T10/06-081r0

Voting Results on T10 Letter Ballot 06-080r0 on
Forwarding SAT to First Public Review
Ballot closed: 2006/02/17 12:00 noon MST

Organization	Name	S	Vote	Add'l Info
Adaptec, Inc.	Lawrence J. Lamers	A	Yes	
AMCC	Paul von Stamwitz	P	Yes	
Amphenol Interconnect	Michael Wingard	P	Yes	
AvagoTechnologies			DNV	
Broadcom Corp.	Ron Roberts	A	Yes	
Brocade	Robert Snively	P	Yes	Cmnts
Dallas Semiconductor	James A. Lott, Jr.	P	Yes	
Dell, Inc.	Kevin Marks	P	No	Cmnts
EMC Corp.	David Black	A	Yes	
Emulex	Kenneth Hirata	A	Yes	Cmnts
ENDL	Ralph O. Weber	P	No	Cmnts
FCI	Douglas Wagner	P	Yes	
Foxconn Electronics	Elwood Parsons	P	Abs	Cmnts
Fujitsu	Mike Fitzpatrick	P	Yes	
General Dynamics	Nathan Hastad	P	Yes	
Hewlett Packard Co.	William Ham	A	No	Cmnts
Hitachi Cable Manchester	Zane Daggett	P	Yes	
Hitachi Global Storage Tech.	Dan Colegrove	P	Yes	
IBM Corp.	George O. Penokie	P	No	Cmnts
Intel Corp.	Robert Sheffield	P	No	Cmnts
Iomega Corp.	Robert Payne	P	Yes	
Lexar Media, Inc.	John Geldman	P	Yes	
LSI Logic Corp.	John Lohmeyer	P	No	Cmnts
M-Systems	Avraham Shimor	P	Yes	
Maxtor Corp.	Mark Evans	P	No	Cmnts
Microsoft Corp.	Emily Hill	P	Abs	Cmnts
Molex Inc.	Jay Neer	P	Yes	
Nvidia Corp.	Mark Overby	P	No	Cmnts
Oracle	James Williams	P	Yes	
Panasonic Technologies, Inc	Terence J. Nelson	P	Yes	
Philips Electronics	William P. McFerrin	P	Yes	
Pivot3, Inc.	Bill Galloway	P	Yes	
PMC-Sierra	Tim Symons	P	Yes	
QLogic Corp.	Craig W. Carlson	A	Yes	
Quantum Corp.	Paul Suhler	A	Yes	Cmnts
Seagate Technology	Gerald Houlder	P	Yes	Cmnts
Sierra Logic, Inc.	William Martin	P	Yes	Cmnts
Sun Microsystems, Inc.	Vit Novak	P	Yes	
Symantec	Roger Cummings	P	Yes	
Texas Instruments	Paul D. Aloisi	P	Yes	
TycoElectronics	Dan Gorenc	A	Yes	
Vitesse Semiconductor	Gregory Tabor	P	Abs	Cmnts
Western Digital	Curtis Stevens	P	No	Cmnts
Xiotech Corp.	Jeff Williams	P	Yes	
Xyratex	Rich Ramos	P	Yes	

Ballot totals: (32:9:3:1=45)
32 Yes

```
  9 No
  3 Abstain
  1 Organization(s) did not vote
 45 Total voting organizations
 17 Ballot(s) included comments

This 2/3rds majority ballot passed.
32 Yes are more than half the membership eligible to vote minus abstentions
  [greater than 21] AND
32 Yes are at least 27 (2/3rds of those voting, excluding abstentions [40])
AND
32 Yes are equal to or exceed a quorum [15]

Key:
P       Voter is principal member
A       Voter is alternate member
Abs     Abstain vote
DNV     Organization did not vote
Cmnts   Comments were included with ballot
NoCmnts No comments were included with a vote that requires comments

************************************************************

Comments attached to Yes ballot from Robert Snively of
Brocade:

Comments may be forthcoming during the review process if problems are
identified during the comment resolution.


************************************************************

Comments attached to No ballot from Kevin Marks of
Dell, Inc.:

Dell comment number 1
Page=1 Subtype=Text Author=Kevin_Marks
Comment=
Globally Comments:

1. Both "SCSI/ATA translation" and "SCSI/ATA Translation" are used. Need to
make all capital T or lower case. Prefer lower case, unless referring to
this standard specifically.

2. Sometimes ATA commands have ATA in front, like ATA IDENTIFY DEVICE some
times they don't. Recommend that all ATA commands have ATA in front, unless
in table when the column header says ATA command.

3. Since this is a SCSI spec, remove SCSI from in front of SCSI commands.

4.Search for IDENTIFY DEVICE data, and add ATA in front. Same for IDENTIFY
PACKET DEVICE data.

5. The standard, in parts, seem to imply (with shall) that only
direct-access block devices are supported, but other areas leave it open.
```

Example is the mode page block descriptorsection.

