Date: Sept 10, 2003

To: T10 Membership

From: Erich Oetting

Subject: SMC-2 letter ballot comment response.

SMC-2 revision 6 includes all changes marked as (A) and (P) in
revision 5 of this document.

Response Key:

(A) - Comment is accepted and suggested revision has been done.

(D) - Comment accepted, document has not yet been revised.

(R) - Comment rejected for reasons given.

(P) - Comment accepted in part or revised in another way.

(T) - Technical change.

(?) - No decision yet.

****

Comments attached to YesC ballot from Mr. Ralph O. Weber of
ENDL Texas:

ENDL 1
PDF pg 1, Global
remove change bars

(A) Change bars and strikeouts removed.

ENDL 2
PDF pg 1, Global
SCSI-3 Media Changer Commands - 2 s/b
SCSI Media Changer Commands - 2

(A) Changed all "SCSI-3 Media" to "SCSI Media".

ENDL 3
PDF pg 1, Global
Change SPC to SPC-2.

(T)(P) Agreed, except for READ ATTRIBUTE and other commands that must reference SPC-3.

ENDL 4
PDF pg 3
Remove revision history before sending SMC-2 to Public Review.

(A) Revision history has been removed.

ENDL 5
PDF pg 6, Foreword, p2, s2
SCSI-3 Architecture Model (SAM) s/b either just SAM or just SCSI-3 Architecture Model. The SAM acronym should be defined in the acronyms glossary (if used).

(A) Removed "(SAM)".

ENDL 6
PDF pg 7, Introduction, s for clause 2
Put a period at the end of this sentence.

(A) Added a period.

ENDL 7
PDF pg 12, Clause 1, 1st bullet
Delete 'over a SCSI service delivery subsystem'.

(A) Deleted.

ENDL 8
PDF pg 12, Clause 1, 3rd bullet
commands s/b commands and parameter data

(A) Text changed.

ENDL 9
PDF pg 12, Clause 1, Figure 1
Transport Protocols s/b SCSI Transport Protocols

(A) Added SCSI.

ENDL 10
PDF pg 13, Clause 1, top of page
SCSI-3 s/b SCSI

(P) Changed text on pg 12.

ENDL 11
PDF pg 13, Clause 1
Transport Protocols s/b SCSI Transport Protocols

(P) Changed pg 12, see ENDL 9.

ENDL 12
PDF pg 13, Clause 1
The example SCSI standards need a lot of work. FC-AL is no longer
current, FC-AL-2 is. FC-PH should be replaced by FC-PI. SSA-PL2
needs a year after the NCITS.307. ...

If the intention is to take SMC-2 to ISO, it would be best to
switch to ISO reference numbers wherever possible. ANSI will
accept ISO references but ISO prefers not to use ANSI references.

Look at the list in SPC-3 r08.

(T)(A) Revised list using SPC-3 r11 as a guide.

ENDL 13
PDF pg 13, Clause 1, b of pg
RE: 'The term SCSI is used wherever it is not necessary to
distinguish between the versions of SCSI.'

In these modern times, SCSI refers to SCSI-3, since SCSI-2 is
thought of as ancient history.

(A) Deleted offending sentence.

ENDL 14
PDF pg 14, Clause 2, p 2, s1
can be obtained s/b may be obtained

(A) Changed text.

ENDL 15
PDF pg 14, Clause 2
ANSI X3.270-1996 s/b ISO/IEC 14776-411

(A) Changed to ISO/IEC standard.

ENDL 16
PDF pg 14, Clause 2
ANSI X3.301-1997, Information Technology - SCSI-3 Primary Commands
s/b
ISO/IEC 14776-312, Information Technology - SCSI Primary Commands
- 2

(A) Text changed.

ENDL 17
PDF pg 14, Clause 2
The discussion of ports in SMC-2 requires that a reference be
added to SAM-2. Currently, that would have to be a reference to a
standard in development. As soon as SAM-2 goes to public review,
it should be possible to make the reference a normative reference.

(A) Changed references to SAM-2 and added SAM-2 to abbreviations list.

ENDL 18
PDF pg 14, Clause 2
The discussion of MAM in SMC-2 requires that a reference be added to SPC-3. This will have to be reference to a standard in development. MAM is discussed only in SPC-3.

(A) Reference to SPC-3 added.

ENDL 19
PDF pg 15, 3.1.1
of REQUEST SENSE command response data s/b of the sense data

(A) Text changed.

ENDL 20
PDF pg 15, 3.1.2
the SCSI-3 Architecture Model (SAM) s/b SAM

(A) Text changed.

ENDL 21
PDF pg 15, 3.1.5
So that the definition of byte is not a sentence (as is the case with most other glossary entries) 'Indicates an' s/b 'An'.

(A) Text changed.

ENDL 22
PDF pg 15, 3.1.7
command descriptor block: s/b command descriptor block (CDB):

(A) Text changed.

ENDL 23
PDF pg 15, 3.1.7
To acknowledge variable length CDBs, delete 'up to 16 bytes in length'.

(A) Text removed.

ENDL 24
PDF pg 15, 3.1.11
can serve s/b may serve

(A) Text changed.

ENDL 25
PDF pg 15, 3.1.12
Delete the definition for 'extent' because the term should not be used in SMC-2.

(A) Definition removed.

ENDL 26
PDF pg 16, 3.1.15
Delete the definition for 'host' because the term should not be
used in SMC-2.

(A) Definition removed.

ENDL 27
PDF pg 16, 3.1.16
can be accessed s/b may be accessed

(A) Text changed.

ENDL 28
PDF pg 16, 3.1.18
initiator s/b SCSI initiator device [note this will move the entry
to a different position in the glossary]

(A) Changed to SCSI initiator device and moved.

ENDL 29
PDF pg 16, 3.1.18
an initiator may be found in SAM s/b a SCSI initiator device may
be found in SAM-2

(A) Text changed.

ENDL 30
PDF pg 16, 3.1.19
Delete 'which collectively make up a discrete I/O operation' Or at
a minimum, change 'which' to 'that'.

(A) Text deleted.

ENDL 31
PDF pg 16, 3.1.20
target s/b SCSI target device

(A) Text changed.

ENDL 32
PDF pg 16, 3.1.21
Remove '64-bit'

(A) Text deleted.

ENDL 33
PDF pg 16, 3.1.26
To avoid having a glossary entry start with a complete sentence,

'Several commands use regular parameter structures that are referred to as pages.' s/b 'A regular parameter structure (or format) used by several commands.'

(A) Text modified.

ENDL 34
PDF pg 16, 3.1.27
Delete the definition for 'port' because the correct term now is SCSI target port.

(A) Definition deleted.

ENDL 35
PDF pg 16, 3.1.29
SCSI-3 protocol standard s/b SCSI transport protocol standard

(A) Text changed.

ENDL 36
PDF pg 17, insert after 3.1.31
Add the following new glossary entries.

SCSI initiator port: A SCSI initiator device object that acts as the connection between application clients and and the service delivery subsystem through which requests and responses are routed. A detailed definition of SCSI target port may be found in SAM-2.

SCSI target port: A SCSI target device object that acts as the connection between device servers and task managers and the service delivery subsystem through which requests and responses are routed. A detailed definition of SCSI target port may be found in SAM-2.

(A) Added two new entries.

ENDL 37
PDF pg 17, 3.1.34
initiator s/b application client

(A) Text changed.

ENDL 38
PDF pg 17, 3.1.38
target s/b SCSI target device (note this will move the entry to a different position in the glossary)

(A) Entry modified as suggested.

ENDL 39
PDF pg 17, 3.1.38
initiator s/b application client

(A) Text changed.

ENDL 40
PDF pg 17, 3.1.38, s 2
target may be found in SAM s/b SCSI target device may be found in
SAM-2

(A) Text changed.

ENDL 41
PDF pg 17, 3.1.40
queuing and autocontingent allegiance rules s/b queuing,
contingent allegiance, and auto contingent allegiance rules

(A) Text changed.

ENDL 42
PDF pg 17, 3.1.41
reference to RESERVE or RELEASE commands s/b
reference to the RESERVE ELEMENT or RELEASE ELEMENT commands

(A) Text changed.

ENDL 43
PDF pg 17, 3.1.42
initiators s/b SCSI initiator ports

(A) Text changed.

ENDL 44
PDF pg 18, 3.2, Symbols and abbreviations
Add '= is equal to' as a symbol definition because of the frequent
use of bit=0 and bit=1 in several tables.

(A) Symbol added.

ENDL 45
PDF pg 18, 3.2
MMC SCSI-3 Multi-Media Commands standard s/b
MMC-3 SCSI Multi-Media Commands -3 standard

(A) Text changed.

ENDL 46
PDF pg 18, 3.2, SMC-2
SCSI-3 Media Changer Commands - 2 standard s/b
SCSI Media Changer Commands -2, this standard

(A) Text changed.

ENDL 47

PDF pg 18, 3.2
add an acronym entry for SPC-3.

(A) SPC-3 added.

ENDL 48
PDF pg 18, 3.2
The abbreviations list should just be a list, not a bulleted list.

(A) Bullets removed.

ENDL 49
PDF pg 19, 3.3.6
this standards s/b this standard

(A) Text changed.

ENDL 50
PDF pg 19, 3.3.7, s1
future extension to this standard s/b future version of this
standard

(A) Text changed.

ENDL 51
PDF pg 19, 3.4, s3
The text 'If a conflict arises between text, tables, or figures,
...'
should begin a new paragraph.

(A) Text changed.

ENDL 52
PDF pg 20, Clause 4, p1, s1 & s2
SCSI-3 s/b SCSI [twice]

(A) Text changed.

ENDL 53
PDF pg 20, Clause 4, p1, s1
they can s/b that may

(A) Text changed in p3, not p1.

ENDL 54
PDF pg 20, Clause 4, p 4, s 1 & s 3
initiators s/b SCSI initiator ports and
initiator s/b SCSI initiator port

(A) Text changed.

ENDL 55
PDF pg 21, Clause 4, Figure 2

'Port' s/b 'SCSI target port' or 'SCSI Target Port' [3 times]

(P) Changed to SCSI Target Port on the Media Changer. As the
other ports may not be SCSI, these were left as port. Changed
text just before Figure 2 from "port" to "SCSI target port".

ENDL 56
PDF pg 21, Clause 4, last p on pg, s1
initiator s/b application client

(A) Text changed.

ENDL 57
PDF pg 22, 5.1, p2, s1
the SMC-2 standard s/b this standard

(A) Text changed.

ENDL 58
PDF pg 22, 5.1, p3
port s/b SCSI target port

(A) Text changed.

ENDL 59
PDF pg 22, 5.1, p3
independent ports s/b independent SCSI target ports

(A) Text changed.

ENDL 60
PDF pg 22, 5.3, bulleted list
The list should be an a,b,c list.

(A) List format changed.

ENDL 61
PDF pg 23, 5.3, 1st p on pg, s 3
'However, multiple initiator environments may cause volumes to be
moved without notifying other initiators.' s/b 'However, in
configurations with multiple initiators, volumes may be moved by
one application client without notification to other application
clients.'

(A) Text changed.

ENDL 62
PDF pg 23, 5.3, 2nd p on pg, s2
Volumes can be s/b Volumes may be

(A) Text changed.

ENDL 63
PDF pg 23, 5.3, 3rd p on pg, s 1
an initiator s/b a SCSI initiator port

(A) Text changed.

ENDL 64
PDF pg 23, 5.3, 3rd p on pg, s2
will be lost s/b shall be released

(A) Text changed.

ENDL 65
PDF pg 23, 5.3, 3rd p on pg, s3
will be retained s/b shall be retained

(A) Text changed.

ENDL 66
PDF pg 23, 5.3, 4th p on pg, s2
can be s/b may be

(A) Text changed.

ENDL 67
PDF pg 23, 5.3, Note 1, s 2
could be provided by a port which allows s/b
may be provided by a port that allows

(A) Text changed.

ENDL 68
PDF pg 23, 5.4, p1, s2
can serve s/b may serve

(A) Text changed.

ENDL 69
PDF pg 23, 5.4, last p on pg, s 2
initiator s/b application client

(A) Text changed.

ENDL 70
PDF pg 24, 5.5, p1, s3
the SMC-2 device s/b the device

(A) Removed SMC-2.

ENDL 71
PDF pg 25, 5.9, p1, s2
which may be s/b that may be

(A) Text changed.

ENDL 72
PDF pg 25, 5.9, p 1, s 3
initiators s/b SCSI initiator ports & initiator s/b SCSI initiator
port [twice]

(A) Text changed.

ENDL 73
PDF pg 25, 5.9, bulleted list
The list should be an a,b,c list.

(A) List format changed.

ENDL 74
PDF pg 26, 5.10, p 1, last s
initiator s/b application client

(A) Text changed.

ENDL 75
PDF pg 27, 6.1, Table 2
Table 2 should have column titles and the key on every page.

(A) Column titles added to second page of table.

ENDL 76
PDF pg 29, 6.3, p 4, s 1, & p 5, s 1
issued by initiators s/b received from SCSI initiators [once each
p] by initiators s/b from SCSI initiator ports [once each p]

(A) Text changed.

ENDL 77
PDF pg 29, 6.3, p 4, s 1
registrantsonly s/b registrants only or all registrants

(A) Text changed.

ENDL 78
PDF pg 29, 6.3, p 5, s 1
registrants only s/b registrants only or all registrants

(A) Text changed.

ENDL 79
PDF pg 29, 6.3, p 6, s 1 & s 2
initiators s/b SCSI initiator ports [twice]

(A) Text changed.

ENDL 80

PDF pg 29, 6.3, p7 & p8
remove strikeout text

(A) Text has been removed.

ENDL 81
PDF pg 30, 6.3, Table 4
Initiator s/b initiator [twice]

(A) Table headings changed.

ENDL 82
PDF pg 31, 6.4, p 3
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph has been removed.

