Date: October 4, 1999
From: Dave Peterson
Subject: Proposed response to SSC letter ballot comments

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Comments attached to YesC ballot from Robert C Elliott of
Compaq Computer Corp.:

(CPQ 000)
See 99-208 for some differences between SPC-2 and SSC regarding
MRIE behavior while the TEST bit is asserted.

Accepted, refer to SPC-2 MRIE behavior.

(CPQ 001)
Page i.a Should this be "SCSI-3 ..." or "SCSI ..."?a Other standards
like SAM-2, SPC-2, and SPI-3 have dropped the "-3".a However, SCSI-3
is useful when differentiation from SCSI-2 is needed.a This would need
to be a global change, including the footer.

Rejected, still need to use the term SCSI-3.

(CPQ 002)
Page i.a Should this be "Stream Device Commands" or "Stream Commands"?a
SBC used "Block Commands".a Keeping "Device" out matches the acronym.a
This would need to be a global change, including the footer.

Accepted, changed to "Stream Commands".

(CPQ 003)
Page i.a No zip code for the editor.

Accepted.

(CPQ 004)
Page ii.a Update John's company name and email.a List the
new T10 web site name.

Accepted.

(CPQ 005)
Page iii.a Change "Steam" to "Stream".a

Accepted.

(CPQ 006)
Page ix.a Several places.a Change "Stream Commands (SSC)" to "Stream
Device Commands (SSC)" to match the title of the document (unless
the title is changed).

Rejected, changed to "Stream Commands".

(CPQ 007)
Page ix.a Foreward.a Remove comma from "Sequential-access device, or

a Printer".

Accepted.

(CPQ 008)
Page ix.a Introduction.a Remove comma from "Sequential-access, and Printer"

Accepted.

(CPQ 009)
Page ix.a Introduction.a Should "initiator" be "application client" in line 2?

Accepted.

(CPQ 010)
Page 1.a Scope.a Upgrade "SCSI-3 Primary Commands" to "ANSI NCITS 301-1997 SCSI-3 Primary Commands (SPC)", or a reference to SPC-2.

Accepted, upgraded to SCSI Primary Commands - 2.

(CPQ 011)
Page 1.a a).a Remove command from "device, or printer device"

Accepted

(CPQ 012)
Page 1.a a).a Move "over a SCSI service delivery subsystem" after "communicate" so it's not dangling at the end.

Accepted

(CPQ 013)
Page 1.a Remove extra blank line after b).

Accepted

(CPQ 014)
Page 1/2.a Caption on different page from figure.

Accepted

(CPQ 015)
Page 3.a Section 2.1.a Change "contact ANSI" to "contact the ANSI"

Accepted

(CPQ 016)
Page 3.a Sections 2.1.x.a SPC and SMC are both approved.a This should refer to SAM-2 and SPC-2 which are under development. Maybe FC-TAPE should be referenced too?a Also, the list on page 2 needs updating.a A lot of documents have become standards or been obsoleted.

Accepted, updated the section(s).

(CPQ 017)
Page 4.a Section 3.1.a This has "object" references which are
no longer in SAM-2.a Consider updating the definitions.

Rejected, application client and device server definitions are currently
consistent with SAM-2.

(CPQ 018)
Page 5.a Section 3.3.a Change "optionally" to "optionality" (this
wording must be from SBC).

Accepted.

(CPQ 019)
Page 5.a Section 3.3.9 "reserved".a Change the definition to
that in SPC-2:
aaa 3.3.9 reserved: A keyword referring to bits, bytes, words, fields and
aaa code values that are set aside for future standardization. A reserved
aaa bit, byte, word or field shall be set to zero, or in accordance with
aaa a future extension to this standard. Recipients are not required to
aaa check reserved bits, bytes, words or fields for zero values. Receipt of
aaa reserved code values in defined fields shall be reported as error.

Accepted, with modification(s) to the above text.

(CPQ 020)
Page 5.a Add definitions of "may" and "may not" like in SPC-2.

aaa 3.3.5 may: A keyword that indicated flexibility of choice with no
aaa implied preference (equivalent to "may or may not").
aaa 3.3.6 may not: A keyword that indicated flexibility of choice with no
aaa implied preference (equivalent to "may or may not").

Accepted, with modification(s) to the above text.

(CPQ 021)
Page 8.a Section 4.1.a Change "access, and printerdevices.a All" to
"access and printer devices.a Both".

Accepted.

(CPQ 022)
Page 9.a Section 5.1.14 partition.a Change "If there is" to "If there are".

Rejected.

(CPQ 023)
Page 9.a Section 5.1.16 setmark.a Change "based on a" to "based on
the RSMK".

Accepted.

(CPQ 024)
Page 10.a Section 5.2.1.a Change "Out, Persistent" to "Out, and
Persistent".

Accepted, and changed the Reserve and Release to mandatory.

(CPQ 025)
Page 25.a Table 5.a These commands should be listed as "Yes/May" - WRITE BUFFER, MODE SELECT (both), and SEND DIAGNOSTIC.a Section 5.2.6 makes them required in certain cases for those commands.

Accepted.

(CPQ 026)
Page 39.a Table 19.a Byte 0.a Remove extra spaces around 44h.

Accepted.

(CPQ 027)
Page 47.a Table 25.a Byte 5.a Control should be in small caps.

Accepted.

(CPQ 028)
Page 58.a "ASOCWP" didn't fit in byte 15 - try a smaller font.

Accepted.

(CPQ 029)
Page 80.a Table 58.a Caption.a Remove D from "SYNCHRONIZED"

Accepted.

(CPQ 030)
Page 88.a Above Table 74.a "Command, a clear to send" doesn't make sense.

Accepted.

(CPQ 031)
Page 91.a Table 75.a There is no reference to note 3.a

Accepted, removed the note.

(CPQ 032)
Page 91.a Table 75.a The "?" references should be fixed in codes 22h and 23h.a The "?" densities for code 2Bh should be fixed. Something should be listed for code 2Ah.

Accepted, removed density code 2Ah, no information available.

(CPQ 033)
Page 25.a Table 5.a There are several differences from SPC-2 Table B.2 Operation Codes table that need to be resolved, either here or in SPC-2.

a) CHANGE DEFINITION is obsolete in SPC-2.

Accepted, marked it obsolete for both sequential and printer devices.

b) READ should be READ(6), WRITE should

be WRITE(6), and VERIFY should be VERIFY(6) to match SPC-2
Table B.2.

Accepted, fix in SPC-2.

c) SPC-2 lists these as mandatory but they are
listed as optional here:
aaa RESERVE(6)
aaa RESERVE(10)
aaa RELEASE(6)
aaa RELEASE(10)

Accepted, changed to mandatory for sequential and printer devices.

d)a "READ POSITION" is mandatory here, but listed
as optional in SPC-2.

Accepted, change to mandatory in SPC-2.

e)a SPC-2 lists these as optional for sequential
access devices, but they are not mentioned here:a
aaa A3h MAINTENANCE (IN)(for report device identifier)
aaa A4h MAINTENANCE (OUT)(for set device identifier)
aaa A5h MOVE MEDIUM
aaa B8h READ ELEMENT STATUS
aaa BAh REDUNDANCY GROUP (IN)
aaa BBh REDUNDANCY GROUP (OUT)
aaa BCh SPARE (IN)
aaa BDh SPARE (OUT)
aaa BEh VOLUME SET (IN)
aaa BFh VOLUME SET (OUT)

Accepted, added MOVE MEDIUM and READ ELEMENT STATUS (noting SMC). Other commands
will be fixed in SPC-2.

f) Text after Table 5.a SPC-2 also lists 0Dh as
vendor-specific for SSC.

Accepted, added 0Dh.

g)a SPC-2 also lists A5h "MOVE MEDIUM" as optional for SSC.a It is
not mentioned here.

Accepted, fixed in e). above.

(CPQ 034)
Page 51.a Table 29.a There are several differences from SPC-2
Table B.3 Log Page Codes table that need to be resolved, either
here or in SPC-2.

a)a SPC-2 names some log pages differently:
aaa 06h Non-medium error page
aaa 0Ch Sequential-access [D]evice page
aaa 0Bh Last n deferred error events page

Accepted, match text in SPC-2 except device is not "Device" (fix in SPC-2).

b) SPC-2 also lists these log pages for sequential access devices:
aaa 08h Format status page
aaa 0Dh Temperature page
aaa 0Eh Start-stop cycle counter page
This table lists them in the Reserved sections 08h-0Ah and 0Dh-2Dh.