6. Remove change bars

7. The word "attached" is not used regularly. Search for ATA device and remove form one's present or add "attached" where applicable.

8. Through out standard, the words "terminate the command is use" Shouldn't this be task, and not command.

Dell comment number 2
Page=19 Subtype=Text Author=Kevin_Marks
Comment=
In Foreword

Add member list prior to forwarding to INCITS

Dell comment number 3
Page=20 Subtype=Highlight Author=Kevin_Marks
Comment=
Introduction

Change

"
...
Clause 10 describes the mapping of mode page and log page information to selected ATA protocol elements.
Clause 11 describes the mapping of SMART capabilities from ATA to SCSI.
Clause 12 describes error reporting and sense data conventions for SCSI/ATA translation.
Clause 13 describes SCSI commands, mode pages and log pages to support SCSI / ATA Translation.
Clause 14 describes SCSI / ATA Translation elements specific to ATAPI devices.
Appendix A provides informative text to assist in the implementation of SCSI/ATA translation."
to
"
Clause 10 describes the mapping of mode page and log page information to selected ATA protocol elements.
Clause 11 describes error reporting and sense data conventions for SCSI/ATAtranslation.
Clause 12 describes SCSI commands, and mode pages to support SCSI / ATA Translation.
Clause 13 describes SCSI / ATA Translation elements specific to ATAPI devices.
"

Dell comment number 4
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 3, remove

"SAM-3

[ISO/IEC 14776-413]"

or add versions to other boxes.

Dell comment number 5
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
Figure 2

change
"ATA Protocols"
to
"ATA Transport Protocols"

Dell comment number 6
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
Figure 2
change
"Physical Interconnects"
to
"ATA physical interconnects"

Dell comment number 7
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
Figure 2
change
"Logical Register Set"
to
"ATA logical register set"

Dell comment number 8
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 2
change
"ATA Register-Delivered Command Set"
to
"ATA register delivered command set"

Dell comment number 9
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 2
change
"ATAPI Packet-Delivered Command Set"
to
"ATAPI packet delivered command set"

Dell comment number 10
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 3
change

"ATA/ATAPI Register-Delivered Command Set"
to
"ATA/ATAPI register delivered command set"

Dell comment number 11
Page=22 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 3
change
"ATA/ATAPI Packet-Delivered Command Set"
to
"ATA/ATAPI packet delivered command set"

Dell comment number 12
Page=23 Subtype=Text Author=Kevin_Marks
Comment=
Remove blank page after Figure 3.

page 3.

Dell comment number 13
Page=24 Subtype=Text Author=Kevin_Marks
Comment=
Section 2

Remove editor's note 1 prior to forwarding to INCITS

Dell comment number 14
Page=24 Subtype=Highlight Author=Kevin_Marks
Comment=
2.2 Approved references
change
"ISO/IEC 14776-971, AT Attachment - 7 with Packet Interface (ATA/ATAPI-7)
[ANSI INCITS 397-2005]"
to
"ISO/IEC 14776-971, AT Attachment with Packet Interface - 7 (ATA/ATAPI-7)
[ANSI INCITS 397-2005]"

Dell comment number 15
Page=24 Subtype=Highlight Author=Kevin_Marks
Comment=
2.4 Other references

Serial ATA Revision 2.5 (SATA-2.5)

No organization is specified for SATA, add SATA-IO

Dell comment number 16
Page=24 Subtype=Highlight Author=Kevin_Marks
Comment=
2.3 References under development
Change
"NOTE 1 For more information"
to
"NOTE 1 - For more information"

Dell comment number 17
Page=24 Subtype=Text Author=Kevin_Marks
Comment=
2.3 References under development

add SPC-4 for ASC/ASCQ defined in ATA PASS-THROUGH Commands

Dell comment number 18
Page=25 Subtype=Highlight Author=Kevin_Marks
Comment=
Change
"3.1.2 application client: An object that is the source of SCSI commands. Further definition of an application client is found in SAM-3."
to
"3.1.2 application client: An object that is the source of SCSI commands. Further definition of an application client may be found in SAM-3."