ENDL 83
PDF pg 31, 6.4, Table 5
Add MSB and LSB information for the MEDIUM TRANSPORT ADDRESS,
SOURCE ADDRESS, FIRST DESTINATION ADDRESS, and SECOND DESTINATION
ADDRESS fields.

(A) MSB and LSB added.

ENDL 84
PDF pg 31, 6.4, 1st p after table 5, s 4
which defines s/b that defines

(A) Text changed.

ENDL 85
PDF pg 32, 6.4, last p on pg, s2
a logical unit which is not capable s/b
a device sever that is not capable

(A) Text changed.

ENDL 86
PDF pg 33, 6.5, p 1, s 2
Initiator s/b application client

(A) Text changed.

ENDL 87
PDF pg 33, 6.5, 3rd p after table 6
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph removed.

ENDL 88

PDF pg 34, 6.6, p 1, s 1
ELEMENT STATUS WITH RANGE s/b INITIALIZE ELEMENT STATUS WITH RANGE

(P) Changed to "The INITIALIZE ELEMENT ..."

ENDL 89
PDF pg 34, 6.6, p 1, s 2
Initiator s/b application client

(A) Text changed.

ENDL 90
PDF pg 34, 6.6, p 1, s 3
power failure, or if a s/b power failure, if a [currently there
are two 'or's in the sentence where there should be one]

(A) "or" removed.

ENDL 91
PDF pg 34, 6.6, Table 7
Add MSB and LSB information for the STARTING ELEMENT ADDRESS and
NUMBER OF ELEMENTS fields.

(A) Done

ENDL 92
PDF pg 34, 6.6, 4th p after table 7
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.
(A) Paragraph removed.

ENDL 93
PDF pg 35, 6.7, p 1, s 1
target s/b device server

(A) Text changed.

ENDL 94
PDF pg 35, 6.7, p 2
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph removed.

ENDL 95
PDF pg 35, 6.7, Table 8
Add MSB and LSB information for the MEDIUM TRANSPORT ADDRESS,
SOURCE ADDRESS, and DESTINATION ADDRESS fields.

(A) Table format fixed.

ENDL 96
PDF pg 35, 6.7, 3rd p after table 8, s 1 & s 3

target s/b device server [twice]

(A) Text changed.

ENDL 97
PDF pg 36, 6.7, 1st p on pg, s 3, 2nd p on pg s 2, 4th p on pg, s
3 target s/b device server [3 times]

(A) Text changed in three places.

ENDL 98
PDF pg 37, 6.8, p 3
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Text removed.

ENDL 99
PDF pg 37, 6.8, Table 9
Add MSB and LSB information for the MEDIUM TRANSPORT ADDRESS and
DESTINATION ADDRESS fields.

(A) Table format fixed.

ENDL 100
PDF pg 38, 6.9
Insert 6.9.1 READ ATTRIBUTE command introduction [to eliminate
hanging paragraphs]

(P) Added subheader for READ ATTRIBUTE introduction.

ENDL 101
PDF pg 38, 6.9, p 3
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph removed.

ENDL 102
PDF pg 38, 6.9, Table 10
Do not capitalize field names such as Element type code, First
attribute id, and Allocation length.

(A) Text in table modified.

ENDL 103
PDF pg 38, 6.9, Table 10, byte 5
Volume number s/b in small caps starting with a lower case v

(A) Format changed.

ENDL 104
PDF pg 38, 6.9, Table 10, byte 6

Capitalize Reserved so that byte 6 looks like bytes 1 and 8.

(A) Text modified.

ENDL 105
PDF pg 38, 6.9, Table 10, byte 7
Partition number s/b in small caps starting with a lower case p

(A) Format changed.

ENDL 106
PDF pg 38, 6.9, 1st p after table 10, s 1
resides (as part of a medium) s/b resides as part of a medium.

(A) Text modified.

ENDL 107
PDF pg 39, 6.9, 1st p on pg, s 2
SPC s/b SPC-3 [only SPC-3 describes MAM]

(A) Changed to SPC-3.

ENDL 108
PDF pg 39, 6.9, 1st p after table 11, s 1
'command, see SPC' s/b 'command see SPC-3'

(A) Text modified.

ENDL 109
PDF pg 39, 6.9, 2nd p after table 11
ELEMENT LIST service action s/b
6.9.2 ELEMENT LIST service action
(a subclause header)

(A) Changed to subheader.

ENDL 110
PDF pg 39, 6.9, Table 12, bytes 0-3
Available data s/b in small caps starting with a lower case a

(A) Format changed.

ENDL 111
PDF pg 39, 6.9, Table 12, byte 4
Element type code s/b in small caps starting with a lower case e

(A) Format changed.

ENDL 112
PDF pg 39, 6.9, Table 12
Add MSB and LSB information for the FIRST ELEMENT ADDRESS and
NUMBER OF ELEMENTS fields.

(A) Table format fixed.

ENDL 113
PDF pg 39, 6.9, Table 12, bytes 5 & 6
First Element Address s/b in small caps starting with a lower case
f

(A) Format changed.

ENDL 114
PDF pg 39, 6.9, Note 5
shall contain s/b contain
(or note 5 is not a note)

(P) Note modified to remove the word shall.

ENDL 115
PDF pg 40, 6.10
Insert 6.10.1 READ ELEMENT STATUS introduction [to eliminate
hanging paragraphs]

(A) Subheader added.

ENDL 116
PDF pg 40, 6.10, p 1, s 1
target s/b device server & initiator s/b application client

(A) Text changed.

ENDL 117
PDF pg 40, 6.10, Table 13
Add MSB and LSB information for the STARTING ELEMENT ADDRESS,
NUMBER OF ELEMENTS, and ALLOCATION LENGTH fields.

(A) Table format fixed.

ENDL 118
PDF pg 40, 6.10, 2nd p after table 13, s 1, 3rd p after table 13,
s 1 & s 2 target s/b device server [3 times]

(A) Text modified.

ENDL 119
PDF pg 40, 6.10, p 4 after table 13
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3. (Note, this paragraph continues on
the top of PDF pg 41.)

(A) Paragraph removed.

ENDL 120
PDF pg 41, 6.10, 2nd p after table 14, s 1, 3rd p after table 14,
s 1 & s 2 target s/b device server [3 times]

(A) Text modified.

ENDL 121
PDF pg 41, 6.10, 2nd p after table 14, s3
'the target shall transfer all those descriptors that can be
completely transferred' s/b 'the device server shall transfer all
those descriptors whose complete contents fit within the
allocation length'

(A) Text modified.

ENDL 122
PDF pg 42, 6.10.1, Table 15
Add MSB and LSB information for the FIRST ELEMENT ADDRESS
REPORTED, NUMBER OF ELEMENTS AVAILABLE, and BYTE COUNT OF REPORT
AVAILABLE fields.

(A) Table format fixed.

ENDL 123
PDF pg 42, 6.10.1, Note 6
can be issued s/b may be issued

(A) Text changed.

ENDL 124
PDF pg 43, 6.10.2, Table 16
Add MSB and LSB information for the ELEMENT DESCRIPTOR LENGTH and
BYTE COUNT OF DATA AVAILABLE fields.

(A) Table format fixed.

ENDL 125
PDF pg 44, 6.10.3, Table 17
Add MSB and LSB information for the ELEMENT ADDRESS and SOURCE
STORAGE ELEMENT ADDRESS fields.

(A) Information added.

ENDL 126
PDF pg 46, 6.10.4, Table 18
Add MSB and LSB information for the ELEMENT ADDRESS and SOURCE
STORAGE ELEMENT ADDRESS fields.

(A) Information added.

ENDL 127
PDF pg 48, 6.10.5, Table 19
Add MSB and LSB information for the ELEMENT ADDRESS and SOURCE
STORAGE ELEMENT ADDRESS fields.

(A) Information added.

ENDL 128
PDF pg 48, 6.10.5, Table 19, byte 1
'Rsvd' s/b 'RSVD' and 'cmc' should be in small caps.

(A) Table changed.

ENDL 129
PDF pg 50, 6.10.6, Table 20
Add MSB and LSB information for the ELEMENT ADDRESS and SOURCE
STORAGE ELEMENT ADDRESS fields.

(A) Information added.

ENDL 130
PDF pg 50, 6.10.6, Table 20, byte 6
NOT BUS should begin with a lower case n, ID VALID should begin
with a lower case i, and LU VALID should begin with a lower case
l.

(P) Fields made obsolete instead.

ENDL 131
PDF pg 51, 6.10.6, Note 8, s3
can only reflect s/b only reflects

(A) Text modified.

ENDL 132
PDF pg 53, 6.11
Insert 6.11.1 RELEASE ELEMENT (6) introduction [to eliminate
hanging paragraphs]

(A) Subheader added.

ENDL 133
PDF pg 53, 6.11, 1st p after table 22, s 1
The following requirement conflicts with the intentions of
approved proposal 02-108r0: 'Attached media changers shall
implement the RESERVE(6) command as defined in the SPC.' Remove
it.

(A) Text deleted. Second sentence moved to paragraph before
table.

ENDL 134
PDF pg 53, 6.11, note 9
Remove this note because the SPC-2 RESERVE(6) command does not
define an EXTENT bit.

(A) Note removed.

ENDL 135

PDF pg 53, 6.11, 1 st p after note 9, s 1
multiple initiator systems s/b configurations with multiple
initiators

(A) Text modified.

ENDL 136
PDF pg 53, 6.11, 1 st p after note 9, s 2
RELEASE command s/b RELEASE ELEMENT command

(A) Text modified.

ENDL 137
PDF pg 53, 6.11.1
Logical unit release is not a complementary function to the
logical unit reserve function described in 6.14.1. 6.11.1 needs
some form of counterpart for the 6.14.1 statement: 'If the ELEMENT
bit is zero, this command shall request that the entire logical
unit be reserved for the exclusive use of the initiator as defined
in SPC.' However, SPC should be replaced with SPC-2.

(A) Added text to make device server actions clear and reference
SPC-2.

ENDL 138
PDF pg 53, 6.11.1, p 1, s 1, also 6.11.2, p 1, s 1
terminate s/b release & terminated s/b released

(A) Text modified.

ENDL 139
PDF pg 53, 6.11.1, p 1, s 1
initiator s/b SCSI initiator port

(A) Text modified.

ENDL 140
PDF pg 53, 6.11.2, p 1, s 1 & s 2
initiator s/b SCSI initiator port [twice]

(A) Text modified.

ENDL 141
PDF pg 54, 6.12, subclause header
Make the 6.12 header text the same font size as the 6.11 header.

(A) Format changed.

ENDL 142
PDF pg 54, 6.12
Insert 6.12.1 RELEASE ELEMENT (10) introduction [to eliminate
hanging paragraphs]

(A) Subheader added.

ENDL 143
PDF pg 54, 6.12, Table 23
Add MSB and LSB information for the PARAEMTER LIST LENGTH field.

(A) Information added.

ENDL 144
PDF pg 54, 6.12.1, p 1, s 1
RELEASE ELEMENT command
s/b RELEASE ELEMENT (10) command

(A) Text modified.

ENDL 145
PDF pg 54, 6.12.1, p 1, s 1
initiator s/b application client

(A) Text modified.

ENDL 146
PDF pg 54, 6.12.1, p 1, s 1 [x2] & p 2, s 2 [x1]
unit s/b logical unit [3 times]

(A) Text modified.

ENDL 147
PDF pg 54, 6.12.1, p 2, s 2
target s/b SCSI device

(A) Text modified.

ENDL 148
PDF pg 54, 6.12.1, p 2, s 2
target s/b device server

(A) Text modified.

ENDL 149
PDF pg 54, 6.12.1, p 2, s 2
initiator s/b SCSI initiator port

(A) Text modified.

ENDL 150
PDF pg 55, 6.12.1, 2nd p on pg, s 1
In 'the PARAMETER LIST LENGTH', parameter list length should not
be in small caps because it is not followed by the word 'field'.
[twice]

(A) Added the word 'field'.

ENDL 151
PDF pg 55, 6.12.1, Table 24
Add MSB and LSB information for the THIRD PARTY DEVICE ID field.

(A) Information added.

ENDL 152
PDF pg 55, 6.13, p 3
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Text removed.

ENDL 153
PDF pg 55, 6.13, p5, s2
will be reported s/b shall be reported

(A) Text modified.

ENDL 154
PDF pg 56, 6.13, note 10, s 1
multi-initiator environment s/b configuration with multiple SCSI
initiator devices

(A) Text modified.

ENDL 155
PDF pg 56, 6.13, note 10, s 1
initiator s/b SCSI initiator port

(A) Text changed.

ENDL 156
PDF pg 56, 6.13, Table 25
Add MSB and LSB information for the ELEMENT ADDRESS, NUMBER OF
ELEMENTS TO REPORT, and ALLOCATION LENGTH fields.

(A) Information added.

ENDL 157
PDF pg 57, 6.13, 1st p on pg, s 3
'the logical unit shall transfer all those descriptors that can be
completely transferred' s/b 'the device server shall transfer all
those descriptors whose complete contents fit within the
allocation length'

(A) Text modified.

ENDL 158
PDF pg 57, 6.13, Table 26
Add MSB and LSB information for the FIRST ELEMENT ADDRESS
REPORTED, NUMBER OF ELEMENTS REPORTED, and BYTE COUNT OF REPORT
AVAILABLE fields.

(A) Information added.

ENDL 159
PDF pg 57, 6.13, 2nd p after table 26, s 1
'see the READ ELEMENT STATUS command description' s/b 'see the
READ ELEMENT STATUS command description in 6.10'

(A) Text added.

ENDL 160
PDF pg 58, 6.14
Insert 6.14.1 RESERVE ELEMENT (6) introduction [to eliminate
hanging paragraphs]

(A) Subheader added.

ENDL 161
PDF pg 58, 6.14, Table 27
The line between bytes 3 and 4 should be a dash line, like the
line between bytes 3 and 4 in table 22.

(R) All dashed lines in tables have been removed to make the style
match other T10 documents.

