, to be cast by its principal representative or designated alternative. A two-week rule is in effect: No matter may be voted on unless notice was given at least two weeks prior. Documents to be voted on must have been posted two weeks prior to the vote. The two-week rule can be waived if nobody objects. Announcements of new documents and meetings must be posted to the T10 email reflector; all other business can be conducted on the working group reflector.

The following paragraph about ANSI/T10 patent policy is copied from past T10 Plenary minutes:

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 web at [http://www.ncits.org/help/ansi\\_sdo.html](http://www.ncits.org/help/ansi_sdo.html). Section 1.2.11 contains the ANSI patent policy. Amy Marasco manages patent issues for ANSI and can be contacted at [amarasco@ansi.org](mailto:amarasco@ansi.org) or 212-642-4954. Gene Milligan prepared a useful "Handy dandy Technical Committee's Patents Guide", which is available at <ftp://ftp.t10.org/t10/document.99/99-291r0.pdf>.

[3.1] Johansson announced that the BRC has been formed and a reflector established. Some discussion threads have begun; the first BRC meeting is anticipated in December.

[3.2] Johansson reported that BRC progress has been good---with the majority of comments resolved; the number that still require discussion has been whittled down to approximately ten. The BRC anticipates a short (10-day) recirculation ballot before the end of the year.

[4.1] Fuller reported that he has not yet completed this item.

[4.2] Johansson commented that he has not yet completed this item.

[5] The group quickly reviewed modifications marked with change bars in the latest SBP-3 document, SBP-3 Revision 1e. None of the changes received any criticism and were accepted as written. However, because of the low attendance, Johansson suggested that a vote to stabilize the FAST\_START sections is premature. He will send an EMail announcing that the FAST\_START sections will be voted for stabilization at either the November or January meeting.

[6.2] The group reviewed and discussed the proposed changes to Annex H that are included in document 01-287r0, "Bare-bones isochronous."

Annex H will be changed to a normative annex and renumbered in accordance with ANSI style guidelines. Although implementation is optional, if elected it shall conform to the specifications in Annex H.

In response to a question raised in a previous meeting discussion, Fuller confirmed that an AV/C command is allowed to return only one intermediate status.

In clause H.2, Johansson said that there is no accepted name for a command frame and its corresponding response frame; he suggested calling it a "command sequence".

Fuller raised the topic of mixing AV/C and RBC commands in the same task set. Johansson said that although both commands might be sent using SBP-3, he questions if there is any real benefit in sending them in the same task set. After some discussion about the likelihood of Microsoft making modifications to their disk driver(s), it was agreed that combining commands in the same task set would be an unlikely benefit.

It was suggested that the configuration ROM example should include both AV/C and RBC command sets. What will "hybrid" units look like in the future? After some speculation, it was decided that any attempt to describe hybrid units should be deferred until more discussions can take place between more representatives of interested companies (e.g., Sony, Apple, Microsoft, disk manufacturers, etc.)

The group discussed interim AV/C responses. An open issue was identified in connection with isochronous error reports: Has the problem of "throttling back" on isochronous error reports been adequately addressed? There is a concern about flooding the initiator with isochronous error reports.

After further discussion, Johansson created the following paragraph for inclusion in an updated draft: "AV/C commands shall return a final response frame or may return an interim response frame followed by a final response frame. Both response frames are stored in the buffer described by the *response\_frame* field. Final response frames shall be stored at relative offset zero within the buffer. Interim response frames shall be stored at relative offset *response\_size/2* within the same buffer. If *response\_size/2* is less than the size of the either the final or interim response frame, the target shall not store an interim response. A target may report the error via an interim status block but is not required to do so."

Other minor clarifications and changes were suggested and agreed; Johansson will include them in the next SBP-3 revision.

[6.1] The group reviewed the rest of the "Bare bones isochronous" document, 01-287r0, and generally accepted the proposed modifications. It was noted that when the isochronous bit is set, the data descriptor fields are not used---except *data\_length*.

Other discussion about the use of the isochronous bit led Johansson and Fuller to agree that the OS vendors need to consider how they might support this feature. Also, the handling of error conditions needs further examination. It was agreed that the section describing the isochronous bit needs "additional work"---possibly to the degree of considering its practicality.

What happens if there is an underflow? Would it be possible to know which ORB lost its data? To resolve this issue, would it be necessary to only queue one ORB at a time? If so, that would probably defeat any hopes of improved efficiency associated with multiple queued ORBs.

Johansson then suggested that the document discussed at the previous meeting, "Stream ORBs: the fewer, the better" (document 01-222r0) is perhaps worth reconsidering. It was reviewed (once again) and evaluated for somehow including a synchronization time reference. After a while, Fuller said that if an ORB contains time synch information, it might present problems over bridges.

[7.1] The next day, Johansson referenced an EMail message from Andy Green ("RBC Extent Management Commands", September 28, 2001) and considered his proposal for the data format field. Discussion of Andy's proposal was deferred until he is present.

[X] Consideration of agenda item 7.1 lead to a discussion of the applicability of the proposed RBC commands to other AV devices (this was not on the agenda approved the day before). Johansson suggested that the 01-180r1 document ("RBC-2 commands for extent management") should be modified to specify a "template" set of commands that could be used for AV/C disk access and incorporated by reference into other SCSI command sets.

Discussion digressed, and both Fuller and Johansson spent time examining some AV/C documents. They were trying to research the naming rules of tracks/blocks on a disk. Evidently, there was some confusion on object identification and referencing methods used in AV/C.]

ACTION 9.1: Fuller will investigate the method(s) used for track identification on AV/C disks.

Later, Fuller suggested that the RBC extent management command should reference the AV/C "object id."