Accepted, added to the table.

c) SPC-2 does not list this log page yet:
aaa 2Eh TapeAlert log page

Accepted, fix in SPC-2.

d) SPC-2 labels 30h - 3Eh as (does not require page format)
but this table does not mention that.

Accepted, added "(does not require page format)" to text.

(CPQ 035)
Page 55.a Table 36.a There are several differences from SPC-2
Table B.4 Mode Page Codes table that need to be resolved, either
here or in SPC-2.

a) SPC-2 has different names for these mode pages:
aaa 10h Device configuration [mode] page
aaa 1Ch Informational exceptions control [mode] page
aaa 11h Medium partition [mode page (1)
aaa 12h Medium partition [mode page (2)
aaa 13h Medium partition [mode page (3)
aaa 14h Medium partition [mode page (4)
aaa 1Ah Power Condition [mode] pageaa (s removed)
aaaaaaa (SPC-2 should probably uncapitalize Condition)

Accepted, changed to match text in SPC-2 and fix "Power Condition" in SPC-2.

b) SPC-2 lists these mode pages for sequential access devices:
aaa 18h Protocol specific LUN mode page
aaa 19h Protocol specific port mode page

Accepted, added to table and reference SPC-2.

c) SPC-2 and this table disagree when page format is required.
SPC-2 says these do not: 00, 20-29, 2A, 2B-3E.
Table 36 says these do not: 00 and these do: 20-3E.

Accepted, changed to match SPC-2 (i.e. does not require page format).

d)a SPC-2 does not yet list:
aaa 0Fh Data compression page

Accepted, fix in SPC-2.

(CPQ 036)
Page 76.a Table 51.a There are several differences from SPC-2
Table B.2 Operation Codes table that need to be resolved, either
here or in SPC-2.

a) SPC-2 lists this command as optional for printer devices, but it
is not listed here:
aaa A0h REPORT LUNS

Accepted, added to table, made mandatory. Need to make mandatory in SPC-2.

b) SPC-2 lists these commands as mandatory but they are listed as
optional here:
aaa RESERVE(6)
aaa RESERVE(10)
aaa RELEASE(6)
aaa RELEASE(10)

Accepted, made mandatory.

c)a SPC-2 uses "RELEASE" and "RESERVE" instead
of "RELEASE UNIT" and "RESERVE UNIT"

Accepted, dropped "UNIT"

d)a Reference for STOP PRINT should be 6.2.5,
not 0.

Accepted.

(CPQ 037)
Page 81.a Table 60.a There are several differences from SPC-2
Table B.3 Log Page Codes table that need to be resolved, either
here or in SPC-2.

a)a SPC-2 names some log pages differently:
aaa 06h Non-medium error page
aaa 0Bh Last n deferred error events page

Accepted.

b) SPC-2 also lists these log pages for printer devices:
aaa 0Dh Temperature page
aaa 0Eh Start-stop cycle counter page
This table lists them in the Reserved section 0Ch-2Fh.

Accepted.

(CPQ 038)
Page 82.a Table 62.a There are several differences from SPC-2
Table B.4 Mode Page Codes table that need to be resolved, either
here or in SPC-2.

a) SPC-2 has different names for these mode pages:
aaa 1Ch [Informational exceptions control mode] page
aaa 03h Parallel printer interface [mode] page
aaa 1Ah Power Condition [mode] pageaa (s removed)
aaaaaaa (SPC-2 should probably uncapitalize Condition)
aaa 05h Printer options [mode] page
aaa 04h Serial printer interface [mode] page

Accepted, added "mode" to the text and fix SPC-2.

b) SPC-2 lists these mode pages for printer
devices:
aaa 18h Protocol specific LUN mode page
aaa 19h Protocol specific port mode page

Accepted, added to table.

c) SPC-2 and this table disagree when page format is required.
SPC-2 says these do not: 00, 20-29, 2A, 2B-3E.
Table 62 says these do not: 00 and these do: 20-3E.

Accepted, changed to "does not require page format".

The following Compaq comments were added in Rev 2 of this document:
A few more SSC rev 17 comments (all editorial):

(CPQ 039)
Page 8/9. Beginning-of-medium should be before beginning-of-partition, to maintain alphabetical order.

Accepted.

(CPQ 040)
Page 9. Cross reference in 5.1.3 buffered to 5.1.5 doesn't make sense. 5.1.5 is end-of-data.

Accepted, changed cross reference to 5.2.5.

(CPQ 041)
Page 9. Cross reference in 5.1.6 to 5.2.2 doesn't make sense. I think 5.2.11 or 5.3.3 was intended.

Accepted, changed cross reference to 5.3.3.

(CPQ 042)
Page 9. Last reference in 5.1.21 to 5.1.3 is correct, but not highlighted in PDF as a link. If 5.1.3 is renumbered, this reference might not be updated.

Accepted, changed to cross reference.

(CPQ 043)
Page 34. After Table 15. "A -of-partition" should be "A beginning-of-partition"

Accepted.

(CPQ 044)
Page 47 and 49. a) Cross reference to 5.4.21 is to a section which doesn't exist.

Accepted, fixed cross reference.

(CPQ 045)
Page 47. Cross reference to 5.4.3 after "buffered mode" not highlighted in PDF.

Accepted, fixed cross reference.

(CPQ 046)
Page 75. Section 6.1 first sentence. Change "or it may" to "or may"

Accepted.

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Comments attached to No ballot from J. R. Sims, III of
Hewlett Packard Co.:

Hewlett Packard CPB SSC Letter Ballot Comments
(Submitted by Stewart Wyatt)

1. Drive initialisation should be in the loaded state

5.2.5 Device initialisation
A device shall be in the uninitialised and unloaded state after power-up.'

This behaviour is very uncommon in existing tape drives and is typically limited to very high end or legacy drives (e.g. 1/2" tape). Most tape drives now automatically load a tape if it is present at power on. These include:

- DDS
- DLT
- 8mm
- QIC/Travan

There is significant danger of this change breaking existing applications as well as forcing changes to most existing drives. This phrase should be removed from the document.

Accepted, clause removed.

2. TapeAlert for multi-initiator environments

Changes to Section 5.2.12.1

Modify the clearing criteria for TapeAlert flags to cover multi-initiator environments by changing

b) When the TapeAlert Log page is read

to

b) When the TapeAlert Log page is read - note that
in multi-initiator environments the TapeAlert flags
should be cleared on read on a per-initiator basis
such that set flags are still visible to other
initiators"

Changes to Section 5.4.2.2

Add the following after Table 31:

"where the value of n is from 1 to 64"

Accepted.

3. Please add a footnote to Table 29 - Log page codes, stating that the "Log page '0A' and inquiry page '84' are being proposed for use by Media Auxiliary Memory as documented in T10/99-148."

Rejected, the log page implementation is obsolete and currently the SPC-2 editor has no plans to add MAM functionality. It will most likely go into the upcoming SPC-3 document.

4. 4.1 line 2 - space omitted from 'printerdevices'

Accepted.

5. Abstract (page iii) includes communication devices, these are not in the Scope section 1 a) or the list of clauses in the Introduction (page ix)

Accepted.

6. 4.2, Physical model. Delete first sentence " The physical model is similar....." it is contradictory with the rest of the section. Also change fourth sentence to " As media is taken out of one pool, it passes by..... and into the other pool" this is equally appropriate to helical scan and linear tape devices unlike present wording.

Accepted.

7. Page numbers are bold on even number pages, normal on odd number pages. Also some in different font size

Accepted.

8. Page 18 'Conditions list' this would be better presented as a table even though it is presented here in the same manner as the SCSI-2 standard. Also 'ABORTED command' should be fully capitalised.

Accepted.

9. Page 19, remove extra line space between 5.2.10 b) and c)

Accepted.

10. Page 20 section 5.2.10.1, list would be more readable presented as a table

Accepted.

11. Table 31 - borders inconsistent. Should be double underline above Byte 0 line, RH end of Byte 0 line different to rest. Border above 5n-1 should this be single?

Accepted.

12. Table 76. Use same border weights as for rest of document, also

remove unused blank rows.

Accepted.

13. Subsection numbers and heading should be bold. Currently 5.1.1 onwards are normal, headings are difficult to find.

Accepted.

14. Delete blank page 7

Accepted.