ENDL 162
PDF pg 58, 6.14, 1 st p after table 27, s 1
multiple-initiator systems s/b configurations with multiple SCSI
initiator devices

(A) Text modified.

ENDL 163
PDF pg 58, 6.14, 2nd p after table 27, s 2
The following requirement conflicts with the intentions of
approved proposal 02-108r0: 'Attached media changers shall
implement the RESERVE (6) command as defined in SPC.' Remove it.

(A) Text removed.

ENDL 164
PDF pg 58, 6.14, note 11
Remove this note because the SPC-2 RESERVE(6) command does not
define an EXTENT bit.

(A) Note deleted.

ENDL 165
PDF pg 58, 6.14.1, p 1, s 1
initiator s/b SCSI initiator port

(A) Text changed.

ENDL 166
PDF pg 58, 6.14.1, p2 & p 3
Remove the two paragraphs describing reservation conflicts because
that subject is now covered in 6.3.

(A) Text removed.

ENDL 167
PDF pg 59, 6.14.2, p 5, s 1
initiator s/b SCSI initiator port [three times]

(A) Text modified.

ENDL 168
PDF pg 59, 6.14.2, bulleted list
This list should be a 1,2,3 list.

(A) List format changed.

ENDL 169
PDF pg 59, 6.14.2, 1st p after bulleted list, s 1
the ELEMENT LIST LENGTH parameter s/b the ELEMENT LIST LENGTH
field

(A) Text modified.

ENDL 170
PDF pg 60, 6.14.2, Table 28
Add MSB and LSB information for the NUMBER OF ELEMENTS and ELEMENT
ADDRESS fields.

(A) Information added.

ENDL 171
PDF pg 60, 6.14.2, 1 st p after table 28
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph deleted.

ENDL 172
PDF pg 60, 6.15
Insert 6.15.1 RESERVE ELEMENT (10) introduction [to eliminate
hanging paragraphs]

(A) Subheader added.

ENDL 173
PDF pg 61, 6.15, Table 29
Add MSB and LSB information for the PARAMETER LIST LENGTH field.

(A) Information added.

ENDL 174
PDF pg 61, 6.15, 1 st p after table 29, s 1
multiple-initiator systems s/b configurations with multiple SCSI
initiator devices

(A) Text modified.

ENDL 175
PDF pg 61, 6.15, note 12
Remove this note because the SPC-2 RESERVE(10) command does not
define an EXTENT bit.

(A) Note removed.

ENDL 176
PDF pg 61, 6.15.1, p 1, s 1
RESERVE command s/b RESERVE ELEMENT (10) command

(A) Text changed.

ENDL 177
PDF pg 61, 6.15.1, p 2, s 3
'The target shall preserve the reservation' s/b 'The reservation
shall be preserved'

(A) Text changed.

ENDL 178
PDF pg 61, 6.15.1, p 2, s 2
RESERVE command s/b RESERVE ELEMENT (10) command

(A) Changed RESERVE to RESERVE ELEMENT (10).

ENDL 179
PDF pg 61, 6.15.1, p 2, s 3 & s 4
initiator s/b SCSI initiator port [4 times]

(A) Text changed.

ENDL 180
PDF pg 61, 6.15.1, p 2, s 4
target s/b device server

(A) Text changed.

ENDL 181
PDF pg 62, 6.15.1, 1st p on pg, s 1
initiator s/b SCSI initiator port [twice]

(A) Text changed.

ENDL 182
PDF pg 62, 6.15.1, 1st p on pg, s 1, 6.15.2, p 1, s 1, & p 1, s 2

RESERVE command s/b RESERVE ELEMENT (10) command [3 times]

(P) Changed to RESERVE ELEMENT (6) or RESERVE ELEMENT (10) where appropriate.

ENDL 183
PDF pg 62, 6.15.1, 1 st p on pg, s 2
Delete the following: 'Reservation conflicts shall occur in all cases where another initiator is not allowed access due to the reservation.' because it is covered in 6.3.

(A) Text deleted.

ENDL 184
PDF pg 62, 6.15.2, p 1, s 1
initiator s/b SCSI initiator port [twice]

(A) Once instance changed. Replaced the word 'unit' in this sentence with device server.

ENDL 185
PDF pg 62, 6.15.2, p 1, last s
target s/b device server

(A) Text modified.

ENDL 186
PDF pg 62, 6.15.2, note 13
remove 'principally'

(A) Word deleted.

ENDL 187
PDF pg 62, 6.15.2, 1st p after note 13, s 1
THIRD PARTY DEVICE ID is s/b THIRD PARTY DEVICE ID field is

(A) Text modified.

ENDL 188
PDF pg 62, 6.15.2, last p before table 30
extent list length s/b element descriptor list length

(A) Text modified.

ENDL 189
PDF pg 62, 6.15.2, 4th p after note 13, s 1
In 'PARAMETER LIST LENGTH minus', parameter list length should not be in small caps because it is not followed by the word 'field'.

(A) Changed font to normal from small caps.

ENDL 190
PDF pg 62, 6.15.2, Table 30

Add MSB and LSB information for the THIRD PARTY DEVICE ID field.

(A) Information added.

ENDL 191
PDF pg 63, 6.16, p 2
Remove the paragraph describing reservation conflicts because that
subject is now covered in 6.3.

(A) Paragraph deleted.

ENDL 192
PDF pg 63, 6.16, Table 31
Add MSB and LSB information for the ELEMENT ADDRESS and PARAMETER
LIST LENGTH fields.

(A) Information added.

ENDL 193
PDF pg 63, 6.16, 1st p after table 31, s 2 & s 4
SEND ACTION CODE s/b SEND ACTION CODE field [twice]

(A) Text modified.

ENDL 194
PDF pg 64, 6.16, 1st p on pg, s 2 & s 3
SEND ACTION CODE s/b SEND ACTION CODE field [twice]

(A) Text modified.

ENDL 195
PDF pg 65, 6.16, Table 33
Add MSB and LSB information for the VOLUME IDENTIFICATION
TEMPLATE, MINIMUM VOLUME SEQUENCE NUMBER, and MAXIMUM VOLUME
SEQUENCE NUMBER fields.

(A) Information added.

ENDL 196
PDF pg 66, 6.16, 1st bulleted list on pg, both bullets
will match s/b shall match

(A) Text changed.

ENDL 197
PDF pg 66, 6.16, bulleted list
This list should be an a,b list.

(A) List format changed.

ENDL 198
PDF pg 66, 6.16, 2nd p after bulleted list, s 2
will meet s/b meets

(A) Text modified.

ENDL 199
PDF pg 67, 6.17, Table 34
Add MSB and LSB information for the ELEMENT ADDRESS and PARAMETER
LIST LENGTH fields. Also VOLUME NUMBER should begin with a lower
case v and PARTITION NUMBER should begin with a lower case p.

(A) Changed case in two places. Added MSB and LSB.

ENDL 200
PDF pg 67, 6.17, 1st p after table 34, s 1
resides (as part of a medium) s/b resides as part of a medium

(A) Text changed.

ENDL 201
PDF pg 67, 6.17, 3rd p after table 34, s 1
SPC-2 s/b SPC-3 [the MAM commands are not defined in SPC-2]

(A) Text changed.

ENDL 202
PDF pg 69, 7.2.2, heading
page. s/b page (remove the period)

(A) Period removed.

ENDL 203
PDF pg 69, 7.2.2, p 1, s 2
of this document s/b of this standard

(A) Text changed.

ENDL 204
PDF pg 69, 7.2.2, p 2
Regarding: 'EDITORS NOTE: TapeAlert log page description should be
moved here and renamed to avoid the reference to SSC.'

At a minimum, remove this paragraph. If it is still desirable to
move the TapeAlert log page description to SMC-2, then do so.

(A) Added Tape Alert model section and defined log page.
Descriptive test started with what was in SSC-2.

ENDL 205
PDF pg 70, 7.3
Insert 7.3.1 Mode parameters overview [to eliminate hanging
paragraphs]

(P) Added subheader "Mode Page codes"

ENDL 206
PDF pg 72, 7.3.1, heading, p1, and table 38 title
The current editorial agreement is that 'Device Capabilities' may
be capitalized when it is followed by the exact words 'mode page'.

(A) Used 'Device Capabilities mode page' in three places.

ENDL 207
PDF pg 72, 7.3.1, p 1, s 3
initiator s/b application client

(A) Text modified.

ENDL 208
PDF pg 72, 7.3.1, 1st p after table 38, s 3
target s/b SCSI device

(A) Text modified.

ENDL 209
PDF pg 73, 7.3.1, bulleted list
This list should be an a,b,c list.

(A) List format changed.

ENDL 210
PDF pg 73, 7.3.1, 2 nd & 3 rd p after bulleted list, last s
In both paragraphs... 'Those which are not valid will be rejected
with ILLEGAL REQUEST.' s/b 'Those that are not valid shall be
rejected with a CHECK CONDITION status and ILLEGAL REQUEST sense
key.'

(A) Text modified.

ENDL 211
PDF pg 74, 7.3.2, heading, p1, and table 39 title
The current editorial agreement is that 'Element Address
Assignment' may be capitalized when it is followed by the exact
words 'mode page'.

(A) Changed all three to 'Element Address Assignment mode page'.

ENDL 212
PDF pg 74, 7.3.2, Table 39
Add MSB and LSB information for the FIRST MEDIUM TRANSPORT ELEMENT
ADDRESS, NUMBER OF MEDIUM TRANSPORT ELEMENTS, FIRST STORAGE
ELEMENT ADDRESS, NUMBER OF STORAGE ELEMENTS, FIRST IMPORT/EXPORT
ELEMENT ADDRESS, NUMBER OF IMPORT/EXPORT ELEMENTS, FIRST DATA
TRANSFER ELEMENT ADDRESS, and NUMBER OF DATA TRANSFER ELEMENTS
fields.

(A) Information added.

ENDL 213
PDF pg 74, 7.3.2, 1st p after table 33, s 3
target s/b SCSI device

(A) Changed target to device server. Is SCSI device really
correct? Changed to SCSI device.

ENDL 214
PDF pg 75, 7.3.2, global on pg
target s/b device server [4 times]

(A) Text changed.

ENDL 215
PDF pg 75, 7.3.2, last p before 7.3.3, s 1
must have s/b shall have

(A) Text changed.

ENDL 216
PDF pg 75, 7.3.3, heading, p1, and table 40 title
The current editorial agreement is that 'Transport Geometry
Parameters' may be capitalized when it is followed by the exact
words 'mode page'.

(A) Changed to 'Transport Geometry Parameters mode page' in three
places.

ENDL 217
PDF pg 75, 7.3.3, p 1, s 1
defines s/b indicates

(A) Text modified.

ENDL 218
PDF pg 75, 7.3.3, p 1, s 1
'that share a common robotics subsystem' s/b 'that share common
robotics'

(A) Text modified.

ENDL 219
PDF pg 75, 7.3.3, p 1, s 2 & 3
'element. (Other than the default transport element address of
zero.)' s/b 'element (other than the default medium transport
address of zero).' as is the case in the description of FIRST
MEDIUM TRANSPORT ELEMENT ADDRESS.

(A) Text modified.

ENDL 220
PDF pg 75, 7.3.3, p 1, last s

Regarding: 'An attached media changer shall not return this page.'

Remove this sentence because the requirement it states is already stated in 7.3 and because none of the other mode page descriptions contain a similar sentence.

(A) Text removed.

ENDL 221
PDF pg 76, 7.3.3, 1st p after table 40, s 3
target s/b SCSI device

(A) Text modified.

ENDL 222
PDF pg 76, 7.3.3, 2nd p after table 41, s 1 'that share a common robotics subsystem' s/b 'that share common robotics'

(A) Text modified.

ENDL 223
PDF pg 76, 7.3.3, Note 15
'(The individual transport element is addressed [not the robotics subsystem]. An element is defined to be a place where a unit of media may be at any point in time. See clause 5.)' s/b 'The individual transport element is addressed, not the robotics subsystem. An element is defined to be a place where a unit of media may be at any point in time. See clause 5.'

(A) Text modified.

ENDL 224
PDF pg 77, Annex A, Table
The table in Annex A should have a title, including a table number of 'Table A.1'. The table should have column headings and key information on every page.

(A) Table tile, number, headers and keys added to each page.

ENDL 225
PDF pg 77, Annex A, code 05h
which s/b that

(A) Text modified.

ENDL 226
PDF pg 77, Annex A, code 06h
Replace 'host interface' with a more specific term, e.g., 'service delivery subsystem'.

(R) Host interface is probably more clear to an operator.

ENDL 227

PDF pg 79, Annex A, code 12h
can not s/b cannot

(A) Space removed.

ENDL 228
PDF pg 81, Annex A
Remove the periods from the list entries in the Type Key and Flag
Type Key lists in the Annex A table note.

(A) Periods removed.

****

Comments attached to YesC ballot from Mr. Joe Breher of
Exabyte Corp.:

Exabyte 1
E
doc page 3 - Revision History, Rev 0 "Restored Third Party ID
field in Table 24, Reserve Element (10) command." s/b "...Table
29..."

(P) Revision History has been removed.

Exabyte 2
T
doc page 15 - 3.1.7
"3.1.7 command descriptor block: The structure up to 16 bytes in
length used to communicate commands from an application client to
a device server." CDBs may be over 16 bytes.

(A) 'up to 16 bytes' removed.

Exabyte 3
E
doc page 19 - 3.3.x
Add definition of 'restricted' as per SPC

(R) Will continue to use the word Reserved instead.

Exabyte 4
E
doc page 20 - 4 Overview, several other places "data transport
element" s/b "data transfer element"
The (undefined) term data transport element is used in several
places in the document.
So is the (defined) term data transfer element. Data transport

element seems to be an alias for data transfer element. Suggest
replace throughout.

(A) Replaced three cases of 'data transport'.

Exabyte 5
E
doc page 22 – 5.1 Independent media changer, 1st sentence:
"An independent mediachanger is a device server that returns..."
s/b "An independent media changer is a device server that
returns..."

(A) Space added.