Fuller and Johansson then engaged in a brainstorming activity of identifying the necessary characteristics of a minimal command set for interacting with an AV/C disk. Although there were no hard decisions or agreements reached during the discussion, Johansson indicated that it would help him create a proposal for a command set (and a new isochronous model document).

ACTION 9.2: Johansson will find out what it takes to initiate a T10 technical report on AV devices.

[6.3] Returning to the latest SBP-3 draft, Johansson referenced section 5.1.4.5, Node handle ORB, to begin the discussion on bridge-related scenarios.

Fuller listed some suggested items for the bridge-aware implementations:

- \* require SBP-3 as a keyword
- \* require DEP (Discovery and Enumeration Protocol)
- \* require DEP request responses
- \* require establishment of correct local ids after a reset

Fuller indicated that he will write a proposal that includes the above information; it will be for inclusion in the SBP-3 draft.

[8] The upcoming meeting schedule is:

November 6 - 7 (Monterey, CA)  
January 21 - 22 (Waikoloa, HI)  
March 12 - 13 (Dallas, TX)  
April 30 - May 1 (Nashua, NH)  
June 3 - 7 / 10 - 14 (Portland, OR) [two-day meeting in one of the weeks]  
July 16 - 17 (Colorado Springs, CO)

Adjourned.

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General information and document index

The SBP-3 email reflector SBP3@isg.apple.com can be accessed, *via Email*, as follows:

Subscribing: requests@isg.apple.com w/subject "subscribe sbp3"

Help?: requests@isg.apple.com w/subject "help"

An automated system had been created for the allocation of T10 document numbers, and the subsequent submission of documents for posting:

<http://www.t10.org/members/ad.htm>

The following documents have been posted pertaining to SBP-3:

- 00-328 Eric Anderson  
Fast Start proposal (PowerPoint slides)  
<ftp://ftp.t10.org/t10/document.00/00-328r0.pdf>
  
- 00-371 Peter Johansson  
Minutes of SBP-3 Study Group September 19, 2000  
<ftp://ftp.t10.org/t10/document.00/00-371r0.pdf>
  
- 00-388 Peter Johansson  
SBP-3 Project Proposal  
<ftp://ftp.t10.org/t10/document.00/00-388r0.pdf>
  
- 01-057 Eric Anderson  
Fast Start Proposal  
<ftp://ftp.t10.org/t10/document.01/01-057r0.pdf>
  
- 01-060 Eric Anderson  
Minutes of SBP-3 Working Group January 24-25, 2001  
<ftp://ftp.t10.org/t10/document.01/01-060r0.pdf>
  
- 01-067 Lance Flake  
RBC Access For AV/C Data Interchange  
<ftp://ftp.t10.org/t10/document.01/01-067r0.pdf>  
<ftp://ftp.t10.org/t10/document.01/01-067r1.pdf>
  
- 01-070 Peter Johansson  
Bridge-aware targets and node handles  
<ftp://ftp.t10.org/t10/document.01/01-070r0.pdf>
  
- 01-101 Eric Anderson  
Minutes of SBP-3 Working Group March 6-7, 2001  
<ftp://ftp.t10.org/t10/document.01/01-101r0.pdf>
  
- 01-102 Scott Smyers  
Proposal for modifications to SBP3 and RBC  
<ftp://ftp.t10.org/t10/document.01/01-102r0.pdf>
  
- 01-103 Firooz Farhoomand  
Using SBP-3 for DVD playback

ftp://ftp.t10.org/t10/document.01/01-103r0.pdf

01-137 Peter Johansson  
Stream command block ORB  
ftp://ftp.t10.org/t10/document.01/01-137r0.pdf

01-138 Peter Johansson  
Bi-directional ORBs (PowerPoint slides)  
ftp://ftp.t10.org/t10/document.01/01-138r0.pdf

01-139 Eric Anderson  
Minutes of SBP-3 Working Group April 26-27, 2001  
ftp://ftp.t10.org/t10/document.01/01-139r0.pdf

01-179 Andy Green  
Proposal to modify isochronous recording format  
ftp://ftp.t10.org/t10/document.01/01-179r0.pdf

01-180 Peter Johansson  
RBC-2 commands for extent management  
ftp://ftp.t10.org/t10/document.01/01-180r1.pdf

01-187 Eric Anderson  
Minutes of SBP-3 Working Group June 5-6, 2001  
ftp://ftp.t10.org/t10/document.01/01-187r0.pdf

01-200 Peter Johansson  
Distributed Buffers  
ftp://ftp.t10.org/t10/document.01/01-200r0.pdf

01-222 Peter Johansson  
Simplified Isochronous  
ftp://ftp.t10.org/t10/document.01/01-222r0.pdf

01-223 Eric Anderson  
Minutes of SBP-3 Working Group July 17-18, 2001  
ftp://ftp.t10.org/t10/document.01/01-223r0.pdf

01-248 Peter Johansson  
MP-friendly Fast-Start  
ftp://ftp.t10.org/t10/document.01/01-248r1.pdf

01-265 Eric Anderson  
Minutes of SBP-3 Working Group August 22-23, 2001  
ftp://ftp.t10.org/t10/document.01/01-265r0.pdf

01-287 Peter Johansson  
Bare-bones Isochronous  
ftp://ftp.t10.org/t10/document.01/01-287r0.pdf

01-330 Eric Anderson  
Minutes of SBP-3 Working Group August 22-23, 2001  
ftp://ftp.t10.org/t10/document.01/01-330r0.pdf

Latest draft SBP-3 document:

ftp://ftp.t10.org/t10/drafts/sbp3/sbp3r01e.pdf