15. Page 14, spacing between 5.2.3 a) and c)

Accepted.

16. 5.4.2.2 needs explanation, field definitions, byte numbering jump from 3 to (5n-1), meaning of 140h in parameter length etc.

Accepted, added reference to SPC-2, defined the value of n and the value of flag field.

Additional (late) comments from HP:

Comment 17: Section 5.2.1, Paragraph 8 (Document Page 10, Paragraph 10, line 2)

Replace the words "(e.g. thumbwheel switch)" with "(e.g. mechanical lock)"

Reason - Most common volumns (tape cartridges) us a mechanical lock such as a breakable tab and not a thumbwheel switch for write protection. This is indicated in section 5.2.10.

Accepted.

Comment 18: Section 5.3, Table 5 - Commands for sequential-access devices (Document Page 25)

Flush Write Data column is not consistent with the specified commands on the following pages. The commands state the buffers "shall" be flushed while the table states the buffers "may" be flushed. Any command which moves the tape needs to flush the buffers before processing the command. All such commands need to be marked as "Yes" in this column. Failure to flush the buffers will result in data loss or corruption.

Accepted.

Comment 19: Section 5.3.2, Format Medium command, Paragraph 1 (Document page 26, Paragraph 9)

Remove the information about Check Conditions due to the write buffer not being empty. The information about Check Conditions with information in the write buffer is repeated in paragraph 2 (page 27 Paragraph 1).

Rejected, the first paragraph states if the buffer contains data, filemarks, or setmarks, a check condition shall be returned. The second paragraph states if the medium is not at BOM or BOP 0 a check condition shall be returned.

Comment 20: Section 5.3.3 Load Unload command, Paragraph 9 (Document page 29, Paragraph 7)

This paragraph (a Logical unit shall discard any unwritten buffered data after the a) is not valid and should be deleted. The first paragraph of this section (5.3.3) states all buffered data shall be transferred to the medium prior to validating the Load / Unload command. Therefore there is no way to have data left in the buffer for this paragraph.

Rejected, the device shall attempt to flush buffered data. If it unable to flush the device shall discard the data (i.e. it reported an error).

Comment 21: Section 5.3.5, Read command

This section needs to state buffered write data is to be transferred to the medium before this command is validated and acted upon.

Accepted.

Comment 22: Section 5.3.7, Read Position command, Paragraph 7 (Document page 34, Paragraph 5)

Change the start of the paragraph to "A beginning of partition (BOP)".

Accepted.

Comment 23: Section 5.3.11, Rewind command, Paragraph 1 (Document page 42, Paragraph 7)

The second sentience (Prior to performing the REWIND a transferred to the medium.) needs to be moved to the next paragraph to be consistent with the format of other commands listed in this section.

Rejected, flushing buffer statements will be in the first paragraph (when applicable).

Comment 24: Section 5.3.12, Space command, Paragraph 5 (Document page 44, Paragraph 3)

Clarification is needed - The paragraph is explicit about what happens if the RSMK bit is set to 1 and a setmark is encountered, but the paragraph is not specific when RSMK is 0. Does tape movement continue pass the setmark if RSMK = 0?

Rejected, tape movement will continue if RSMK=0. This paragraph states "The device server shall not return CHECK CONDITION status when a setmark is encountered if the RSMK bit is set to zero or if this option is not supported."

Comment 25: Section 5.3.12, Space command, Paragraph 6 (Document page 44, Paragraph 4)

Clarification is needed - The paragraph is explicit about what happens if the REW bit is set to 1 and an end of medium early warning is detected, but the

paragraph is not specific when REW is 0. Does tape movement continue pass the early warning if REW = 0?

Rejected, tape movement will continue if REW=0. This paragraph states "If the REW bit is zero or the option is not supported by the logical unit, the device server shall not report CHECK CONDITION status at the early-warning point."

Comment 26: Section 5.3.12, Space command, Paragraph 15 (Document page 45, Paragraph 5)

Same comment as on paragraph 5 (page 44, paragraph 3) above.

Rejected, tape movement will continue if RSMK=0. This paragraph states "The device server shall not return CHECK CONDITION status when a setmark is encountered if the RSMK bit is set to zero or if this option is not supported."

Comment 27: Section 5.3.13, Verify command, Paragraph 1 (Document page 45, Paragraph 10)

Add a sentence to flush the write buffer before moving tape. (Most commands with tape movement and data in the write buffers need to flush the buffer before moving tape or discard the buffer since the tape will not be in position to store the data after the move is completed.)

Accepted.

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Comments attached to No ballot from George Penokie of IBM Corp.:

IBM letter ballot comments on ssc-r17

Page 1
1. Annotation 1;
General comment on pdf format - The bookmarks do not have any section numbers which makes them almost impossible to use when trying to navigate the document. When generating make sure the section numbers appear in the pdfs bookmarks list.

Accepted, but I have currently not been able to figure out how to add section numbers using MS Word.

Page 9
2. Annotation 1;
Section Introduction, 1st paragraph, last sentence; The last sentence should be removed.

Accepted.

Page 14
3. Annotation 1;
3.1.13 There are two periods and the end of the sentence.

Accepted.

Page 18

4. Annotation 1;
4.1, first paragraph, 2nd sentence. There is no space between printer and device.

Page 20
5. Annotation 1;
5.2.1 - 3rd paragraph from bottom, last sentence: SET CAPACITY should be removed.

Accepted.

Page 24
6. Annotation 1;
abc list under figure 10: Remove spaces between (a) paragraph and (b) paragraph, and between (b) paragraph and (c) paragraph. This should be changed anywhere there is a list.

Accepted.

Page 25
7. Annotation 1;
5.2.4 - All these references to 'American National Standards' will have to change when this standard becomes an ISO standard.

Accepted, noted and will address in the future.

Page 26
8. Annotation 1;
5.2.6 - 5th paragraph - 'asynchronous event notification' should be 'asynchronous event reporting'.

Accepted.

9. Annotation 2;
5.2.7 This section looks like a SAM thing that is not specific to SSC. It should be removed. Of replaced with a reference to SAM.

Rejected, review the current text.

Page 27
10. Annotation 1;
5.2.9.1 - 1st paragraph - The sentence 'The appropriate sense key and additional sense code and an additional sense code should be set.' makes no sense. The words additional sense code appear twice when once would be enough.

Accepted, added "qualifier" before "should be set".

Page 28
11. Annotation 1;
5.2.9.1 - 2nd paragraph after error list. Contains 'sense data valid' bit in multiple places. 'sense data.valid' should be in small caps.

Accepted, but did not set sense data to small caps (per SPC-2).

12. Annotation 2;
5.2.9.1 - 3rd paragraph after error list. Contains 'information' field in multiple places. 'information' should be in small caps.

Accepted.

13. Annotation 3;
5.2.9.1 - 2rd paragraph after error list. Contains 'information' field in multiple places. 'information' should be in small caps.

Accepted.

14. Annotation 4;
5.2.9.1 - paragraphs after error list. The fixed bit, sense data valid bit and information field are talked about but there is no reference to where these bits belong. Is it a mode page and command or what.

Accepted, added reference(s).

Page 29
15. Annotation 1;
5.2.9.1 - 2nd from last paragraph - 'asynchronous event notification' should be 'asynchronous event reporting'. Do a global change on this.

Accepted.

Page 31
16. Annotation 1;
5.2.11 - 2nd paragraph - sense-key specific as in sense-key specific field should be small caps.

Accepted.

17. Annotation 2;
5.2.11 - 4th paragraph - sense-key specific as in sense-key specific field should be small caps.

Accepted.

Page 32
18. Annotation 1;
5.2.12 - 1st paragraph - SMART is a marketing term and is not used in SCSI standards. If you mean the 'information exception conditions' mode page controls then say that.

Accepted.

19. Annotation 2;
5.2.12 - abc list - This list is formatted incorrectly. An abc list should be like this:
a) First thing;
b) next thing;
c) next to last thing; and
d) last thing.
The 'and' in the next to last thing could be an 'or'.

Accepted.

20. Annotation 3;
5.2.12.1 - 3rd paragraph - This sentence should read; Each flag shall be

cleared in the .... And see above comment as to how the list should be formatted.

Accepted.

21. Annotation 4;
General - All note should be number from 1 to n with the first note of the standard being 1 and the last note of the standards being n.

Accepted.