Exabyte 6
T
doc page 23 – 5.4 Medium transport element, 1st para, last
sentence
"The maximum number of medium transport elements is 127."
Why? This seems like a totally arbitrary restriction.
Suggest removing this bound.

(R) Structure of Transport Geometry Parameters mode page places a
limit on number of transports. The one byte length field and two
bytes of information per transport leaves room for only 127
elements.

Exabyte 7
E
doc page 24 – 5.6 Import/export element, 1st sentence
"Import/export elements are locations of volumes thatare being
inserted into or..."
s/b
"Import/export elements are locations of volumes that are being
inserted into or..."

(A) Space added.

Exabyte 8
E
doc page 24 – 5.6 Import/export element, 2nd sentence
"...(i.e., cascaded media changer devices)."
Should "cascaded" be replaced with "connected"? This is the only
place in the entire doc where "cascade*" is used.

(P) Replaced with "interconnected".

Exabyte 9

T
doc page 27 - Table 2
CHANGE DEFINITION is obsolete in SPC-2, SPC-3. We should probably
remove it from this table.

(A) Command removed from table.

Exabyte 10
T
doc page 27 - Table 2
Opcode for RELEASE ELEMENT (6) is listed as 16h.
s/b 17h

(A) Changed opcode.

Exabyte 11
E
doc page 28 - Table 2
"SEND DIAGNOSTIC" is in different font from other entries.

(A) Changed format.

Exabyte 12
T
doc page 28 - 2nd sentence after Table 2
"All other operation codes are reserved."
s/b
"All other operation codes are restricted."

(R) Use of "reserved" is fine.

Exabyte 13
E
doc page 29 - 6.3, 4th para
"allowed: Commands issued by initiators not holding the
reservation or by initiators not registered when
a registrantsonly persistent reservation is present should
complete normally."
s/b
"...not registered when a registrants only persistent..."

(A) Inserted space.

Exabyte 14
E
doc page 34 - 6.6 INITIALIZE ELEMENT STATUS WITH RANGE, 1st
sentence Word "INITIALIZE" missing
Also, why is the 1st para not similar text to that for 6.5

INITIALIZE ELEMENT STATUS?

(P) Added 'INITIALIZE'.

Exabyte 15
T
doc page 38 - 6.9 READ ATTRIBUTE command SPC-3 defines this as a
16 byte CDB - we should match.

(A)(T) Fixed table to match SPC-3.

Exabyte 16
E
doc page 38 - 6.9 READ ATTRIBUTE command, para after Table 10,
last sentence
"Not that this field forms an additional..." s/b "Note that this
field forms an additional..."

(A) Changed 'Not' to 'Note'.

Exabyte 17
E
doc page 39 - 6.9 READ ATTRIBUTE, 1st sentence on page, sentence
after Table 11
READ ATTTRIBUTE does not appear in SPC, SPC-2. Should the
reference therefore be to SPC-3?

(A) Changed to SPC-3.

Exabyte 18
?
doc page 39 - Table 12
Should this table be formatted as descriptors?

(P) Table needs to be reformatted to handle non-contiguous list of
elements. Look for examples in other documents. Check with
document 99-148.

Exabyte 19
E
doc page 48, Table 19
cmc bit s/b capitalized - it is a field name.

(A) Changed to small caps.

Exabyte 20
E

doc page 56, last sentence
"When the SEND ACTION CODE is assert, replace, and undefine, the
ELEMENT ADDRESS field gives the particular element whose volume
tag information was modified."
s/b
"When the SEND ACTION CODE is assert, replace, or undefine, ..."

(A) Changed 'and' to 'or'.

Exabyte 21
E
doc page 67, last sentence "For the definitions of all other
fields, and parameter data format, see SPC-
2."
s/b
"...see SPC-3." WRITE ATTRIBUTE not in SPC-2

(A) Changed to SPC-3.

Exabyte 22
E
doc page 69, Table 36
Log page codes 01h-05h, 08h-0Ah, 0Ch are listed as reserved
s/b listed as restricted.

(R) For an SMC-2 device, the codes are reserved. Restricted is
the correct term only for SPC-3.

Exabyte 23
E
doc page 69, last sentence
resolve and remove editor's note

(A) Removed not and added description of TapeAlert log page.

Exabyte 24
E
doc page 71, Table 37
Log page codes 01h, 03h-09h, 0Bh-17h, 1Bh are listed as reserved
s/b listed as restricted.
Log page code 2Ah is listed as Vendor-specific (page format
required) s/b listed as restricted.

(R) Will use "reserved". Mode pages 20h to 3Eh listed as Vendor-
specific.

Exabyte 25
?

doc page 71, Table 37
I think this is really an issue with SPC-x, but I bring it up
here.
SPC, SPC-2, and SPC-3 each have a numerically ordered listing of
mode page codes. In each of these docs, they list code 1Dh as
associated with Transport
geometry parapmeters page and 1Eh as associated with Element
address assignment page. SPC-x explicitly defers the assignment
of these codes to device type specific documents elsewhere within
SPC-x. I believe SPC-x is therefore in error.
As the useage in SMC and SMC-2 reflect industry practice (at least
to my knowledge), I would like SMC and SMC-2 to remain as they are
on this point.

(A) Will leave codes as assigned in SMC and SMC-2.

****

Comments attached to No ballot from Mr. Michael Banther of
Hewlett Packard Co.:

HP #1
PDF Page 1
Cover page and global
Change "SCSI-3 Media Changer Commands - 2" to "SCSI Media Changer
Commands - 2". All the second revisions of the command standards
have dropped the -3 from the SCSI prefix in their titles.

(A) Text changed.

HP #2
PDF Page 1
Cover page
Change "SMC Technical Editor" to "Technical editor" since this is
now SMC-2

(P) Changed to T10 Technical Editor to match ESG.

HP #3
PDF Page 1
Cover page
Change Acredited to Accredited

(A) Text changed.

HP #4
PDF Page 1
Cover page

Remove comma after CO in the address

(A) Comma deleted.

HP #5
PDF Page 2
Points of Contact
Remove trailing / from all web site addresses
Change the T10 information to:
Web Site: http://www.t10.org
E-mail reflector:
Server: majordomo@t10.org
To subscribe, send e-mail with 'subscribe t10' in the message body
To unsubscribe, send e-mail with 'unsubscribe t10' in the message
body

(P) Modified to more closely match ESG (T10/03-049r0).

HP #6
PDF Page 6
Foreword
Update the "SCSI-3 Architecture Model (SAM)" reference to SAM-2

(A) Changed SAM reference to SAM-2.

HP #7
PDF Page 6
Foreword
Change "device type" to "peripheral device type" in small caps.

(A) Text modified.

HP #8
PDF Page 7
Introduction
Change "seven clauses" to "the following clauses" since the
annexes are also listed

(P) ESG example has a count of clauses, a list of clauses, a count
of annexes and a list of annexes. Changed SMC-2 to match.

HP #9
PDF Page 9
Figures and Tables
Remove blank lines between rows in the lists of figures and tables

(A) Blank lines removed.

HP #10
PDF Page 10
Tables
Spacing around the emdash is inconsistent in the table headers. 4
and 5 have no space after the table number. 11 and 14 have no

space before the table title. There should be spaces on both sides
for all of them.

(A) Fixed spacing as recommended.

HP #11
PDF Page 11
Annexes
Include the annexes (if any remain) as part of the Contents
section.

(P) Annex B removed, Annex A will be listed in contents after
tables and figures.

HP #12
PDF Page 12
1 Scope
Page 12 should be page 1. All preceding pages should be numbered
i, ii, iii, etc.

(A) Page numbers modified as suggested.

HP #13
PDF Page 12
1 Scope
Change sets "the MCHNGR bit in" to "the MCHNGR bit to one in the"

(A) Added 'to one'.

HP #14
PDF Page 12
1 Scope
Delete "over a SCSI service delivery subsystem."

(A) Text deleted.

HP #15
PDF Page 12
1 Scope
Change bulleted list into an a) b) c) list.

(P) Removed bullets.

HP #16
PDF Page 12
1 Scope
Change "DEVICE TYPE" to "PERIPHERAL DEVICE TYPE"

(A) Text modified.

HP #17
PDF Page 13
1 Scope

I suggest removing page 13, the page with the "At the time this standard was generated examples of the SCSI-3 general structure included:" list of other standards. This kind of list is always out of date and incomplete.

(A) Updated list using SPC-3 r11 as a guide.

HP #18
PDF Page 14
2 Normative references
Update to SAM-2 and SPC-2.
Add References under development listing SAM-3 and SPC-3. Then globally change references to SAM and SPC to SAM-2 and SPC-2 (or SPC-3)

(P) SPC changed to SPC-2 or SPC-3 as appropriate. SAM-2 will also be referenced instead of SAM.

HP #19
PDF Page 14
2 Normative References
Uncapitalize References in the section header.

(A) Done.

HP #20
PDF Page 15
3.1 Definitions
Remove "This clause contains a glossary of special terms used in this standard. These terms apply to SMC-2 and do not constitute a comprehensive glossary for SCSI-3." This is a hanging paragraph and is not really necessary.

(A) Text removed.

HP #21
PDF Page 15
3.1.4 autosense data
Remove this definition - only used by the definition of "sense data."

(A) Definition removed.

HP #22
PDF Page 15
3.1.7 command descriptor block
Add (CDB) to the bold part of the definition. The phrase "up to 16 bytes in length" is no longer true; see SPC-2 for the latest definition.

(A) Text modified.

You may not need to include any of the terms that are already

defined in SAM-2 and SPC-2, since those documents are listed as normative references. Additional sense code, application client, byte, command, command descriptor block, etc. could all be deleted.

(R) SMC-2 is following the example set by other command standards such as SSC-2.

HP #23
PDF Page 17
3.1.32 sense data
Remove this definition. Not used in text.

(A) Removed.

HP #24
PDF Page 18
3.2 Symbols and abbreviations
Format the abbreviations list as a table without row or column lines showing.

(P) Format changed to use a tab between abbreviation and definition.

HP #25
PDF Page 18
3.3.4 may
Add a definition of "may not: Keywords indication flexibility of choice with no implied preference."

(A) Added 'may not' to keywords with same definition as may.

HP #26
PDF Page 19
3.3.9 should
Put the period inside the quotes in recommended".

(A) Period moved inside quotes.

HP #27
PDF Page 20
4 Overview
1st paragraph
Change "multi-media" to "multimedia"

(A) Done.

HP #28
PDF Page 20
4 Overview
1st paragraph
Change SBC, MMC and SSC to SBC-2, MMC-4, and SSC-2.

(A) Changed to SBC-2, MMC-4 and SSC-2 and updated list of abbreviations.

HP #29
PDF Page 20
4 Overview
3rd paragraph
Change "maintains an inventory of volumes and the element address they can be found" to "maintains an inventory of volumes and the element addresses with which they may be accessed."

(P) Changed to "at which they may be found."

HP #30
PDF Page 20
4 Overview
3rd paragraph
Change "identifying" to "identifies"

(A) Text modified.

HP #31
PDF Page 20
4 Overview
2nd paragraph
"The element types are storage, data transfer, medium transport, and import/export."
Make this into an a) b) c) list, sorted like other references:
a) medium transport;
b) storage;
c) import/export; and
d) data transfer

(R) Will leave as is.

HP #32
PDF Page 21
4 Overview
Figure 2 Example independent media changer and several places in the text "Data Transport Element" should be "Data transfer element"

(A) Changed 'transport' to 'transfer'.

HP #33
PDF Page 21
4 Overview
Figure 2
Move the "Medium Changer Logical Unit" closer to the shaded box on the bottom (perhaps make the box bigger so the label fits inside the box) and change it to "Media changer logical unit."

(A) Changed 'Medium' to 'Media' and moved label.

HP #34
PDF Page 21
4 Overview
Figure 2 – Example independent media changer device.
Remove the period at the end of the figure title

(A) Period removed.

HP #35
PDF Page 21
4 Overview
Figure 2 – Example independent media changer device
Add some "volume"s to the picture.

(R) I wish to avoid clutter in this diagram.

HP #36
PDF Page 21
4 Overview
In "via the same SCSI ID as the primary device, or via a different
SCSI ID." SCSI ID is a parallel-SCSI specific term. Use "target
port identifier" instead.

(P) Changed SCSI ID to SCSI target port, primary device to data
transfer element.

HP #37
PDF Page 21
4 Overview
Figure 2 – Example independent media changer device
Add a "primary device" connected to each "data transport element".
The "port" is part of the primary device rather than the element.
Add a "media changer" box around all the elements and the medium
changer logical unit, but not around the primary devices.

(R)

HP #38
PDF Page 21
4 Overview
Add a figure showing the attached media changer model too.

(R)

HP #39
PDF Page 21
4 Overview and global
The document uses "domain" or "media changer's domain" a few
times. This is easily confused with SCSI domain. I think you can
phrase it such that the elements are just part of the media
changer device itself rather than its domain. For example, the
sentence on the bottom of page 21 could just be "Media changers

shall be capable of reporting the full or empty status of any element."

(A) Modified text to avoid use of 'domain'.

HP #40
PDF Page 21
4 Overview
Bottom of page 21
Change "several element types" to "several elements" - movement is by specific address, not element type.

(P) Changed 'several element types' to 'elements'.

HP #41
PDF Page 21
4 Overview
Bottom of page 21
"Media changers shall be.. in its domain" mixes plural and singular. Change to "Media changers...in their domains" or "A media changer...in its domain"

(P) Sentence reworded.

HP #42
PDF Page 21
4 Overview
Mention that multiple media changers may be cascaded with their import/export elements in this section.

(A) Added a sentence stating this to second paragraph of section 4.

HP #43
PDF Page 22
5.1 Independent media changer
Change "Independent media changers for the SMC-2 standard respond to" to "Independent media changers respond to"

(A) Text changed.

HP #44
PDF Page 22
5.1 Independend media changer
Add command after LUN in the 3rd paragraph

(P) Added a period and reworded following text.