Dell comment number 19
Page=25 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.7 ATA domain:
change
"...consisting of an ATA hosts and ATA/ATAPI..."
to
"...consisting of an ATA host and ATA/ATAPI..."

Don't follow argument of a SATA A/A Mux having only one domain.

Dell comment number 20
Page=25 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.12 AT Attachment Packet Interface (ATAPI)

change
"... defines a Packet Command feature set that provides ..."
to"... defines a PACKET Command feature set that provides ..."

Dell comment number 21
Page=25 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.11 ATA LBA: .If the attached

Remove leading period.

Dell comment number 22
Page=25 Subtype=Highlight Author=Kevin_Marks
Comment=
change
"3.1.13 ATAPI device: A device implementing the packet feature set as described in ATA/ATAPI-7."
to
"3.1.13 ATAPI device: A device implementing the PACKET Command feature set as described in ATA/ATAPI-7."

Dell comment number 23
Page=26 Subtype=Highlight Author=Kevin_Marks
Comment=
In 3.1.19 ATA write FUA command sequence, d)

change
"...bit in the Device/Head field set..."
to
"...bit in the Device field set..."

SATA and PATA specs don't use head any more.

Dell comment number 24
Page=26 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.30

Remove second sentence
"The payload of a frame, does not
include the SOF, CRC, and EOF delimiters"

Although part of ATA/ATAPI-7 definition, does not seem applicable to this standard.

Dell comment number 25
Page=27 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.31
remove "that exists" from 1st sentence.

Dell comment number 26
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.33

Change
"3.1.33 I_T_L_Q nexus: A nexus between a SCSI initiator port, a SCSI target port, a logical unit, and a queue tag following the successful receipt of a queue tag. This relationship replaces the prior I_T nexus or I_T_L nexus (see SAM-3)."
to
"3.1.33 I_T_L_Q nexus: A nexus between a SCSI initiator port, a SCSI target port, a logical unit, and a task (see SAM-3)."

Dell comment number 27
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.32
change
"3.1.32 I_T_L nexus: A nexus that exists between a SCSI initiator port, a SCSI target port, and a logical unit. This relationship extends the prior I_T nexus (see SAM-3)."
to
"3.1.32 I_T_L nexus: A nexus between a SCSI initiator port, a SCSI target port, and a logical unit (see SAM-3)."

Dell comment number 28
Page=27 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.39
Remove "SCSI" from 1st Sentence

Dell comment number 29
Page=27 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.46
remove "tag" from 1st sentence.

Dell comment number 30
Page=27 Subtype=StrikeOut Author=Kevin_Marks
Comment=
In 3.1.45

Remove last sentence

"There is no enable or disable function."

Dell comment number 31
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.45
change
"information"
to
"data" in 2nd sentence to match rest of spec and add "ATA" in front of
"IDENTIFY DEVICE"

Dell comment number 32
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.45
Change
"(see ATA/ATAPI-7)."
to
"(see SATA 2.5)."

word 76 is assigned to SATA in ATA/ATAPI-7

Dell comment number 33
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.36
change
"3.1.36 link reset sequence: For SATA, a phy reset sequence. For PATA, a
software reset as defined in ATA/ATAPI-7."
to
"3.1.36 link reset sequence: A phy reset sequence (see ATA/ATAPI-7)."

link reset or link reset sequence is never used with reference to PATA in
spec.

Dell comment number 34
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.40
change in 1st sentence
"...unit reset from a logical..."
to
"...unit reset to a logical..."

Dell comment number 35
Page=27 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.41
change
"3.1.41 logical unit reset: A logical unit action in response to a logical unit reset event in which the logical unit performs the operations described in SAM-3."
to
"3.1.41 logical unit reset: A condition resulting from a hard reset condition or a logical unit reset event in which the logical unit performs the logical unit reset operations described in SAM-3, SPC-3, and this standard."

Dell comment number 36
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.49

change
"3.1.49 PATA device: A storage device that uses the PATA transport (see ATA/ATAPI-7)."
to
"3.1.49 PATA device: An storage device that uses the PATA transport protocol (see ATA/ATAPI-7)."