Page 33
22. Annotation 1;
5.2.12.2 - table 4 - 1st row - The statement '(this flag is set as an 5, or 6)' I think should be' (this flag is set as in 5, or 6)'.

Accepted.

23. Annotation 2;
5.2.12.2 - abc list after table 4 - This would be better if placed into a table.

Accepted.

Page 35
24. Annotation 1;
5.3 - table 5 - You should not reference both SPC and SPC-2. I suggest you only reference SPC-2. So change all references to SPC to SPC-2 in this standard.

Accepted.

25. Annotation 2;
5.3 - table 5 key - SPC should be SPC-2 = SCSI Primary Commands-2 standard.

Accepted.

Page 38
26. Annotation 1;
5.3.2 - last paragraph - FORMAT should be small caps not large caps.

Accepted.

Page 43
27. Annotation 1;
5.3.7 - 2nd paragraph - Total Current Logical Position should not be capitalized.

Accepted.

Page 44
28. Annotation 1;
5.3.7 - 3rd paragraph -Long Format should not be capitalized.

Accepted.

29. Annotation 2;

5.3.7 - 4th paragraph - Block Identifier Type should not be capitalized.

Accepted.

30. Annotation 3;
5.3.7 - 1st paragraph after table 15 - A '-of-partition' should be 'beginning-of-partition', I think.

Accepted.

Page 45
31. Annotation 1;
5.3.7 - 5th and 6th paragraphs after table 15 - There is no space between these two paragraphs.

Accepted.

32. Annotation 2;
5.3.7 - 1st paragraph before table 16 - TCLP and LONG should be small caps not large caps.

Accepted.

Page 46
33. Annotation 1;
5.3.7 - 4th paragraph after table 16 - MPU and BPU should be small caps not large caps.

Accepted.

Page 49
34. Annotation 1;
5.3.10 - table 19 - bytes 7-8 - The name of this field should be on one line not two. (i.e., ALLOCATION LENGTH)

Accepted.

35. Annotation 2;
5.3.10 - table 20 - bytes 0-1 AND 4-n - The name of these fieldS should be on one line not two. (i.e., AVAILABLE DENSITY SUPPORT LENGTH and DENSITY SUPPORT DATA BLOCK DESCRIPTORS))

Accepted.

36. Annotation 3;
5.3.10 - table 20 - bytes 4-n - The name of these this field should in small caps.

Accepted.

Page 50
37. Annotation 1;
5.3.10 - table 21 - bytes 8-9 - The name of this field should be on one line not two. (i.e., MEDIA WIDTH)

Accepted.

38. Annotation 2;
5.3.10 - 3rd paragraph after table 21 - The name 'density support data block descriptors' should be in small caps.

Rejected, should be lower case.

39. Annotation 3;
5.3.10 - 3rd paragraph after table 21 - The name 'density support data block descriptors' should be in small caps.

Rejected, should be lower case.

40. Annotation 4;
5.3.10 - 3rd paragraph after table 21 - The name 'density support data block descriptors' should be in small caps.

Rejected, should be lower case.

41. Annotation 5;
5.3.10 - 4th paragraph after table 21 - The name 'density support data block descriptors' should be in small caps.

Rejected, should be lower case.

Page 52
42. Annotation 1;
5.3.10 - 1st paragraph above note 14 - This sentence: 'Thus, if vendor X defines a density and format, another vendor may use X in the ASSIGNING ORGANIZATION field. If exactly the same density and format construction later becomes known by another name, both X and the new assigning organization may be used for the density code. This is one condition that may result in multiple density support data blocks for a single density code value.' should be removed or at least put in a note.

Accepted.

Page 53
43. Annotation 1;
5.3.12 - 1st paragraph after table 24 - The statement 'if they exist' is used in multiple places in this section. A better way to say it would be 'if they are implemented' .

Rejected, meant to indicate existence, not if they are implemented.

44. Annotation 2;
5.3.12 - 1st paragraph after table 24 - The statement 'if they exist' is used in multiple places in this section. A better way to say it would be 'if they are implemented' .

Rejected, meant to indicate existence, not if they are implemented.

Page 54
45. Annotation 1;
5.3.12 - 3rd paragraph after table 24 - the information in Information field should be small caps.

Accepted.

46. Annotation 2;
5.3.12 -4th paragraph after table 24 - the information in Information field should be small caps.

Accepted.

47. Annotation 3;
5.3.12 - 5th paragraph after table 24 - the information in Information field should be small caps.

Accepted.

48. Annotation 4;
5.3.12 - 6th paragraph after table 24 - the information in Information field should be small caps.

Accepted.

49. Annotation 5;
5.3.12 - 7th paragraph after table 24 - the information in Information field should be small caps.

Accepted.

50. Annotation 6;
5.3.12 - 8th paragraph after table 24 - the information in Information field should be small caps.

Accepted.

51. Annotation 7;
5.3.12 - 3rd paragraph from bottom. Medium position should be defined when end-of-data is encountered while spacing over blocks, filemarks, or setmarks. Recommendation: Medium shall be positioned such that a subsequent write operation would append to the last record, filemark, or setmark.

Accepted.

Page 55
52. Annotation 1;
5.3.12 - abc list after the 11th paragraph after table 24 - There is a space between the (a) and (b) entries in the list. This should be removed.

Accepted.

Page 56
53. Annotation 1;
5.3.13 - 6th paragraph after table 25 - the information in Information field should be small caps.

Accepted.

54. Annotation 2;
5.3.13 - 6th paragraph after table 25 - the information in Information field should be small caps.

Accepted.

Page 57
55. Annotation 1;
5.3.14 - 6th paragraph after table 26 - the information in Information field should be small caps.

Accepted.

56. Annotation 2;
5.3.13 - abc list after 6th paragraph after table 25 -There should not be any spaces between (a) and (b), (b) and (c), etc. This comment applies other abc lists in this section.

Accepted.

Page 58
57. Annotation 1;
5.3.14 - 1st paragraph after abcd list - the information in Information field should be small caps.

Accepted.

Page 59
58. Annotation 1;
5.3.15 -5th paragraph after table 27 - the information in Information field should be small caps.

Accepted.

Page 60
59. Annotation 1;
5.3.15 -last paragraph - the information in Information field should be small caps.

Accepted.
Page 62
60. Annotation 1;
5.4.2.2 - Entire section - All the field names in this section need to be made small caps.

Accepted.

61. Annotation 2;
5.4.2.2 - Why is the description of the fields in this log page not with the log page?

Rejected, they are defined in SPC-2. Added a reference to SPC-2.

62. Annotation 3;
5.4.3 - 3rd paragraph - 'medium-type code' needs to be small caps.

Accepted.

Page 63
63. Annotation 1;
5.4.3 - table 33 - In at least 3 places write command should be WRITE command.

Accepted.

64. Annotation 2;
5.4.3 - ABC/abc lists under table 34 - Remove all line spacing in the ABC and abc lists.

Accepted.

65. Annotation 3;
5.4.3 - ABC/abc list under table 34 - 1st abc list - There should be an 'or' between the last 2 entries in both abc lists.

Accepted.

Page 64
66. Annotation 1;
General - In some places names like beginning-of-medium are capitalized in other places they are not. The correct way is to not have any capitals in that type of name. Any capitals should be made into small letters.

Accepted.

Page 67
67. Annotation 1;
5.4.3.1 - 6th paragraph after table 38 - The word 'beset' should be 'be set'.

Accepted.

68. Annotation 2;
5.4.3.1 - 7th paragraph after table 38 - information should be in small caps.

Accepted.

Page 71
69. Annotation 1;
5.4.3.2 - note 32 - This note contains a shall requirement. Notes cannot contain requirements. Either remove the requirement or make the note part of the text.

Accepted, made the note part of the text.

Page 73
70. Annotation 1;
5.4.3.3 - 2nd paragraph above table 43 - The statement 'The device server shall set only one and only one of the IDP, FDP or SDP fields set to one in the MODE SENSE data.' Makes no sense and I have no idea how it should be reworded.

Accepted, and reworded the paragraph.

71. Annotation 2;
5.4.3.3 - 2nd paragraph above table 43 - At the end of the 3rd sentence the words 'set to one' are in small caps and they should not be.

Accepted.

72. Annotation 3;
5.4.3.3 - note 35 - The end of the sentence should read '... or IDP are set to one.'.

Accepted.