HP #45
PDF Page 22
5.2 Attached media changer
The definition of primary device includes that it is not a media changer, so "a primary device that is not a media changer." can

just be "the primar device." Somewhere in this section, add a list of primary device types (block, sequential, multimedia)

(P) Replaced the term "primary device" with "data transfer device".

HP #46
PDF Page 22
5.3 Media changer elements
Move this text into 5.3.1(Overview)
Move 5.4 into 5.3.2 (Medium transport element)
Move 5.5 into 5.3.3 (Storage element)
Move 5.6 into 5.3.4 (Import/export element)
Move 5.7 into 5.3.5 (Data transfer element)
Move 5.8 into 5.3.6 (Element status maintenance requirements)

(A) Changed level of headers as recommended.

HP #47
PDF Page 22
5.3 Media changer elements
Make the bulleted list into an a) b) c) list, and don't capitalize each word.

(A) Changed list format.

HP #48
PDF Page 22
5.3 Media changer elements
Change "may provide storage for zero or one volume." to "is capable of storing one volume."

(R) SMC-2 allows configurations with import/export or medium transport elements that are not capable of storing a volume.

HP #49
PDF Page 23
Global (technical)
Remove:
RESERVE ELEMENT (6)
RESERVE ELEMENT (10)
RELEASE ELEMENT (6)
RELEASE ELEMENT (10)
in favor of PERSISTENT RESERVE OUT for all the same reasons that they have been obsoleted from SPC-3 and other command set standards. SPC-3 section 5.9 also needs to be updated to remove its references to them.

(R)(T) Will leave RESERVE/RELEASE ELEMENT commands in SMC-2. They should be removed in the first draft of SMC-3, if we decided to start a new project.

HP #50
PDF Page 23
5.3 Media changer elements
Change "import export" to "import/export"

(A) Text changed.

HP #51
PDF Page 23
5.3 Media changer elements
Change "device capabilities page" to "Device Capabilities mode page"

(A) Text changed.

HP #52
PDF Page 23
5.3 Media changer elements
Change "Each element type shall be assigned a contiguous number range" to "Each element type shall be assigned a contiguous range of element addresses" and adjust the rest of the paragraph accordingly

(A) Paragraph reworded as suggested.

HP #53
PDF Page 23
5.4 Medium transport element
Change "transport geometry mode parameters." to "Transport Geometry Parameters mode page."

(A) Text changed.

HP #54
PDF Page 24
5.4 Medium transport element
Change "medium transport element address" to "medium transport address" in small caps

(A) Text changed.

HP #55
PDF Page 24
5.5 Storage element
Change "SMC-2 device" to "media changer"

(P) Changed to "device".

HP #56
PDF Page 24
5.6 Import/export element
Add space to "thatare"

(A) Space added.

HP #57
PDF Page 24
5.6 Import/export element
Remove "when present in a media changer logical unit."

(A) Text removed.

HP #58
PDF Page 25
5.7 Data transfer element
Change "media, see the device capabilities mode parameters." to media; the Device Capabilities mode page indicates whether independent storage is provided."

(P) Name of page changed and clause reference added.

HP #59
PDF Page 25
5.8 Element status maintenance requirements
Change i.e., to e.g.,

(P) Changed "(i.e., full, error, etc.)" to "(e.g., full, error)".

HP #60
PDF Page 25
5.9 Volume tag information
Move the 5.9 text into 5.9.1 Overview
Move 5.10 into 5.9.2 (Primary and alternate volume tag information) Move 5.11 into 5.9.3 (Volume tag information format)

(A) Changed level of headers as recommended.

HP #61
PDF Page 25
5.9 Volume tag information
Change "or by other means which may be vendorspecific." to "or by vendor-specific means."

(R) Text was changed, but we need to leave open the possibility of other not vendor specific means.

HP #62
PDF Page 25
5.9 Volume tag information
Change "whether" to "regardless of whether"

(A) Text changed.

HP #63
PDF Page 25

5.9 Volume tag information
Remove "or a volume."

(A) Text removed.

HP #64
PDF Page 25
5.9 Volume tag information
Change "The media changer command set definition" to "This standard"

(A) Text changed.

HP #65
PDF Page 25
5.9 Volume tag information
Change bulleted list to an a) b) c) list.

(A) List format changed.

HP #66
PDF Page 26
5.10 Primary and alternate volume tag information
Change "partition of a volume" to "other side of a volume"

(P) Changed "partition" to "side".

HP #67
PDF Page 26
5.10 Primary and alternate volume tag information
Change "All volumes have" to "All volumes shall have"

(A) Added "shall".

HP #68
PDF Page 26
5.11 Volume tag information format
Table 1 - Volume tag information format
Add (MSB) and (LSB) to the volume sequence number field (but not to the volume identification field)

(A) Information added to table.

HP #69
PDF Page 26
5.10 Primary and alternate volume tag information
Change "MOVE MEDIUM" to "MOVE MEDIUM or EXCHANGE MEDIUM" since both have INVERT bits.

(A) Changed in two places.

HP #70
PDF Page 26

5.10 Primary and alternate volume tag information
Once a volume is loaded inverted, do the primary and alternate
volume tags swap roles? Or is the primary tag always the primary
tag?

(R) If the media is inverted, the Primary and Alternate tags are
swapped. The side that is "up" is the Primary.

HP #71
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
This table should fit on one page if the rows are separated by
less whitespace.

(R) Table split into two parts.

HP #72
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
Delete:
CHANGE DEFINITION 40h O SPC
Add "Operation code 40h is obsolete" after the table.

(A) Added line listing obsolete codes after table 2.

HP #73
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
Change Subclause to Reference

(A) Text modified.

HP #74
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
Make PERSISTENT RESERVE IN and OUT mandatory (and have SPC-3
updated to match)

(R)(T) - I would like to release SMC-2 with SPC-2 as the primary
command set, not SPC-3 (except for the optional READ and WRITE
ATTRIBUTE commands).

HP #75
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
SPC-3 Table B.2 lists RESERVE/RELEASE ELEMENT 6/10 as mandatory.
SPC-3 and SMC-2 should match.

(R) SMC-2 uses SPC-2 for the primary command set.

HP #76
PDF Page 27
6.1 Summary of commands for independent media changers
Table 2 - Commands for independent media changers
Add the following optional commands:
REZERO UNIT 01h SPC-3

(R) Rezero Unit opcode should be obsolete for SMC-2 devices.

ACCESS CONTROLS IN 86h SPC-3
ACCESS CONTROLS OUT 87h SPC-3

(A) Commands added to table with reference to SPC-3.

MAINTENANCE IN A3h SCC-2 (Follow SBC-2 r7)
MAINTENANCE OUT A4h SCC-2 (Follow SBC-2 r7)
REDUNDANCY GROUP IN BAh SCC-2 "
REDUNDANCY GROUP OUT BBh SCC-2 "
SPARE IN BCh SCC-2   "
SPARE OUT BDh SCC-2   "
VOLUME SET IN BEh SCC-2 "
VOLUME SET OUT BFh SCC-2 "

(R) Model for SCC-2 does not describe how to handle an SMC-2
device.

REPORT DEVICE IDENTIFIER A3h/05h SPC-3
REPORT TARGET PORT GROUPS A3h/0Ah SPC-3
REPORT ALIASES A3h/0Bh SPC-3
REPORT SUPPORTED OPERATION CODES A3h/0Ch SPC-3
REPORT SUPPORTED TASK MANAGEMENT FUNCTIONS SPC-3
SET DEVICE IDENTIFIER A4h/06h SPC-3
SET TARGET PORT GROUPS A4h/0Ah SPC-3
CHANGE ALIASES A4h/0Bh SPC-3

(A) Commands added to table with reference to SPC-3.

HP #77
PDF Page 28
6.2 Summary of commands for attached media changers
Change MOVE MEDIUM ATTACHED * to MOVE MEDIUM *
Change READ ELEMENT STATUS ATTACHED * to READ ELEMENT STATUS *

(A) Names changed.

HP #78
PDF Page 28
6.2 Summary of commands for attached media changers
SPC-3 lists A7h and B4h as "M" for media changer devices. They are
really not allowed for independent changers (meaning they should
not be in the SPC-3 column at all), but are mandatory for attached

changers. SPC-3 may need another column to differentiate attached media changers from independent.

(R)

HP #79
PDF Page 28
6.1 Summary of commands for independent media changers
This is incomplete:
"Operation codes 0Ch and C0h through FFh are vendor-specific." It should say:
"Operation codes 02h, 05h, 06h 08h, 09h, 0Ah, 0Bh, 0Ch, 0Dh, 0Eh, 0Fh, and C0h through FFh are vendor-specific." to match SPC-3.

(A) Updated list to match SPC-2. (Same list as SPC-3)

HP #80
PDF Page 28
6.1 Summary of commands for independent media changers
The sentence "All other operation codes are reserved." needs to be preceded by a list of obsolete operation codes: "Operation code 40h (CHANGE DEFINITION) is obsolete."

(A) Added list of obsolete opcodes 01h, 07h and 40h. (REZERO UNIT, INITIALIZE ELEMENT STATUS and CHANGE DEFINITION).

HP #81
PDF Page 28
6.2 Summary of commands for attached media changers
Table 3 - Commands for attached media changers
Rather than use * in the command name column, create a new type code other than O that represents "optional operation codes for use by sequential devices only."

(A) Used type code S instead of * on command name.

HP #82
PDF Page 30
6.3 Commands allowed in the presence of various reservations
Table 4 - Reservation table
Remove Column A if RESERVE ELEMENT/RELEASE ELEMENT are obsoleted.

(R) HP intends to keep supporting Reserve Element & Release Element. Leave column A in.

HP #83
PDF Page 30
6.3 Commands allowed in the presence of various reservations
Table 4 - Reservation table
If RESERVE ELEMENT/RELEASE ELEMENT remain, The "Allowed" for RELEASE ELEMENT needs a note that "The reservation is not released." (as done in SPC-2)

(A) Added note and reference to RELEASE ELEMENT (6) and RELEASE
ELEMENT (10) commands.

HP #84
PDF Page 31
6.4 EXCHANGE MEDIUM command
and globally in all the command descriptions
Delete the paragraph: "A reservation conflict shall occur if an
EXCHANGEMEDIUM command is received from an initiator other than
the one holding a logical unit or element reservation." This is
covered by the big reservation table in 6.3.

(A) Paragraph deleted for all commands.

HP #85
PDF Page 31
6.4 EXCHANGE MEDIUM command
Remove comma from "address," in the second line.

(A) Comma deleted.

HP #86
PDF Page 32
6.4 EXCHANGE ELEMENT command
On Page 32 define "empty," as "empty (i.e., set to zero)".

(R) Empty indicates there is no medium stored in the element, not
the contents of the parameter field.

HP #87
PDF Page 32
6.4 EXCHANGE MEDIUM command
Add period after FULL on page 32.

(A) Period added.

HP #88
PDF Page 32
6.4 EXCHANGE MEDIUM command
Change INV1 to INVERT FIRST and INV2 to INVERT SECOND to better
match wording in 5.10 and MOVE MEDIUM.

(R) No room in the table for a longer name for these one bit
fields.

HP #89
PDF Page 33
6.5 INITIALIZE ELEMENT STATUS command and global
Change "Initiator" to "initiator" or "application client".

(A) Changed to "application client".

HP #90

PDF Page 34
6.6 INITIALIZE ELEMENT STATUS WITH RANGE command
First paragraph is missing "The INITIALIZE" before "ELEMENT"

(A) Text modified.

HP #91
PDF Page 35
6.7 MOVE MEDIUM command
Table 8 - MOVE MEDIUM command
Change "INV" to "INVERT" to match text throughout the document

(A) Field name changed in table.

HP #92
PDF Page 35
6.7 MOVE MEDIUM command
Change title to "MOVE MEDIUM and MOVE MEDIUM ATTACHED commands" in
the section header and table 8 header

(P) Section header changed to MOVE MEDIUM commands, table header
changed to list both commands. Also changed text in a few places
to make it more clear that both commands are covered.

HP #93
PDF Page 35
6.7 MOVE MEDIUM command
Add to "OPERATION CODE" "(A5h or A7h)

(R) Opcodes are described in following text.

HP #94
PDF Page 35
6.7 MOVE MEDIUM command and global
Change "target" to "media changer" in first sentence of this
section and elsewhere in the document where appropriate.

(P) Change most instances of "target" to "device server".

HP #95
PDF Page 35
6.7 MOVE MEDIUM command and globally
Change "target" to "logical unit" near bottom of page (twice) and
elsewhere in the document where discussing CHECK CONDITIONs and
other logical unit states.

(P) Changed "target" to "device server" in these cases.

HP #96
PDF Page 38
6.9 READ ATTRIBUTE command
Table 10 - READ ATTRIBUTE command and
6.17 WRITE ATTRIBUTE command

Table 34 WRITE ATTRIBUTE command
Make Volume number and Partition number small caps

(A) Format changed.

HP #97
PDF Page 38
6.9 READ ATTRIBUTE command
Make "element address" small caps below the table

(A) Changed to small caps.

HP #98
PDF Page 38
6.9 READ ATTRIBUTE command
Table 10 – READ ATTRIBUTE command
Change mixed capital/small cap in ELEMENT TYPE CODE and ALLOCATION
LENGTH to all small cap

(A) Format changed.

HP #99
PDF Page 39
6.9 READ ATTRIBUTE command
The ELEMENT LIST service action line looks like a section header.
If that's the intention, move the previous text into 6.9.1 and
make this 6.9.2 to avoid hanging paragraphs.

(A) Changed to section header.

HP #100
PDF Page 39
6.9 READ ATTRIBUTE command
Table 12 – Parameter data for ELEMENT LIST service action
Make Element type code and First Element Address small caps

(A) Changed to small caps.

HP #101
PDF Page 39
6.9 READ ATTRIBUTE command
Table 11 – READ ATTRIBUTE service action code
Add a double line below the header row.

(A) Table format changed.