Dell comment number 37
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.50
change
"3.1.50 PATA host: A host that uses the PATA transport (see ATA/ATAPI-7)."
to
"3.1.50 PATA host: An host that uses the PATA transport protocol (see ATA/ATAPI-7)."

Dell comment number 38
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.54
change
"...unique name assigned..."
to
"...unique name or identifier assigned..."

Dell comment number 39
Page=28 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.59 SATA 2.5

Remove definition, already in references and acronyms.

Dell comment number 40
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.57
change
"3.1.57 SATA device: A device that implements a Serial ATA transport (see ATA/ATAPI-7)."
to
"3.1.57 SATA device: An storage device that uses the Serial ATA transport protocol (see ATA/ATAPI-7)."

Dell comment number 41
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.58
change
"3.1.58 SATA host: A host that implements a Serial ATA transport (see ATA/ATAPI-7)."
to
"3.1.58 SATA host: An host that implements a Serial ATA transport protocol (see ATA/ATAPI-7)."

Dell comment number 42
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.65

"3.1.65 SCSI synchronize cache command: A ..."

remove leading period

Dell comment number 43
Page=28 Subtype=StrikeOut Author=Kevin_Marks
Comment=3.1.64 remove "SCSI" in definition.

Dell comment number 44
Page=28 Subtype=StrikeOut Author=Kevin_Marks
Comment=3.1.65 remove "SCSI" in definition.

Dell comment number 45
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.67

"3.1.67 SCSI verify command: A SCSI"

Remove leading period

Dell comment number 46
Page=28 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.68

"3.1.68 SCSI write command: A SCSI WRITE"

Remove leading period and "SCSI" from definition.

Dell comment number 47
Page=28 Subtype=StrikeOut Author=Kevin_Marks
Comment=3.1.67 remove "SCSI" in definition.

Dell comment number 48
Page=29 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.69

"3.1.69 SCSI write and verify command: A SCSI"

Remove leading period and "SCSI" from definition.

Dell comment number 49
Page=29 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.70
change
"3.1.70 Serial ATA (SATA): A protocol defined by ATA/ATAPI-7."
to
"3.1.70 Serial ATA (SATA): A transport protocol defined by ATA/ATAPI-7."

Dell comment number 50
Page=29 Subtype=Highlight Author=Kevin_Marks
Comment=
3.1.71
change
"3.1.71 Serial ATA Tunneled Protocol (STP): The protocol defined in this standard used by STP initiator ports to communicate with STP target ports in a SAS domain."
to
"3.1.71 Serial ATA Tunneled Protocol (STP): The protocol defined by SAS-1.1 used by STP initiator ports to communicate with STP target ports in a SAS domain."

Dell comment number 51
Page=29 Subtype=StrikeOut Author=Kevin_Marks
Comment=
3.1.79
Remove 2nd sentence
"A task consists of one initial connection and zero or more physical or logical reconnections, all pertaining to the task."

Dell comment number 52
Page=29 Subtype=Text Author=Kevin_Marks
Comment=

3.1.81 vendor-specific

vendor-specific should be moved to the keyword section 3.3.

Dell comment number 53
Page=30 Subtype=Highlight Author=Kevin_Marks
Comment=
3.3.1
add space between A and keyword.

"3.3.1 expected: A keyword..."

Dell comment number 54
Page=30 Subtype=Text Author=Kevin_Marks
Comment=
3.2 Symbols and abbreviations
SAT is missing.

Dell comment number 55
Page=31 Subtype=Highlight Author=Kevin_Marks
Comment=
3.4.2 implemented:

2nd sentence

change
"...command has a 32 bit address, and 16 bit transfer length."
to
"...command has a 32 bit logical block address, and a16 bit transfer length."

Dell comment number 56
Page=31 Subtype=StrikeOut Author=Kevin_Marks
Comment=3.4.2 remove "SCSI" from "SCSI READ (10)"

Dell comment number 57
Page=33 Subtype=Highlight Author=Kevin_Marks
Comment=
3.5.4.1 Description
1st Sentence
change
"...corresponding ATA commands, as well..."
to
"...corresponding ATA command(s), as well..."

Dell comment number 58
Page=33 Subtype=Highlight Author=Kevin_Marks
Comment=
3.5.4.2.1 Overview
2nd Sentence
change
"...shown in Table 2 to describe the..."
to
"...shown in Table 3 to describe the..."

Dell comment number 59
Page=33 Subtype=Text Author=Kevin_Marks
Comment=
In Table 3

Remove SATType column.