Page 74
73. Annotation 1;
5.4.3.3 - abc list above table 44. There should be a ':' after the partition size if. a ';' after (a), and a '; or' after (b). The first the in (b) and (c) should not be capitalized.

Accepted.

Page 75
Annotation 1;

Page 76
74. Annotation 1;
5.4.3.4 - table 45 - The partition size descriptor(s) should be in small caps.

Accepted.

75. Annotation 2;
5.4.3.4 - table 45 - bytes +0 and +1 - This field name should be on one line.

Accepted.

76. Annotation 3;
5.4.3.4 - table 45 - What does +0 and +1 mean? I have never seen that notation before. It should be 2
and 3 for the first descriptor then a ... with another field entry to represent the last descriptor. That
would be labeled n-1 and n.

Accepted.

77. Annotation 4;
5.4.3.4 - abc list after table 45 - Should be no spaces between a and b.

Accepted.

78. Annotation 5;
5.4.3.4 - note 38 - 1st note under table 45 - This looks like a requirement (i.e., are's are thinly disguised shalls) and should be made part of the main text.

Accepted.

79. Annotation 6;
5.4.3.4 - Note 38 - 2nd note under table 45 - The statement 'recommended, but not required' is redundant and should be changed to 'recommended'.

Accepted.

80. Annotation 7;
5.4.3.4 - 2nd abc list under table 45 - The end of (a) should be '; or' and

'or' at the start of (b) removed.

Accepted.

Page 77
81. Annotation 1;
5.4.3.4 - note 40 - 3rd note under table 45 - This looks like a requirement and should be made part of the main text.

Accepted.

82. Annotation 2;
5.4.3.4 - 3rd abc list under table 45 - The end of (a) should be '; or' and the 'If' and the start of (b) should be 'if'.

Accepted.

Page 78
83. Annotation 1;
5.4.3.6 - Table 47 - byte 2 - The DExcpt and LOGerr bits should be in small caps. (note; only the xcpt part of DExcpt and the err of LOGerr need be in small caps.

Accepted.

84. Annotation 2;
5.4.3.6 - Many all of the fields in this section are large caps. They all need to be made into small caps.

Accepted.

Page 79
85. Annotation 1;
5.4.3.6 - 1st paragraph after table 47- DExcpt should be in small caps. (note; only the xcpt part of.DExcpt need be in small caps.

Accepted.

86. Annotation 2;
5.4.3.6 - 2nd paragraph after table 47 - LOGerr should be in small caps. (note; only the err of LOGerr need be in small caps.

Accepted.

87. Annotation 3;
5.4.3.6 - 5th and 6th paragraphs are not lined up correctly with the other paragraphs.

Accepted.

88. Annotation 4;
5.4.3.6 - The abc list under table 47 - Make that list into a table.

Accepted.

89. Annotation 5;
5.4.3.6 - The interval time description and the report count field

descriptions should go after the MRIE
field description.

Accepted.

90. Annotation 6;
(T) - 5.4.3.6 - interval timer description - The following statement -' An INTERVAL TIMER value of zero indicates that the target shall only report the informational exception condition one time.' Is a technical change from how the interval timer works in SPC-2 and SBC. It should be changed to match those other standards which state that zero indicates a vendor-specific timer interval.

Accepted, refer to SPC-2 behavior.

91. Annotation 7;
5.4.3.6 - The interval timer description should be copied word-for-word from SPC-2. This wording is not only incorrect but the 3rd sentence makes no sense.

Accepted, refer to SPC-2 behavior.

Page 80
92. Annotation 1;
5.4.3.6 - 2nd paragraph above table 48 - Illegal request and invalid field in parameter list need to be capitalized.

Accepted.

93. Annotation 2;
5.4.3.6 - The 2nd and 3rd paragraphs above table 48 are not aligned with the other paragraphs.

Accepted.

94. Annotation 3;
5.4.3.6 - table 48 - This table is difficult to read in it's present format. The mode column is to fat (and doesn't really even need to be there) and the description is too skinny. It should also be confined to one page. It would also be a good idea to make the sense key sentence into it's own paragraph. (Too see what I mean look at this same table in SPC-2)

Accepted.

95. Annotation 4;
(T) - 5.4.3.6 - report count description - The statement: '(assuming that INTERVAL TIMER is set to non-zero).' Is not correct in that it does not match the report count behavior as defined in SPC-2 and SPC. It should be removed.

Accepted.

96. Annotation 5;
(T) - 5.4.3.6 - report count/test flag number field description - I believe adding in the test flag number into this field is a mistake. he test flag number should be a new field added onto the end of this mode page. If this comment is rejected then the paragraphs describing the MODE SELECT vs. MODE SENSE behaviors need to be separated so someone can understand what is going on. Right now the combining of all this makes it very difficult to understand

what is supposed to be done.

Rejected, appears there are already implementation using the field with dual behavior. Separated the MODE SELECT/SENSE behavior.

97. Annotation 6;
5.4.3.6 - table 48 - all rows - The statement; ' (which is 5Dh/00h for a TapeAlert event)' should be removed from all the rows in this table. If the tapealert causes the reporting of a specific ASC/ASCQ then indicate that under the tapealert description. This table is a general description of how the MRIE field works. Also, the name of the ASC/ASCQ should be listed not the hex code (which only machines understand).

Accepted.

98. Annotation 7;
(T) - 5.4.3.6 - table 48 - The statement: '...on the next SCSI command (excluding Inquiry and Request Sense) after an informational exception condition was detected.' is a technical change from the way this is defined in SPC-2 and SBC and should be removed. There is no requirement that the check condition be returned on the next command and even if this requirement was here there is no way to test compliance.

Accepted, removed the table and refer to SPC-2 behavior.

Page 81
99. Annotation 1;
5.4.3.6 - table 48 - all rows - The statement; (and thus does not need to be repeated). Should be removed from this row and others in this table as it adds no useful information.

Accepted.

100. Annotation 2;
(T) - 5.4.3.6 - table 48 - The statement: '...on the next SCSI command (excluding Inquiry and Request Sense) after an informational exception condition was detected.' is a technical change from the way this is defined in SPC-2 and SBC and should be removed. There is no requirement that the check condition be returned on the next command and even if this requirement was here there is no way to test compliance.
Annotation 3;

Accepted, removed the table and refer to SPC-2 behavior.

101. (T) - 5.4.3.6 - table 48 - The statement: '...on the next SCSI command (excluding Inquiry and Request Sense) after an informational exception condition was detected.' should be 'on any command.' As defined in SPC-2 and SBC. There is no requirement that the check condition be returned on the next command and even if this requirement was here there is no way to test compliance.

Accepted, removed the table and refer to SPC-2 behavior.

102. Annotation 4;
(T) - 5.4.3.6 - table 48 - The statement: '...on the next SCSI command (excluding Inquiry and Request Sense) after an informational exception condition was detected.' is a technical change from the way this is defined in

SPC-2 and SBC and should be removed. There is no requirement that the check condition be returned on the next command and even if this requirement was here there is no way to test compliance.

Accepted, removed the table and refer to SPC-2 behavior.

Page 82
103. Annotation 1;
5.4.3.6 - 1 paragraph after table 48 - The name of the ASC/ASCQ should be listed not the hex code
(which only machines understand).

Accepted.

104. Annotation 2;
5.4.3.6 - Everything below table 48 in section 5.4.3.6 - None of this information belongs here. It is specific to tapealert not this mode page and should be described in the part of the standard that defines how tapealert works (i.e., the model).

Accepted.

Page 83
105. Annotation 1;
5.5 - table 50 - Do not allow this table to split across pages.

Accepted.

106. Annotation 2;
5.5 - This entire section should be move to the front model section of this standard.

Accepted.

Page 91
107. Annotation 1;
6.3.3 - 3rd paragraph - medium-type code should be in small caps.

Accepted.

108. Annotation 2;
6.3.3 - 4rd paragraph - device-specific parameter should be in small caps.

Accepted.

Page 92
109. Annotation 1;
6.3.3.1 - 2nd paragraph under table 64 - VFU should be in small caps not large caps in multiple places throughout the next several paragraphs and tables.

Rejected, VFU is not a field name.

Page 103
110. Annotation 1;
Annex B - table 76 - In some cases the paragraph style used in the flag column is 'justified' which causes large spaces between words. It should be made 'left'. The same is true for the clause column only it appears that all

paragraphs in this column are set to 'justified'.

Accepted.