HP #102
PDF Page 40
6.10 READ ELEMENT STATUS command
Table 13 – READ ELEMENT STATUS command
After "OPERATION CODE" add "(B8h or B4h)"

(R) Operation code is described in text following table.

HP #103
PDF Page 40
6.10 READ ELEMENT STATUS command
Move the hanging paragraphs into a new 6.10.1

(A) Added section header.

HP #104
PDF Page 40
6.7 READ ELEMENT STATUS command
Change title to "READ ELEMENT STATUS and READ ELEMENT STATUS
ATTACHED commands" in the section header, table 13 header, and
appropriate text

(P) Changed section header to READ ELEMENT STATUS commands, table
header changed to list both commands. Also changed the text in a
few places to make it clear that both commands were covered.

HP #105
PDF Page 41
6.9 READ ATTRIBUTE command
Table 14 – Element type code
Left justify Description

(A) Left justified header.

HP #106
PDF Page 41
6.9 READ ATTRIBUTE command
Table 14 – Element type code
In table 10, table 12, table 16, etc. ELEMENT type code is an 8
bit field. In table 13 and 14, it's treated as a 4 bit field.
If Table 14 is the reference for all locations, it needs to
mention the disposition of values 10h-FFh.

(P)(T) Changed Element type code fields in Table 10, 12 and 16 to
4 bits.

HP #107
PDF Page 41
6.10 READ ELEMENT STATUS command
Table 14 – Element type code
Remove comma in "reported,"

(A) Comma deleted.

HP #108
PDF Page 41
6.10 READ ELEMENT STATUS command
After "device identifiers," add "(see 6.10.7)" – this is the first
time the term is used. Since SAM-2 now has a well defined "SCSI
device identifier", a name change for element device identifiers

may be a good idea.

(P) Clause reference added. Since the device identifiers returned
are the same as defined by SAM, there is no need to change names.

HP #109
PDF Page 41
6.10 READ ELEMENT STATUS command
6.13 REQUEST VOLUME ELEMENT ADDRESS command (technical)
This is misleading:
"If the ALLOCATION LENGTH is not sufficient to transfer all the
elementdescriptors, the logical unit shall transfer all those
descriptors that can be completely transferred and this shall not
be considered an error."
If a descriptor cannot be "completely transferred" it should be
partially transferred. The data structure returned must not change
at all based on allocation length.
The same wording is on page 14 and 57. Page 42 may need some
clarification too.

(P) Wording changed based on comments from RW.

HP #110
PDF Page 42
6.10 READ ELEMENT STATUS command,
6.10.1 Element status data and globally
Change "6.10.2 through 6.10.7" to "6.10.2, 6.10.3, 6.10.4, 6.10.5,
6.10.6, and 6.10.7"

(R) Change does not add clarity to the document.

HP #111
PDF Page 42
6.10 READ ELEMENT STATUS command
6.10.1 Element status data
NOTE 6
Change "can" to "may"

(A) Text changed.

HP #112
PDF Page 45
6.10.3 Medium transport element descriptor
Page 45 and global
Change IDENFIFIER LENGTH to IDENTIFIER LENGTH

(A) Changed in four places.

HP #113
PDF Page 45
6.10.3 Medium transport element descriptor (technical)
If you invert the same volume twice, does this bit go back to
zero? Or it is always one after the first inversion?

(R)(T) Inverting the media should toggle the bit. No change needed.

HP #114
PDF Page 51
6.10.6 Data transfer element descriptor (technical)
The 8-bit SCSI BUS ADDRESS field is unsuitable for Fibre Channel, Serial
Attached SCSI, iSCSI, and other modern SCSI transport protocols.
The 3-bit LOGICAL UNIT NUMBER field is out of date even for
parallel SCSI (non-packetized has a 6-bit LUN field). All other
protocols support 8-byte LUNs. Both these fields should be
obsoleted in favor of a new solution using the EXTENDED COPY
target descriptor (aka logical unit descriptor) data format
(with alias list support for iSCSI). For compatibility with old
software, require that NOT BUS be set to one and LU VALID (should
be called LUN VALID) be set to zero.

(P)(T) Device Identifiers already provide a method for determining
how devices are interconnected. T10 Plenary voted to obsolete
these fields.

HP #115
PDF Page 56
6.13 REQUEST VOLUME ELEMENT ADDRESS command (technical)
How about making this command fail if it is run by an initiator
different than the one that send the SEND VOLUME TAG command. Add
an additional sense code to report this reason, like WRITE
BUFFER/READ BUFFER do for accesses to the echo buffer in SPC-3.

(T)(R) RESERVE/RELEASE already provide a protection method.

HP #116
PDF Page 56
6.13 REQUEST VOLUME ELEMENT ADDRESS command
In element address description, change "gives" to "specifies"

(A) Text changed.

HP #117
PDF Page 56
6.13 REQUEST VOLUME ELEMENT ADDRESS command
Table 25 - REQUEST VOLUME ELEMENT ADDRESS command
Move Table 25 up under the first paragraph of the section where it
is introduced. It is currently floating on the next page.

(A) Table moved.

HP #118
PDF Page 57
6.13 REQUEST VOLUME ELEMENT ADDRESS command
Table 26 - Volume element address header

Move Table 26 up after the paragraph in which it is introduced.

(A) Table moved.

HP #119
PDF Page 66
6.16 SEND VOLUME TAG command
On page 66, change "will match" to "matches" twice and "will meet" to "meets"

(P) Changed "will match" to "shall match", "will meet" to "meets".

HP #120
PDF Page 67
6.17 WRITE ATTRIBUTE command.
Remove period from section header.

(A) Period removed.

HP #121
PDF Page 68
7 Parameters
Move the hanging paragraph into a new 7.1.

(P) Paragraph removed.

HP #122
PDF Page 68
7.1 Diagnostic parameters
Change table contents to:
00h Supported diagnostic pages
01h - 1Fh SES diagnostic pages (Reference SES)
10h - 3Fh Diagnostic pages assigned by SPC-3 (Reference SPC-3)
40h - 7Fh Reserved (for this standard)
80h - FFh Vendor-specific diagnostic pages
(note: SES is trying to take ownership of 10h-1Fh too)

(A) Also added SES and SES-2 to references.

HP #123
PDF Page 68
7.1 Diagnostic parameters
Table 35 - Diagnostic page codes
Change Subclause to Reference

(A) Header changed.

HP #124
PDF Page 68
7.2.1 Log page codes for independent media changers.
The log page section header includes "for independent media changers" but diagnostic pages and mode pages do not. They should

be consistent, since all of the pages are for independent media changers.

(A) Changed header to "Log page codes"

HP #125
PDF Page 69
7.2.2 TapeAlert page.
Change title to "TapeAlert log page"

(A) Title changed.

HP #126
PDF Page 69
7.2.1 Log page codes for independent media changers
Table 36 - Log page codes
Make capitalization match new rules (mixed case; always say "log page"
afterwards). Make sure all the page codes use h rather than H.
The log pages should be:
00h Supported Log Pages
06h Non-Medium Error log page
07h Last n Error Events log page
0Bh Last n Deferred Errors log page
0Dh Temperature log page
0Eh Start-Stop Cycle Counter log page
0Fh Application Client log page
10h Self-Test Results log page
2Eh TapeAlert log page (this must be added to SPC-3)
2Fh Informational Exceptions log page
30h - 3Fh Vendor-specific
All others Reserved

(P) As this document references SPC-2 for most pages, names were
left the same as that document. TapeAlert page was changed to
TapeAlert log page. Changed hex numbers to h instead of H in
serveral places.

HP #127
PDF Page 69
7.2.2 TapeAlert page
This should be done "EDITORS NOTE: TapeAlert log page description
should be moved here and renamed to avoid the reference to SSC."

(A) Removed editors not and added TapeAlert log page description.

HP #128
PDF Page 69
7.2.1 Log page codes for independent media changers
Table 36 - Log page codes
Subclause to Reference

(A) Header changed.

HP #129
PDF Page 70
7.3 Mode parameters
Move the hanging paragraphs into a new 7.3.1.

(A) Added Mode page codes subheader.

HP #130
PDF Page 71
7.3 Mode parameters
Table 37 – Mode page codes
Make capitalization match SPC-3 (mixed case; always use "mode page").
Add 02h and 0Ah to SPC-3.
1Dh and 1Eh are swapped in SPC-3.
20h-3Eh do NOT require page format.

(P) Changed to match names used by SPC-2.

HP #131
PDF Page 72
7.3.1 Device capabilities mode page and global
Change capitalization to "Device Capabilities mode page"

(A) Text changed.

HP #132
PDF Page 72
7.3.1 Device capabilities mode page
Change "initiator" to "application client"

(A) Text changed.

HP #133
PDF Page 73
7.3.1 Device capabilities mode page
Change "destinations, that" to "destinations and that" on page 73

(A) Text changed.

HP #134
PDF Page 73
7.3.1 Device capabilities mode page
Page 73 asserts that "The value of STORST is one by the definition of that type (see 5.5)." However, storage elements are not required to be present, so STORST is only one if a storage element exists. Reword this sentence to make that more apparent.

(A) Added "If any storage elements exist," to sentence.

HP #135
PDF Page 73

7.3.1 Device capabilities mode page
Change "Those which are not valid will be rejected with ILLEGAL
REQUEST." To "MODE MEDIUM commands which are not valid shall be
rejected with a sense key oof ILLEGAL REQUEST (see 6.7). and make
a similar change in the EXCHANGE MEDIUM paragraph that follows.

(P) Text changed in two places.

HP #136
PDF Page 74
7.3.2 Element address assignment mode page and global
Change capitalization to "Element Address Assignment mode page"

(A) Text changed.

HP #137
PDF Page 75
7.3.3 Transport geometry parameters mode page and global
Change capitalization to "Transport Geometry Parameters mode page"

(A) Text changed.

HP #138
PDF Page 75
7.3.2 Element address assignment mode page and global
Change "The sense key shall be ILLEGAL REQUEST and the additional
sense code PARAMETER VALUE INVALID." to "The sense key shall be
set to ILLEGAL REQUEST and the additional sense code shall be set
to PARAMETER VALUE INVALID." Make similar changes throughout the
document.

(R) Additional words do not make the document more clear.

HP #139
PDF Page 75
7.3.1 Element address assignment mode page
After "If the address ranges defined for any of the element types
overlap," add "for a MODE SELECT command"

(A) Text added.

HP #140
PDF Page 75
7.3.3 Transport geometry parameters mode page
Move "(Other than the default transport element address of zero.)"
into the previous sentence: "transport element (other
than...zero)."

(P) Text has been modified according to comment from RW.

HP #141
PDF Page 76
7.3.3 Transport geometry parameters mode page

NOTE 15
Remove parenthesis and brackets from "(The individual transport
element is addressed [not the robotics subsystem]. An element is
defined to be a place where a unit of media may be at any point in
time. See clause 5.)"

(A) Text changed.

HP #142
PDF Page 77
Annex A
This section needs an A.1 section with introductory text. The
table needs a table title and number. Make the last horizontal
line above the key a double-line.

(A) Double line and introductory text added.

HP #143
PDF Page 82
Annex B Bibliography
Delete Annex B. The Normative references section should list other
standards of import (any standard mentioned in the text can be
listed there).

(A) Annex B deleted.

HP #144
PDF Page 22
5.3 Media changer elements
The sentence, 'The point in time during movement when a volume is
considered in a different element is implementation dependent.'
does not specify an element that a volume is in at the beginning
of the movement. Hence the phrase '...when a volume is considered
in a different element ...' begs the question, different from what
element? Suggest changing to, 'When moving from one element to
another, the point in time when the volume changes element
address depends on the implementation.'

(A) Changed wording using "not specified by this standard" instead
of "depends on the implementation".

HP #145
PDF Page 29
6.3 Commands allowed in the presence of various reservations
Change 'registrantsonly' to 'registrants only'

(A) Space added.

HP #146
PDF Page 30
Table 4
Change 'RESERVE ELEMENT (6)/RELEASE ELEMENT (10)' to 'RESERVE
ELEMENT (6)/RESERVE ELEMENT (10)'

(A) Table entry changed.

HP #147
PDF Page 37
6.8 Position to element
The description of this command fails to include what happens
under exception conditions. Add, 'The MEDIUM TRANSPORT ADDRESS
field specifies the medium transport element used to execute this
command. The default transport element address of zero may be
used. If the MEDIUM TRANSPORT ADDRESS element has not been
assigned or that element address has been assigned to a different
element type, the logical unit shall return CHECK CONDITION
status. The sense key shall be ILLEGAL REQUEST and the additional
sense code INVALID ELEMENT ADDRESS.

'The DESTINATION ADDRESS field may represent a storage element, an
import/export element, a data transfer element, or a medium
transport element.
If the address specified has not been assigned to a specific
element of the media changer, the target shall return CHECK
CONDITION status. The sense key shall be ILLEGAL REQUEST and the
additional sense code INVALID ELEMENT ADDRESS.

'The device capabilities MODE SENSE page (see 7.3.1), provides a
matrix with the supported source element or destination element
combinations for the MOVE MEDIUM command.

'An INVERT bit of one specifies that the volume shall be inverted
or rotated prior to depositing the medium into the DESTINATION
ADDRESS element. If the media changer does not support volume
rotation for handling double-sided media, the INVERT bit should be
set to zero. If this bit is one, a target that is not capable of
volume rotation shall return CHECK CONDITION status. The sense key
shall be ILLEGAL REQUEST and the additional sense code INVALID
FIELD IN CDB.'

(P) Text replaced. Changed MOVE MEDIUM to POSITION TO ELEMENT and
modified text as POSITION TO ELEMENT does not deposit media.

HP #148
PDF Page 38
6.9 Read attribute command
Change 'medium reisding in a data' to 'medium residing in a data'.

(A) Text changed.

HP #149
PDF Page 38
Table 10
Describes a fourteen byte command. Byte numbers 8 and 9
duplicated.

(A) Table has been fixed to match SPC-3.

HP #150
PDF Page 38
6.9 Read attribute command
Change 'Not' to 'Note'.