Dell comment number 60
Page=35 Subtype=Highlight Author=Kevin_Marks
Comment=
4 General
7th paragraph, b) in a,b list

make translation lower case "t"

Dell comment number 61
Page=37 Subtype=Highlight Author=Kevin_Marks
Comment=
Figure 4 - SAT functional protocol reference model

1. Remove what look like change bars in Figure 4
2. Change "logical unit" to "logical unit(s)"
3. Change "ATA protocol interconnect layer" to "ATA transport protocol interconnect layer"

Dell comment number 62
Page=37 Subtype=Highlight Author=Kevin_Marks
Comment=
In 5.1 Overview
2nd Paragraph, in d)
change
"... at the SCSI Transport Protocol Layer and the ATA Protocol Interconnect Layer."
to
"... at the SCSI transport protocol layer and the ATA transport protocol interconnect layer."

Dell comment number 63
Page=37 Subtype=Highlight Author=Kevin_Marks
Comment=
In 5.1 Overview
2nd Paragraph, in b) and c)

move ";and" from b) to c) (fixing missing ";")

Dell comment number 64
Page=37 Subtype=StrikeOut Author=Kevin_Marks
Comment=
In 5.1 Overview
2nd Paragraph, 1st Sentence
remove
"or may not"

Dell comment number 65
Page=37 Subtype=Text Author=Kevin_Marks

Comment=
In 5.1 Overview
2nd Paragraph, in d)

the standard does seem to have transport specific capabilities relating to SAS, contradicting d)

Dell comment number 66
Page=37 Subtype=Highlight Author=Kevin_Marks
Comment=
In 5.1 Overview
3rd paragraph, 2nd sentence in a)
change
"SCSI transport (e.g.,"
to
"SCSI transport protocol (e.g.,"

Dell comment number 67
Page=37 Subtype=Highlight Author=Kevin_Marks
Comment=
5.2 Unit attention condition
1st Sentence.

change
"...shall report asynchronous events to SCSI..."
to
"...shall report SCSI events to SCSI..."

Dell comment number 68
Page=38 Subtype=Highlight Author=Kevin_Marks
Comment=
5.2 Unit attention condition
2nd Paragraph, 1st Sentence

change
"...device with an additional sense code of POWER ON, RESET, OR BUS DEVICE RESET OCCURRED for the SCSI initiator..."
to
"...device with the sense key set to UNIT ATTENTION and the additional sense code set to POWER ON, RESET, OR BUS DEVICE RESET OCCURRED for the SCSI initiator..."

Dell comment number 69
Page=38 Subtype=Text Author=Kevin_Marks
Comment=
5.2 Unit attention condition
4th Paragraph.

after the SAM-3 does not seem to make sense to me, especially the e.g.. what does the READ(10) with a TR of zero have to do with a unit attention condition.

Are you trying to say that if a unit attention condition exists, then a unit attention shall be reported regardless if the SCSI command cause any action on the ATA/ATAPI device?

Dell comment number 70
Page=38 Subtype=Text Author=Kevin_Marks
Comment=
5.2 Unit attention condition

This seems to say the same as above. What reset condition initiated by the ATA host is not covered in the previous paragraph..

What reset condition can be initiated from the ATA host without the SATL's instructions to do so.

Dell comment number 71
Page=38 Subtype=Highlight Author=Kevin_Marks
Comment=
5.3 Handling errors in ATA commands
1st paragraph, 1st sentence.

Should "Clause 11." be a link.

Dell comment number 72
Page=38 Subtype=Highlight Author=Kevin_Marks
Comment=
5.3 Handling errors in ATA commands
2nd Paragraph, 2nd Sentence in a) or a,b,c list
change
"and"
to
"or"

Dell comment number 73
Page=38 Subtype=Text Author=Kevin_Marks
Comment=
5.3 Handling errors in ATA commands
2nd Paragraph, 2nd Sentence, a) in a,b,c list

The integrity word is optional in ATA/ATAPI-7, so this should not be a shall. You can reword and say that if bits (0:7) contain the signature (A5h) then only use if checksum is correct.

Dell comment number 74
Page=38 Subtype=StrikeOut Author=Kevin_Marks
Comment=byte

Dell comment number 75
Page=38 Subtype=StrikeOut Author=Kevin_Marks
Comment=byte

Dell comment number 76
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
6.1 Overview
1st Paragraph,1st Sentence

Spell out SAT or use SATL

Dell comment number 77
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: SCSI
Row: Ordering.