111. Annotation 2;
Annex B - heading - Why is there and 8 in front of this heading? It should be removed.

Accepted.

112. Annotation 3;
Annex B - There is not description of what the codes mean in the type and flag type columns.

Accepted, added keyword description(s).

113. Annotation 4;
Annex B - table 76 - I do not believe this standard can make requirements on the host (what ever that is). I assume you mean application client. Host should be change to application client and required changed to recommended.

Accepted.

114. Annotation 5;
Annex B - table 76 - I would suggest the column cause be retitled to 'Possible Cause'.

Accepted, changed to "Probable cause"

115. Annotation 6;
Annex B - table 76 - The parameter codes should be in hex format.

Accepted.

116. Annotation 7;
Annex B - table 76 - Flag 8 "Not Data Grade" includes comments on MRS stripes. This sounds specific to a certain drive. Explain better what "data grade" and "MRS stripes" mean, and make this more generic.

Accepted, added a note to the table describing MRS and data-grade media.

Page 106
117. Annotation 1;
Annex B - table 76 - 3rd paragraph from bottom. Medium position should be defined when end-of-data is encountered while spacing over blocks, filemarks, or setmarks. Recommendation: Medium shall be positioned such that a subsequent write operation would append to the last record, filemark, or setmark.

Accepted, the comment refers to the SPACE command text though.

****

Comments attached to YesC ballot from Gene Milligan of
Seagate Technology:

GEM 1:
Procedural:

A document indicating the net resolution of comments from the first letter ballot to forwards should be provided.

Accepted.

GEM 2:
Helpful:
Boilerplate:
In this draft and future drafts please add the instructions for unsusbcribing from the reflector.

Accepted.

GEM 3:
Helpful:
Boilerplate:
In this draft and future drafts please add the URLs for ANSI, NCITS, and Global
Engineering documents.

Accepted.

GEM 4:
Nit-picky:
Abstract:
Delete the second standard from the first sentence.

Accepted.

GEM 5:
Nit-picky:
Abstract, Forward, and Introduction:
Stating that "No service delivery subsystem dependencies are included in this standard." In three of the boilerplate clauses seems like overkill.

Accepted, removed text from Forward and Introduction.

GEM 6:
Nit-picky:
Introduction:
"Annex A provides the historical density code list for sequential-access devices." Is it only historical? Are none current?

Accepted, some are current. The list is for density codes prior to REPORT DENSITY SUPPORT command support.

GEM 7:
Editorial:
Introduction:
TapeAlert should be defined in Clause 3 and probably a forward reference given in the Introduction.

Accepted.

GEM 8:
Nit-picky:
Scope:

The title of Figure 1 should be on the same page as the figure.

Accepted.

GEM 9:
Editorial:
Scope:
<< Figure 1 is intended to shows the general structure of SCSI standards.>>
Change to "Figure 1 shows the general structure of SCSI standards."

Accepted.

GEM 10:
Editorial:
Scope:
<< It indicates the applicability of a standard to the implementation of a given transport.>> I don't think so. This appears to be wording left over from
an earlier version of the standard. Use instead the wording that goes with the generic figure.

Accepted.

GEM 11:
Editorial:
Scope:
<< SCSI-3 Serial Bus Protocol [X3.268]>> I thought this was withdrawn. I think it should be deleted.

Accepted.

GEM 12:
Editorial:
Scope:
<< The term SCSI is used whenever it is not necessary to distinguish between the versions of SCSI. The Small Computer System Interface - 2 standard (X3.131-1994) and its architecture are referred to herein as SCSI-2.>> Is it ever necessary to distinguish between SCSI-2 and a later version? If so what is
it called in SSC?

Accepted, changed to SPC-2 wording.

GEM 13:
Editorial:
Clause 2:
The normative references are not up to date. Update them.

Accepted.

GEM 14:
Editorial:
Clause 2:
The informative references are not up to date. SCSI-2 is not 9316-1:1996. It is
9316:1995.

Accepted.

GEM 15:
Nearly technical:
Clause 3.1.7:
The definition of information field seems incorrect. Rather than a definition it appears to be an example.

Accepted.

GEM 16:
Nit-picky:
Clause 3.1.9:
The definition of "one" is obsolete. I suggest deleting the signal portions especially in view of the many denials that SSC relates to transports with signals. Apply the analogous version of this comment to 3.1.15 as well.

Accepted.

GEM 17:
Editorial:
Clause 3.1.11:
<<The device may support other application protocols as well.>> seems to confuse the meaning of SCSI device rather than defining it. Pending explanation
of why this is included, I suggest deleting the sentence.

Accepted.

GEM 18:
Nit-picky:
Clause 3.2:
Some of the acronyms for the standards include the word standard at the end of the definition. Others do not. Be consistent.

Accepted.

GEM 19:
Technical:
Clause 3.3.2:
<< invalid: used to describe an illegal or unsupported bit, byte, word, field or code value. Receipt
of an invalid bit, byte, word, field or code value shall be reported as error.>> The definition and mandatory requirement are appropriate for field or code values but not for bits, bytes, or words. This mandatory requirement is contrary to the nearly appropriate requirement for reserved bits, bytes, or words. SPC-2 also has this issue.

Accepted.

GEM 20:
Editorial:
Clause 3.3.9
<<The recipient may not check reserved bits, bytes, words or fields. Receipt of
reserved code values in defined fields shall be treated as an error.>> While I favor the misunderstanding these words may produce, to be fair they should be

replaced with the SPC-2 wording "Recipients are not required to check reserved bits, bytes, words or fields for zero values. Receipt of reserved code values in
defined fields shall be reported as error."

Accepted.

GEM 21:
Editorial:
Clause 3.3.10
<<vendor-specific: items(e.g., a bit, field, code value, etc.) that are not defined by this standard
and may be defined differently by each vendor.>> Replace the last phrase with the SPC-2 version "and may be vendor defined."

Accepted.

GEM 22:
Editorial:
Clause 4.1
<< However, the physical model defined for each of these device types indicates
whether random-access operations are possible or just inefficient.>> Odd wording. I suspect something like "However, the physical model defined for each
of these device types indicates whether random-access operations are impossible
or just inefficient." or maybe "However, the physical model defined for each of
these device types indicates whether random-access operations are possible or impossible."

Accepted, changed possible to impossible.

Gem 23
Nit picking:
Same clause:
<< (see SBC for a description of a random-access device).>> SBC is not a referenced standard. Delete the phrase or add the reference.

Accepted, added reference to SBC.

Gem 24
Nit picking:
Clause 4.2
<< Thus, transferring data as a stream is most efficient, since the media may traverse the read/write mechanism as a flow of data.>> I doubt it. Perhaps "Transferring data as a stream is most efficient, since the media may traverse the read/write mechanism producing a flow of data." In addition search on and replace usually with a deletion "thus". Thus is a good biblical term but of no benefit in a standard.

Accepted.

Gem 25
Derision:
Clause 4.2:

<< Therefore, a printer device class is not a strict subset of a sequential-access device class.>>
It certainly sounds like a subset. It seems doubtful that it is a superset. But
then who knows what a strict subset is?

Accepted, removed the sentence.

GEM 26
Slightly technical:
Clause 5.1.9:
<< gap: A non-data element recorded on the medium.>> Does the gap have to be recorded?

Accepted, and yes, inter-block gaps (minimum and maximum) are defined by the recording format and must be recorded on the media. Erase gaps may be recorded on the media.

GEM 27
Editorial:
Clause 5.1.14.
<<partition: The entire usable region for recording and reading in a volume or in a portion of a
volume, defined in a vendor-specific manner. If there is more than one partition, they shall be
numbered starting with zero (i.e. beginning-of-partition 0).>> It is not correct to define it as defined in a vendor-specific manner and then specify standard requirements. A clearer distinction is needed between what is vendor-specific and what is required.

Accepted, moved sentence to clause 5.2.3 (Partitions within a volume).

GEM 28
Editorial:
Clause 5.1.21
<< indicated by 0h in the BUFFER MODE field in the mode parameter header (see 5.4.3), the opposite of buffered mode>> 0h is not the opposite of BUFFER MODE. At least to this point a code was not mentioned for BUFFER MODE.

Accepted, added more text to buffered and unbuffered mode definitions.

Gem 29
Nit picking:
Clause 5.2.1:
<< Sequential-access devices (called devices below)>> Actually several other terms were used below.

Accepted, removed "(called devices below)".