(A) Text changed.

HP #151
PDF Page 39
Table 12
Does not explain how a medium changer returns a non-contiguous
list of element addresses using the Element List service action.

(P) The same function can be handled by Read Element Status by
adding a MAMP bit to each element descriptor type to indicates
hardware is present for reading and writing MAM. (Byte 2, bit 7
is free in all element types). Then the Element List service
action can be made obsolete.

(A) Pick up changes in T10/03-211r2.

HP #152
PDF Page 39
Note 5
Change 'Since all the element addresses shall' to 'Since all
element addresses may not'.

(A) Text changed.

HP #153
PDF Page 50
Table 20
Does not provide support for multi-ported data transport element.

(P) Fields describing SCSI BUS ADDRESS, LUN etc for an attached
drive have been marked as obsolete. Configuration mapping can be
solved using Device Identifiers.

HP #154
PDF Page 62
6.15.2 Superseding reservations
Change 'extent list' to 'element descriptor list'.

(A) Text changed.

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Comments attached to Abs ballot from Mr. George O. Penokie of
IBM / Tivoli Systems:

IBM 1. Not materially affected by this standard.

(A)


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Comments attached to Abs ballot from Mr. Edward A. Gardner of
Ophidian Designs:

Ophidian 1. I have no particular competence or interest in medium
changers.

(A)


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Comments attached to YesC ballot from Mr. Charles Binford of
Pirus Networks:

Pirus 1. The change bars and strikeouts need to be removed.
Especially in section 6.3.

(A) Change bars and strikeouts removed.


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Comments attached to No ballot from Mr. Paul Entzel of
Quantum Corp.:

Q1. Section 3.1.1. The term "command response data" is not
defined in this standard, SAM, SAM-2, SPC, or SPC-2. I think the
term that should be used here is simply "data".

(P) Used "sense data" instead.

Q2. Section 3.1.2. Extent reservations were made obsolete in SPC-
2. This standard refers to Element reservations instead of Extent
reservation. Even if Extent reservations were to remain in this
standard, this definition does not make sense for a medium changer
device.

(A) Offending text removed.

Q3. Section 4, forth paragraph. Is it possible to reserve the
Medium Transport element with an element reservation? If so, what
effect would that have on a command that otherwise would not have
reservation problems (the source and destination elements are not
reserved)?

(R) Yes, the command should be rejected with "RESERVATION CONFLICT". See clause 6.14.2, paragraph after table 28.

Q4. Section 5.1, first paragraph. "mediachanger" needs a space.

(A) Space added.

Q5. Section 5.2, first paragraph. The wording of the first sentence in this paragraph sounds as if MCHNGR will only be set if the device supports an attached medium changer. That is not consistent with SPC or SPC-2. Suggest the wording be changed to: "An attached medium changer is part of a device server that returns a value other than 8h in the PERIPHERAL DEVICE TYPEfield (See SPC-2) of an INQUIRY command response data. A device that supports the attached media changer command set shall set the MCHNGR bit to one in its standard INQUIRY data (See SPC-2). This bit may also be set to one if the device server detects that the device is embedded within a independent media changer device."

(R) Need to resolve clash in definition of MCHNGR bit between SPC-2 and SMC-2. Some have interpreted this bit so that it is set in any drive connected to a media changer.

RW modified SPC-3 to clarify intent of MCHNGR bit. No changes needed in SMC-2.

Q6. Section 5.6, first paragraph. "thatare" needs a space.

(A) Space added.

Q7. Section 5.9, second paragraph. I'm not sure about this requirement anymore. With the inclusion of MAM in many devices and medium now, should we consider removing this requirement? When medium changers include MAM readers/writers can it save the SEND VOLUME TAG information in the MAM?

(A) Strike sentence and add reading MAM to examples in previous paragraph.

Q8. Section 5.10, first paragraph. The implied definition of "partition of a volume" as the term is used here is different than other SCSI devices. A clarification of this term would be helpful.

(P) The term "partition" was changed to "side" to avoid confusion.

Q9. Section 6.1, Table 2. It seems kind of silly to release this standard based off of SPC when SPC-2 is so far along and the base for other device standards that are farther along in the process than this one (SSC-2 and SAM-2, for example).

(A) Table entries changed to SPC-2.

Q10. Section 6.2, Table 3. I don't understand this table. Under what circumstances is a device required to support the mandatory commands in this table? If a sequential device supports opcodes A7h and B4h why would it also support A5h and B8h?

(R) The A5h and B8H opcodes were used by some devices before SMC was published. They will remain optional in SMC-2, but may be removed in SMC-3.

Q11. Section 6.3, definition of Allowed. "registrantsonly" need a space.

(A) Space added.

Q12. Section 6.3, Table 4. Since Medium Changers support reservations of elements, this table needs to describe the impact of using this feature. For instance, an INITIAILIZE ELEMENT STATUS WITH RANGE should not be affected by reservations if none of the elements in the range are reserved I would think, but it may be affected if the Medium Transport Element is reserved.

(R) HP checked again, Element Reservations can be obsoleted.

Removed clauses describing Element Reservations and change opcode table to point to Reserve and Release in SPC-2. Definition for third-party was removed as the term was only used in the deleted clauses.

Q13. Section 6.4, first paragraph. This command can do much more than simply exchange medium between to elements. The first sentence of this paragraph should be fixed.

(A) Text modified.

Q14. Section 6.4, second paragraph. This paragraph is partly redundant with Table 2 and wholly confusing. This standard is the only one I know of that explicitly states the data to be transferred with the command.

(A) Sentences removed here and for other commands.

Q15. Section 6.4, third paragraph. This paragraph is redundant with Table 4 but less accurate. It could actually provide more information, such as what elements should be checked for reservation conflicts (source, first destination, second destination, and medium transport).

(P) Paragraphs describing reservation issues with each command have been removed.

Q16. Section 6.5, last paragraph. An "element reservation" for which element?

(P) Paragraph has been removed.

Q17. Section 6.9, the paragraph after Table 10. Spelling error, "reisding" should be "residing".

(A) Text changed.

Q18. Section 6.9, the paragraphs immediately before and immediately after Table 11. The WRITE ATTRIBUTES command was first defined in SPC-3.

(A) Reference changed to SPC-3.

Q19. Section 6.9. The sentence that is only "ELEMENT LIST Service Action" should be a subclause heading.

(A) Converted to subclause heading.

Q20. Section 6.9, the paragraph immediately preceding Table 12. It is completely unclear as to when this information is available, what to do if it changes, or how reservations affect it.

(P) As the format does not handle a non contigious list elements with MAM, the ELEMENT LIST service action was made obsolete. It will be replaced by a field indicating MAM is available in the element descriptor. See Q21.

(A) Pick up changes in T10/03-211r2.

Q21. Section 6.9, Table 12. This table needs to be broken into 2 tables.
The first table contains the Available Data field and another field that is described as "Element List Element Descriptors" running from byte 4 through n. The second table is the Element List Element Descriptor table with the Element Type Code in byte 0, the First Element Address in bytes 1 and 2, and the Number Of Elements field in bytes 3 and 5. We should re-evaluate this descriptor if we don't like the odd size.

(T) Obsolete the Element List service action.

(P) Add a field to each element descriptor that indicates MAM is accessable via this element. Strike element type code field, but add text explaining how element address works, how to find out using Read Element Status if MAM is accessable and what status to return if it is not.

(A) Pick up changes in T10/03-211r2.

Q22. Section 6.10, first paragraph. Since this clause has subclauses, all of this stuff needs to go into a subclause 6.10.1. The same comment applies to section 6.9 (after the ELEMENT LIST Service Action header is fixed), 6.11, 6.12, 6,14, and 6.15.

(A) Subclause headers added.

Q23. Section 6.10, second paragraph. Is a Sequential device with
an attached medium required to support both B4h and B8h opcodes,
or only one of these?

(R) The optional B8h opcode will be retained in SMC-2. SMC-3 may
obsolete the attached model.

Q24. Section 6.10, fifth paragraph. Element reservation for which
element?

(P) Paragraph has been removed.

Q25. Section 6.10.1, second paragraph. No requirement is included
for the order in which the pages or descriptors are returned. Is
it acceptable that the element addressed by the First Element
Address Reported field is not the first element in the list?

(P) (T) Added requirement to return descriptors in element address
order for each element type code.

Q26. Section 6.10.2, first paragraph. Why would an element status
page that had zero descriptors be included in the data? Is there
an implied requirement that pages be returned for element types
that have no elements that meet the reporting criteria?

(R) Media changers are permitted, but not required to return a
zero length page.

Q27. Section 6.10.5, Table 19. cmc should be small caps.

(A) Changed to small caps.

Q28. Section 6.10.6. One could argue that in the fields NOT BUS,
ID VALID, SCSI BUS ADDRESS, LU VALID, and LUN are obsolete with
today's transport layers. If they remain, they need their
descriptions changed to accommodate other transport layers. Three
bits of LUN is not nearly enough for most transport layers in use
today (at least 6 bits, 8 bytes would be better).

(R) Obsoleted fields instead of trying to update them.

Q29. Section 6.13, fifth paragraph. The last sentence in this
paragraph is dangerous. Since the CDB contains an ELEMENT TYPE
field and an ELEMENT ADDRESS field, elements can be requested out
of order. This sentence does not account for that. Suggested re-
wording: "Once information for a given element has been reported,
it will not be reported again for subsequent REQUEST VOLUME
ELEMENT ADDRESS commands until another SEND VOLUME TAG command has

completed".

(T)(P) Added one line. Made the ELEMENT TYPE CODE field in this command obsolete.

Q30. Section 6.14, first paragraph. Since this clause has subclauses, a subclause heading is required before this first paragraph.

(A) Subclause heading added.

Q31. Section 6.14.1, second paragraph. This requirement has the effect of disallowing an initiator from reserving the entire unit if it holds any element reservations. If that is not desired, reword to: "If the unit is reserved by another initiator the target shall respond by returning RESERVATION CONFLICT. If the ELEMENT bit is set to one, and any element in the Element List is reserved by another initiator, the target shall respond with RESERVATION CONFLICT."

(R)

Q32. Section 6.12.1, third paragraph. This paragraph is redundant with subcluase 6.3. If the editor chooses to keep it, it should be reworded to:
"If, after processing a RESERVE ELEMENT command with an ELEMENT bit set to zero, any other..."

(P) Paragraph was removed.

Q33. Section 6.14.2, general comment. The PERSISTENT RESERVE IN and PR OUT commands are intended to replace RESERVE and RELEASE because they can support the transport layers of the future. For all other device types, RESERVE and RELEASE have been obsoleted recently. The one major drawback of PR IN and PR OUT with respect to SMC-2 is the inability to reserve blocks of elements with a single command. Should we fix that flaw in PR OUT and PR IN now and obsolete RESERVE and RELEASE as the other device types have done?

(R) RESERVE ELEMENT and RELEASE ELEMENT have been made obsolete, replaced by the RESERVE and RELEASE commands as defined by SPC-2.

Q34. Section 6.14.2, first paragraph. While this feature may be most useful "in a multiple tasking environment" it is possible without such an environment. This phrase should be removed.

(A) Text removed along with command.

Q35. Section 6.14.2, fifth paragraph. How should overlapped element reservations be handled? If an initiator holds an element reservation for an element and then issues another RESERVE command

with ELEMENT set to one that includes that same element but has a different RESERVATION IDENTIFICATION, what should it do? Should it transfer the reservation to the new ID, hold the reservation under both IDs (both must be released to release the element), or reject the second command?

(P) No change needed, RESERVE ELEMENT and RELEASE ELEMENT have been made obsolete.

Q36. Section 6.14.2, eighth paragraph. This implies that a single element descriptor can include elements of multiple types. Are we sure we want element descriptors to span between element types?

(R) Yes.

Q37. Section 6.14.2, eighth paragraph. Instead of "last" use "highest" since there is no specified ordering of elements.

(A) Text changed.

Q38. Section 6.14.2, general comment. A paragraph is required to describe the action on a truncated element descriptor.

(P) Return check condition, illegal request was appropraite. No change needed now, clause has been removed.

Q39. Section 6.15.1. The section header claims third party support is mandatory and the first paragraph after the header claims it is an option. Since it is not even offered in the RESERVE ELEMENT (6) command, it has to be an option.

(A) Changed to optional.

Q40. Section 6.15.2. This heading should be removed since it breaks up the 3rd party subclause. The first paragraph after it should be moved to subclause 6.14.2. Note 13 should be moved also, or even better, removed.

(A) Move section header and paragraphs 6.15.3 after table.

Q41. Section 6.15.2, fifth paragraph. Since 3rd party support is optional (or at least it should be), the first sentence of this paragraph should be: "Device servers that support 3rd party reservations and device IDs greater..."

(A) Text modified.

Q42. Section 6.15.2, sixth paragraph. There is no paragraph that describes what is expected for other combinations of LONGID and ELEMENT.

(P) Command now obsolete, no change needed.

Q43. Section 6.15.2, sixth paragraph. What is the "extent list length"?

(A) Text changed to "element descriptor list length".

Q44. Section 6.15.2, Table 30. The reference in the Element Descriptors field should be Table 28, but it would be better to reference the entire subclause 6.14.2.

(P) Table reference changed.

Q45. Section 6.16, second paragraph after Table 32. What is the ASC? How about if the element is empty or inaccessible?

(A) Specified ASC/Q as INVALID FIELD IN CDB.

Q46. Section 6.16, fifth paragraph after Table 32. What is the ASC, most likely Invalid Field in CDB?

(A) Specified ASC/Q as INVALID FIELD IN CDB.

Q47. Section 6.16, fifth paragraph after Table 33. What is the Sense Key and ASC if it does?

(A) Modified text to specify Illegal Request, invalid field in parameter list.

Q48. Section 6.17, second paragraph. What should the device do if this element address is empty? What if the medium in that element does not support MAM commands or if an error occurs accessing the MAM?

(A) If empty – return illegal request, medium source element empty. Made the same change to READ ATTRIBUTE.