GEM 30
Technical:
Clause 5.2.1 << The logical unit is not ready when no volume is mounted or, from the initiator's perspective, whenever all medium access commands report CHECK CONDITION status and a NOT READY sense key.>> Why does the initiator have
to try all medium access commands before determining that the logical unit is not ready?

Accepted, should be any medium access command.

GEM 31
Technical:
<< The Reserve, Release, Persistent Reserve Out, Persistent Reserve In commands
(see SPC) are optional for sequential-access devices. Element reservations are not supported by this model.>> Persistent Reservations have undergone significant technical changes since SPC. I suggest changing the reference to SPC-2.

Accepted.

GEM 32
Editorial:
<< As shown in Figure 2, the entire physical length of medium is not usable for
recording data.>>
That is unfortunate. I hope it does not cost much. For better pricing I suggest changing it to "As shown in Figure 2, a portion of the physical length of medium is not usable for recording data."

Accepted.

GEM 33
Nit picky:
The reference to Figure 7 should be moved to the prior sentence. It really does
not relate to the sentence it is in.

Accepted.

GEM 34
Editorial:
Clause 5.2.3
Partition was previously defined. What is a mini-volume?

Accepted, changed "mini-volume" to "logical volume".

GEM 35
Editorial:
Clause 5.2.4
<< The filemark format is defined in some American National Standards.>> This is not a helpful reference. Delete it or be specific. << At least one American National Standard specifically defines filemark use for this purpose.>> Nor is this. << The setmark format is defined
in some American National Standards.>> Another useless reference. << Certain American National Standards define gap lengths which,>> No better.

Accepted.

GEM 34
Editorial:
Clause 5.2.5
<< 5.2.5 Device initialization A device shall be in the uninitialized and unloaded state after power-up.>> In spite of the title the clause deals with

uninitialization and leaves out initialization. Perhaps if devices do not become
initialized the clause should be titled "Device initial state".

Rejected, clause removed.

GEM 34
Editorial:
Clause 5.2.6
<< A device with read-ahead data blocks in the data buffer does not report an unrecovered read error until the data block in error is requested by an application client.>> Since an unrecovered error may cause the data blocks to not be in the data buffer, I think this should be changed to "A device that encounters an unrecoverable error during a read-ahead operation shall not report
the error unless the data block in error is requested by an application client."

Accepted.

GEM 35
Editorial:
Clause 5.2.6
<< The WRITE BUFFER command shall ensure transfer of buffered data for modes 4 through 7 (firmware downloads).>> Specifically what does this mean? Does it mean
the command should be completed?

Accepted, specified the buffered data shall be flushed before performing the download operation.

GEM 36
Technical:
Clause 5.2.7
<< Issuing tagged write commands with the immediate bit not set provides the functional equivalent of issuing untagged write commands with the immediate bit
set and data buffering enabled.>> This is not correct. An immediate write command with a deferred error may result in ambiguity of which command resulted
in a deferred error. A tagged write command error does not have the potential of
ambiguity.

Rejected, the write command contains no immediate bit. Review current text.

GEM 37
Editorial:
Clause 5.2.8
<< has an unique>> Contaminated by an SCSI. This should be "has a unique".

Accepted.

GEM 38
Editorial:
Clause 5.2.8
<< If supported, the end-of-data block identifier representing the position

past the last logical element in a partition shall be unique for the medium.>>
What does "unique for the medium" mean to the design engineer?

Accepted, added "and is defined by the recording format specification".

GEM 39
Editorial:
Clause 5.2.9
<< For sequential-access devices, positioning has the connotation of logically being in, at, before, or after some defined place within a volume.>> I think the definition would be clearer if "in" were deleted. But then << The orientation of usage for the four words (in, at, before, or after) is in one direction, from BOP x toward EOP x.>> leaves me numb. And what could be more numbing than << All positioning defined below is worded from this perspective. Devices without buffers have some physical position that relates to these logical positions. However, these definitions do not require the medium to have a physical position equivalent to the logical position unless explicitly stated.>> But then what about the text before it as recorded in GEM 40.

Rejected, I believe the text defines the direction and positioning very adequately.

GEM 40
Editorial:
Clause 5.2.9
<< This definition means the position is capable of being repeated under the same circumstances.>> I don't think so. Replace with "Positioning requires that the position is capable of being repeated under the same circumstances."

Accepted.

GEM 41
Editorial for technical content:
Clause 5.2.9.1
<< The appropriate sense key and additional sense code and an additional sense code should be set.>> Distinguish the last item by making it "additional sense code qualifier".

Accepted.

GEM 42
Editorial:
Clause 5.2.9.1
<< In the case of an unrecovered read error, if the FIXED bit is one, the sense data valid bit shall be set to one and the information field shall be set to the requested transfer length minus the actual number of blocks read (not including the unrecovered block).>>

Rejected, the sentence is correct (i.e. it should not state "minus the actual number of blocks transferred".

GEM 43
Technical:
Clause 5.2.12
<< The MODE SENSE/SELECT configuration of the TapeAlert interface is compatible
with the SMART diagnostic standard for disk drives.>> There is no such standard.
What is the reference to? The ATA/ATAPI-4 and 5 standards include requirements for S.M.A.R.T. "SMART" is understood to be trade marked.

Accepted, removed reference.

GEM 44
Editorial:
Clause 5.2.12
<< b) Immediately after a fatal error during the write/read job.>> What is a fatal error? I want to avoid such an error.

Accepted, should be unrecoverable error.

GEM 45
Editorial:
Clause 5.2.12.1
<<The specific conditions for any one flag to be set and cleared are device-specific,
and shall be defined by the device vendor implementing them.>> Change to "The specific conditions for any one flag to be set and cleared are vendor-specific."

Accepted.

GEM 46
Editorial:
Clause 5.2.12.1
<< Each flag shall be cleared to zero in the following circumstances:
a) At drive power on.
b) When the TapeAlert log page is read.>> Change to "Each flag shall be cleared
to zero in the following circumstances:
a) At drive power on.
b) After the TapeAlert log page is read."

Accepted.

GEM 47
Editorial:
Clause 5.2.12.1
<< e) On LOG SELECT reset (note the recommended action on receiving LOG SELECT for the TapeAlert log page is to reject the command with an error).>> The relationship between the requirement and the parenthetical statement is not clear. Also below notes are not numbered. Prior notes are numbered.

Accepted.

GEM 48
Editorial:
Clause 5.2.12.2
<< (i.e. an autoloader),>> I think this should be "(e.g., an autoloader),"

Accepted.

GEM 49
Editorial:
Clause 5.2.12.2
It is confusing whether the flag definitions apply or the statement that they are device-specific apply. I had assumed device-specific meant they were vendor-specific.

Accepted, the flag definitions apply and are required (as stated in the referenced table). Text also states "The specific conditions for any one flag to be set and cleared are vendor-specific". Device-specific means it is specific to the device type (i.e. not vendor-specific).

GEM 50
Editorial:
Clause 5.2.12.2
<< This flag is set when the tape drive fails its internal Power-On-Self-Tests (POST), and is not internally cleared until the drive is powered off.>> This appears to be in conflict with the earlier requirement for clearing flags.

Rejected, the key word here is "internally cleared". The flag may be set again after it is read.

GEM 51
Editorial:
In 5.4.3.4 and perhaps global the * should be replaced with the centered * symbol to make it clear whether it is a footnote or multiplication.

Accepted.

GEM 52
Editorial:
Table 52 is split between two pages and the second page is mainly blank. Fix the pagination or reformat the table as a continued/concluded table.

Accepted, clause moved to the model and reformatted.

GEM 53
Editorial:
Annex A
<< The addition of the REPORT DENSITY SUPPORT command has removed the requirement that density codes be specifically named in this standard.>> Sounds
like an editorial progress report. I suggest changing it to "The following codes
may be used with the REPORT DENSITY SUPPORT command." If that is what is meant.

Accepted.

GEM 54

Technical:
Annex A
Replace the ? marks in Table 75 with the appropriate value.

Accepted.

GEM 55
Editorial:
Table 75 is split between two pages. Reformat the table as a continued/concluded table without so much blank space on the first page of the annex.

Accepted.

GEM 56
Editorial
Annex B
In table 76 change the justification in the Cause column to eliminate the awkward spaces between words.

Accepted.

The following additional comments have been provided by Seagate's tape operation and account for the ballot not being an individual's ballot:

#1
Editorial
Clause 4.1
PDF page 18
Para 1, line 2 "printerdevices"
Change to "printer devices"

Accepted.