(A) not supported – illegal request, invalid field in CDB. Error – medium error.

Q49. Section 7.2.2, editor's note. This sounds like good advice. However, SSC-2 is struggling with this issue still, so perhaps the editor should wait for resolution there.

(A) Replaced editors note with descriptive text.

Q50. Section 7.3, first paragraph. Add subclause 7.3.1 to cover these paragraphs.

(A) Subclause added.

Q51. Section 7.3, fifth paragraph. Add a sentence that states the Number Of Blocks and Block Length fields must be 0.

(A) (T) Specified that number of blocks and block length fields are reserved.

 Do any media changers actually implement block descriptors?

Q52. Section 7.3.1. There is more device capability information that we would like to see standardized in its reporting. Perhaps a reserved byte from this mode page could do that. The information is: Optical Bar Code Reader Present, Volume Tag Save capable, MAM Read capable, and MAM Write capable. It would also be good to report if a SET VOLUME TAG command that modifies a VT will save that information with the device or the medium. We would also like to add a bit to report if the medium changer is managing the cleaning process.

(A) Pick up changes in proposal T10/03-211r2.

Q53. Section 7.3.2, last paragraph. According to subclause 5.3, each element type must have a contiguous address range. Each of these paragraphs defines the action to take if MODE SELECT command changes a greater number of elements than the default number. A description of the action to take on an attempt to change the addresses of any number but all of the elements of a specific element type should also be included. It also should be invalid to change the address of any of the elements of type Medium Transport since it must be anchored at 0. Or, Perhaps it is legal to move the Medium Transport elements to another address in which case address 0 acts as an alias. If so, that should be described here, or even better in the Model section.

(P) Specify that if the rules in section 5.3? are violated, return ILLEGAL REQUEST, invalid field in parameter list.

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Comments attached to No ballot from Mr. Gerald Houlder of Seagate Technology:

Seagate Technology Comments on SMC-2, revision 5
Prepared by Paul Suhler

Editorial comments: 30
Technical comments: 1

Seagate-01
Editorial
Pg 17
Clause 3.1.44
".media and its carrier." -- "Media" is plural; "its carrier" is singular. S/b
".medium and its carrier."

(A) Text changed.

Seagate-02
Editorial
Pg 20
Clause 4, third paragraph, 1st sentence:
".address they can be found." S/b ".addresses at which they can be found."

(P) Text changed, replaced "can" with "may".

Seagate-03
Editorial
Pg 20
Clause 4, third paragraph, 2nd sentence:
 ".unit reports this inventory when requested as well as identifying." s/b
".unit reports this inventory when requested and identifies."

(A) Text changed.

Seagate-04
Editorial
Pg 22
Clause 5.1, first sentence:
"mediachanger" s/b "media changer"

(A) Space added.

Seagate-05
Editorial
Pg 22
Clause 5.3, first paragraph, last sentence
"INQUIRY command response data" s/b "standard Inquiry data"

(A) Text changed in 5.2, not 5.3.

Seagate-06
Editorial
Pg 24
Clause 5.6, first sentence
"thatare" s/b "that are"

(A) Space added.

Seagate-07
Pg 25
Clause 5.8, first sentence
" When a media changer receives a valid READ ELEMENT STATUS command with a CURDATA bit of zero, the media changer shall be capable of reporting as command response data various data required by each page type (i.e., full, error, etc.)."
This is very awkward and unclear. I don't have an alternative,

because the intent isn't clear. ".shall be capable of." doesn't
sound like good standards-ese.

(A) Replaced with " ... the media changer returns information
required by each page type (e.g., full, empty) as command response
data."

Seagate-08
Editorial
Pg 25
Clause 5.9, second paragraph
" The volume tag information field values shall be independent of
any volume identification information recorded on the medium or a
volume."
The intent of this is unclear. If the volume tag can come from a
label, then why not from information on the medium? Does "shall
be independent" mean that it may or may not be the same as some
information on the medium.
I see no reason for not deleting the paragraph.

(P) The intent was to state that the volume tag is not the same as
the volume label recorded as the first record in some tape
formats. Replaced "shall" with "may".

Seagate-09
Editorial
Pg 29
Clause 6.3, second paragraph, second sentence: Needs a comma.
". method see table 4." s/b ". method, see table 4."

(A) Comma added.

Seagate-10
Editorial
Pg 29
Clause 6.3, "allowed" keyword:
"registrantsonly" s/b "registrants only"

(A) Space added.

Seagate-11
Editorial
Pp 31 - 74
Clauses 6 and 7, various CDB and parameter tables
In SPC-2 and SPC-3, for example, tables with multiple-byte fields
usually have the MSBs and LSBs indicated and horizontal lines
separating bits 7 of successive bytes and bits 0 of successive
bytes. This was not done in SMC and is not in SMC-2. Please
change.

(A) Table format changed to match other T10 documents.

Seagate-12

Editorial
Pg 36
Clause 6.7, third paragraph
".device capabilities MODE SENSE page." s/b ".device capabilities
mode page."

(P) Changed to "Device Capabilities mode page".

Seagate-13
Editorial
Pg 38
Clause 6.9, first sentence: typo:
"Auxillary" s/b/"Auxiliary"

(A) Text changed.

Seagate-14
Editorial
Pg 38
Clause 6.9, Table 10: Inconsistent use of small caps.
ELEMENT TYPE CODE, VOLUME NUMBER, PARTITION NUMBER, FIRST
ATTRIBUTE ID, and ALLOCATION LENGTH all need to be fixed.

(A) Use of small caps fixed.

Seagate-15
Editorial
Pg 38
Clause 6.9, Table 10
This CDB table was not modified correctly from that in SPC-3:
1. ALLOCATION LENGTH field should be four bytes, 10 - 13.
2. Reserved and CONTROL fields should be 14 and 15, respectively.

(A) Table corrected based on SPC-3.

Seagate-16
Editorial
Pg 38
Clause 6.9, First paragraph after Table 10, second sentence:
typo:
"reisding" s/b "residing"

(A) Text corrected.

Seagate-17
Editorial
Pg 38
Clause 6.9, First paragraph after Table 10, third sentence: typo:
"Not that this field." s/b "Note that this field."

(A) Text corrected.

Seagate-18

Editorial
Pg 39
Clause 6.9, last sentence before and first sentence after Table 11
References to SPC. This command is defined in SPC-3, not SPC-2.
Is a reference to SPC-3 allowed? If not, then snarf field
descriptions from SPC-3.

(A) References changed to SPC-3.

Seagate-19
Editorial
Pg 39
Clause 6.9, Table 12: inconsistent use of small caps
Correct AVAILABLE DATA, ELEMENT TYPE CODE, and FIRST ELEMENT
ADDRESS,

(A) Use of small caps corrected.

Seagate-20
Editorial
Pp 45, 47, 49, 51
Clause 6.10: repeated typo:
"IDENFIFIER LENGTH" s/b "IDENTIFIER LENGTH"

(A) Text corrected in four places.

Seagate-21
Editorial
Pg 50
Clause 6.10.1, Table 20: inconsistent use of small caps
Correct NOT BUS, ID VALID, and LU VALID.

(P) Fields are marked as obsolete.

Seagate-22
Editorial
Pg 51
Clause 6.10.1, third paragraph, last sentence
"lun address" s/b "LUN address"

(A) Corrected text in clause 6.10.6.

Seagate-23
Technical
Pg 51
Clause 6.10.1, third and fourth paragraphs:
This needs an explanation of the value in the SCSI BUS ADDRESS, ID
VALID, and NOT BUS fields for transport layers other than Parallel
SCSI. Probably all fields should be set to zero in such a case.

(P) T10 Plenary voted to make these fields obsolete.

Seagate-24

Editorial
Pg 55
Clause 6.13, fifth paragraph, first sentence: awkward wording:
".shall be able to report." doesn't sound like proper standards-
ese.

(A) Changed to "shall report"

Seagate-25
Editorial
Pg 59
Clause 6.14.2, list bulleted with '-' characters:
Are these steps to be taken in the indicated order? If so, then
the list should be numbered, in accordance with clause 3.4.

(A) Changed to numbered list.

Seagate-26
Editorial
Pg 67
Clause 6.17, WRITE ATTRIBUTE command, last sentence
Reference to SPC-2 is incorrect. If a reference to SPC-3 cannot
be used, then snarf field descriptions from SPC-3.

(A) Changed reference to SPC-3.

Seagate-27
Editorial
Pg 67
Clause 7.2.2, editors note
This needs to be done. Note that changes are being proposed to
the TapeAlert page for SSC-2.

(A) Editors note removed and TapeAlert log page description added.

Seagate-28
Editorial
Pg 79
Annex A table, item 16h: typo:
"perposes" s/b "purposes"

(A) Text corrected.

Seagate-29
Editorial
Pg 80
Annex A Table, line 1Ch: repeated word:
"the the" s/b "the"

(A) Repeated word deleted.

Seagate-30
Editorial

Pg 81
Annex A Table, line 1Eh, columns 5 and 6: two typos:
"occured" s/b "occurred"

(A) Spelling corrected in two places.

Seagate-31
Editorial
Pg 81
Annex A Table, line 1Fh, column 5: typo:
"passthrought" s/b "passthrough"

(A) Text corrected.

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Comments attached to No ballot from Mr. Erich Oetting of
Storage Technology Corp.:

STK 1. (T) Pg 15 - Clause 2, Replace SAM with SAM-2.

(A) Done.

STK 2. (T) Pg 15 - Clause 2, Replace SPC with SPC-2.

(A) Reference changed to SPC-2.

STK 3. (T) Pg 18 - Clause 3.2. Replace SAM with SAM-2, and update
all occurances in the document.

(A) Changed references to SAM-2.

STK 4. (T) Pg 18 - Clause 3.2. Replace SPC with SPC-2, change SPC
to SPC-2 in rest of document except for Read Attribute and Write
Attribute command clauses.

(A) References changed except for commands only defined in SPC-3.

STK 5. (E) Pg 18 - Clause 3.2. Add abbrev. for SPC-3.

(A) SPC-3 added.

STK 6. (E) Pg 22 - Clause 5.1. Missing space in "mediachanger".

(A) Space added.

STK 7. (E) Pg 24 - Clause 5.6. Missing space in "thatare".

(A) Space added.

STK 8. (E) Pg 24 - Clause 5.7. Delete note 2 and substitute a
paragraph stating that coordination between data transport and

media changer may use ADI or be vendor specific.

(P) Changed sentence to refer to ADC.

STK 9. (E) Pg 25 - Clause 5.9. Remove extra space in "data descriptor"

(A) Extra space removed.

STK 10.(T) Pg 27 - Clause 6.1, Table 2, Release Element (6), operation code 16h should be 17h.

(A) Opcode changed to 17h.

STK 11.(E) Pg 31 - Clause 6.4. Remove third paragraph starting "A reservation conflict ... ". Reservation rules are already defined by Table 4. Do the same for all other command definitions.

(A) Reservation paragraph removed from all command definitions.

STK 12.(E) Pg 31 - Clause 6.4. Table 2. Replace dashed lines between byte numbers and replace with hairline. Fix same table format problem in rest of document.

(A) Table format changed to match other T10 documents.

STK 13.(E) Pg 32 - Clause 6.4. Last paragraph on page, "a logical unit that is not capable" should be "a device server that is not capable".

(A) Text changed.

STK 14.(E) Pg 38 - Clause 6.9 - Change SPC to SPC-3 in this clause.

(A) Changed reference to SPC-3.

STK 15.(E) Pg 38 - Clause 6.9 - First sentence, "read attribute values to" should be "read attribute values from".

(A) Text changed.

STK 16.(T) Pg 39 - Clause 6.9 - The Element List service action should return a list of only elements with an accessable MAM, yet the format does not provide for handling a non-contiguous list.

(R) Meeting on 3/10 decided to eliminate the Element List service action and add a MAM bit to each element descriptor instead.

STK 17.(E) Pg 41 - Clause 6.10, Last paragraph on page. Replace "the DVCID bit shall be treated as reserved" with "and the DVCID bit is set to one, the device server shall return Check Condition, Illegal Request, Illegal field in CDB".

(A)(T) Text modified.

STK 18.(T) Pg 51 - Clause 6.10.6 - Text describing the NOT BUS,
ID VALID and SCSI BUS ADDRESS fields should be removed. (mark
these fields as obsolete in Table 20).

(A)(T) Change approved by T10 plenary, fields have been marked as
obsolete.

STK 19.(T) Pg 51 - Clause 6.10.6 -Text describing the LU VALID and
LOGICAL UNIT NUMBER fields should be removed. (mark these fields
obsolete in Table 20).

(A) Fields marked obsolete.

STK 20.(T) Pg 54 - Clause 6.12.1. Third party release should be
obsolete not mandatory. Remove this clause, mark appropriate
fields in Table 23 as obsolete and remove Table 24.

(P) Changed third party release to optional.

STK 21.(T) Pg 61 - Clause 6.15.1. Third party reservations should
be obsolete, not mandatory. Remove this clause and 6.15.2, mark
the appropriate fields in Table 29 as reserved and remove Table
30.

(P) Changed third party release to optional.

STK 22.(E) Pg 67 - Clause 6.17 - Change SPC-2 to SPC-3.

(A) Reference changed to SPC-3.

STK 23.(E) Pg 69 - Clause 7.2.2 - Remove editors note and replace
with description of Tape Alert Log page from SSC.

(A) Deleted editors note and added TapeAlert log page description.

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Comments attached to YesC ballot from Mr. Paul D. Aloisi of
Texas Instruments:

TI 1. Section 1 has a very outdated list of standards, example ?
Fast-20 is Obsolete, SPI-3 and SPI-4 should be listed. (see SAM-2
or newer document for an updated list).

(A) List of standards updated using SPC-3 rev 11 as a guide.

TI 2. Section 2 ? SPC-2 should be the normative reference

(A) Changed to SPC-2.

TI 3. Annex B is a very outdated list

(P) Annex B has been deleted.

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