#2
Editorial
PDF page 19
"5.1.3. buffered mode: A mode of data transfer in write operations which facilitates tape streaming
(see 5.1.5),"
Section 5.1.5 defines end-of-data, not tape streaming. Either add a definition
for tape streaming and point this cross reference to it, or delete the reference.

Accepted, changed reference to Data buffering clause.

#3
Editorial
Clause 5.2.1
PDF page 20
"The logical unit is not ready during the transition between mounted and not mounted, or not mounted to mounted."
Grammatical quibble: non-parallel phrases. Change "between" to "from" and "and" to "to":
"The logical unit is not ready during the transition from mounted to not mounted, or not mounted to mounted."

Accepted.

#4
Editorial
PDF page 21
Fig. 2
Horizontal line to the right of "Usable" is not straight.
All descenders ('g', 'p', and 'y') in this figure are clipped.

Accepted.

#5
Editorial
Bookmarks do not have section numbers.
Please add them.

Rejected, would like to add them but I have not been able to figure out how to add bookmarks using Microsoft Word.

#6
Editorial
Clause 5.2.6
PDF page 26
4th para.
"If an unrecoverable write error occur ..."
Change "occur" to "occurs"

Accepted.

#7
Editorial
Clause 5.2.10
PDF page 29
There is an extra linefeed between numbered paragraphs b) and c).
Please remove.

Accepted.

#8
Editorial
Bookmarks, clauses 5 - 6
There is a stray bookmark, labelled only "P" immediately before the first bookmark of section. 6.
Please remove.

Accepted.

#9
Editorial
Bookmarks, general.
Clicking on a bookmark changes the zoom of the page to an unreadably small size.
Please change so that the current zoom size is maintained when moving to the selected section.

Accepted.

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Comments attached to YesC ballot from Erich Oetting of
Storage Technology Corp.:

StorageTek letter ballot comments on SSC revision 17.

1(E) p iii - Title should be Stream Devices, not Steam.

Accepted.

2(E) p 1 - Remove extra blank line after b) define commands ...

Accepted.

3(E) p 1 - Figure caption for fig. 1 should be on this page.

Accepted.

4(E) p 3 - SPC should be X3.301:1997

Accepted.

5(E) p 3 - Add SPC-2 to list after SPC.

Accepted.

6(E) p 2 - SBC should be NCITS.306:1998

Accepted.

7(E) p 2 - SMC should be NCITS.314:1998

Accepted.

8(E) p 2 - SCC is obsolete and should be removed from the list

Accepted.

9(E) p 2 - MMC should be NCITS.304:1997

Accepted.

10(E) p 3 - SPC and SMC should be moved to approved references and delete clause 2.1.2 and note 1.

Accepted, updated the references.

11(E) p 3 - SPC should be X3.301:1997

Accepted.

12(E) p 3 - SMC should be NCITS.314:1998

Accepted.

13(E) p 4 - Missing space after items in 3.3.10

Accepted.

14(E) p 16 - Clause 5.2.7, The WRITE command does not have an immediate bit. Also the problems of using tagged commands should be explainged here. Replace second sentence with: Provided the initiator does not limit the number of oustanding tagged commands, issuing tagged write commands with data buffering disabled provides the functional equivalent of issuing untagged write commands with data buffering enabled.a

Accepted.

15(T) p 16 - Clause 5.2.8,a This clause is referenced by the Read Position and Locate commands in describing a BT bit of zero.a Reading this clause, it is not clear what block identifier to return.a Replace the second paragraph of this clause with:
"The block identifier value algorithm may be defined by the applicable format standard for the media.a When not specified by the format standard, the block identifier value shall be an sequential increasing number assigned to each logical block, filemark and setmark recorded in the partition starting with zero for the recorded element at BOP."

Accepted.

16(E) p 17, paragraph 2.a Change "real physical location" to "physical location".

Accepted.

17(E) p 18, paragraph following Condition table should be reworded for clarity. The read-write error recovery page (see 5.4.3.5) current values specify behaviour when an unrecoverable read or write error is encountered.a If this page is not implemented, the behaviour is vendor-specific.

Accepted.

18(E) p 19, Remove extra blank line after b) associated write protect near bottom of page.

Accepted.

19(T) p 21, table 1.a Remove Write Filemarks command from table 1. The Immed bit in Write Filemarks specifies that filemarks are put in the buffer the same as Write data.a The function is thus complete when status is returned, unlike the other commands in the table.

Accepted.

20(E) p 25, Table 5.a Remove obsolete Change Definition command.

Accepted.

21(E) p 30, paragraph 5.a Sense DATA EOM, data should not be small caps.

Accepted.

22(E) p 34, following table 15.a Sentence should start "A beginning-of-partition (BOP) bit".

Accepted.

23(T) p 35, second paragraph.a After an error, block position may be unknown, BPU should be set in this case.a Delete sentence starting "If the BIS bit set...".

Accepted.

24(E) p 35, second paragraph.a Add blank line after paragraph.

Accepted.

25(E) p 76, Table 31.a Remove obsolete Change Definition command.

Accepted.

26(E) p 76, Table 31.a Add Report Luns command.

Accepted.

27(E) p 76, Table 31.a Remove blank lines in table.

Accepted.

28(E) p 76, Table 31.a Remove SMC from key list, it does not appear in table.

Accepted.

29(E) p 76, Table 31.a Add SPC-2 to key list as ref. for Report Luns command.

Accepted.

Further comments on SSC Rev 17.

p 22 - Clause 5.2.12.1 note c)
This should read (note the recommended action on receiving LOG SELECT is to reject the command with CHECK CONDITION and the sense key shall be ILLEGAL REQUEST)

Accepted.

p 23 - Clause5.2.12.2 bottom of page add:
d) Flags 40 - 49 For tape autoloader errors
e) Flags 50 - 64 Further tape errors

Accepted.

p 94 Remove blank box between flag 19 and 20

p 95 Remove blank box between flag 28 and 29
p 95 Remove blank box between flag 35 and 36
p 96 Remove blank box between flags 39 and 40 and 46 and 50
p 97 Remove blank box after flag 54.

Accepted.

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Comments attached to No ballot from Robert Snively of
Sun Microsystems Computer Co:

Dear Mr. Lohmeyer:

I regret that I must vote no on the document for the following reason:

Section 5.2.12.1, Tape Alert not reset correctly

The following agreement on the proper resetting of the tape alert bits is
not included in section 5.2.12.1.

  X-Unix-From: StephenG@hpcpbla.bri.hp.com Mon Jun 7 05:35:44 1999
  X-BadHeader: Mon Jun 7 05:35:44 1999
  From: "Gold, Stephen" <StephenG@hpcpbla.bri.hp.com>
  To: T10@Symbios.COM
  Subject: SSC: TapeAlert behavior with multiple initiators
  Date: Mon, 7 Jun 1999 13:25:56 +0100
  Mime-Version: 1.0

  * From the T10 Reflector (t10@symbios.com), posted by:
  * "Gold, Stephen" <StephenG@hpcpbla.bri.hp.com>
  *
  Hi all,

  Due to the concerns with TapeAlert error flags in multi-initiator
  environments, here is a suggestion for improved wording of the TapeAlert log
  page definition to cover this case.

  The suggested change is in the clearing criteria for TapeAlert flags,
  changing
    "When the TapeAlert Log page is read"
  to
    "When the TapeAlert Log page is read - note that
     in multi-initiator environments the TapeAlert flags
     should be cleared on read on a per-initiator basis
     such that set flags are still visible to other
     initiators"

Accepted.

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Comments attached to YesC ballot from Paul D. Aloisi of
Unitrode Corporation:

1. Points of Contact has several errors; John Lohmeyer - Company & Email

Accepted

2. WWW wrong address /T10 not X3T10
FTP wrong address

Accepted.

3. The scope has several errors where X3T10 is used for T10 documents.

Accepted.

4. 2 versions of the document were on the web site without a different version number. The first version had several formating errors. No Notification to the

change in the web site document or Rev Change, there should have been at least

a letter added to the end to notify people the document they downloaded for review changed.

Accepted, the first version that was place on the T10 web site did contain errors. John L. regenerated the PDF for me, (re)placed it on the T10 web site, and sent out an email to the reflector(s) indicating this change.

********** End of Ballot Report **********