SIMPLE, ORDERED should be in small CAPS.

Dell comment number 78
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: SATA NCQ
Row: Queue Depth

change
"...as reported by the IDENTIFY DEVICE
command"
to
"...as reported in the ATA IDENTIFY DEVICE
data"

Dell comment number 79
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: ATA TCQ
Row: Queue Depth

change
"...as reported by the IDENTIFY DEVICE
command"
to
"...as reported in the ATA IDENTIFY DEVICE
data"

Dell comment number 80
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: SATA NCQ and ATA TCQ
Row: Queue Full reporting

ATA devices do not report queue full, so how can it be treated as an error?
It's not possible to issue more that 32 commands, if it did this would not
be a queue full condition, but duplicate tags.

Dell comment number 81
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: SATA NCQ and ATA TCQ
Row: Queue Full management

change
"Host manages"
to
"ATA Host manages"

Dell comment number 82
Page=39 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 4
Column: SATA NCQ and ATA TCQ
Row: Handling of Non-Queued Commands

Need to add when a Queued command is present, queued, active, etc or else the non-queued command does not end in error.

Dell comment number 83
Page=40 Subtype=StrikeOut Author=Kevin_Marks
Comment=SCSI

Dell comment number 84
Page=40 Subtype=StrikeOut Author=Kevin_Marks
Comment=SCSI

Dell comment number 85
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
1st Paragraph, 1st Sentence, in a) of a,b list

change
"report"
to
"Indicate"

Dell comment number 86
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
1st Paragraph, 1st Sentence, in b) of a,b list

change
"report"
to
"Indicate"

Dell comment number 87
Page=40 Subtype=Text Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
1st Paragraph, 1st Sentence, in b) and Paragraph 2

These two statements seem to contradict each other. b) says QERR shall be set to 01b and paragraph 2 say QERR may be set to values other than 01b provided ....

Dell comment number 88
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
1st Paragraph, 1st Sentence, in b) of a,b list
change
"...and report 01b in the Queue error management (QERR) field of the SCSI Control mode page."
to
"...and the QERR (Queue error management) field set to 01b in the Control mode page (see SPC-3)."

Dell comment number 89
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
3rd Paragraph, 2st Sentence

change
"SATA-2"
to
"SATA-2.5"

Dell comment number 90
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
4th Paragraph, 1st Sentence

Not sure what the reserved field in e.g. is? Inactive tags are bit positions set to 0 in the host's SActive register.

"value (e.g. for NCQ, corresponding to an available bit in the reserved field of the
SActive register)."

Dell comment number 91
Page=40 Subtype=StrikeOut Author=Kevin_Marks
Comment=
In b) before 6.2.3
remove
"it's"

Dell comment number 92
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
5th Paragraph, 1st Sentence a) in a,b list
change
"report"
to
"return"

Dell comment number 93

Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.2 Mapping of SCSI queued commands to ATA queued commands
5th Paragraph, 1st Sentence a) in a,b list
change
"device"
to
"logical unit"

Dell comment number 94
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.3 Commands the SATL queues internally
1st Paragraph, 1st Sentence
change
"When queued commands are outstanding..."
to
"When ATA queued commands are outstanding..."

Dell comment number 95
Page=40 Subtype=StrikeOut Author=Kevin_Marks
Comment=
6.2.3 1st Sentence
remove
"been"

Dell comment number 96
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.3 Commands the SATL queues internally
1st Paragraph, 2nd Sentence
change
"The SATL shall defer processing of the newly received non queued commands until the queued commands complete processing."
to
"If the SATL receives a SCSI command that requires a non ATA queued commands to be issues to the ATA device, the SATL shall defer processing of the SCSI command until all outstanding ATA queued commands complete."

or similar wording with this intent.

Dell comment number 97
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.3 Commands the SATL queues internally
1st Paragraph, 3rd Sentence
change
"...requirements in SAM-3."
to
"...requirements in SAM-3 (see 6.3)."

Dell comment number 98
Page=40 Subtype=Text Author=Kevin_Marks
Comment=
6.2.3 Commands the SATL queues internally

2st Paragraph

This paragraph is similar to suggested wording changes above. Remove this one or the other.

If keeping this paragraph change to
"If the SATL supports ATA queued commands and the translation requires a mix of ATA queued and non ATA queued commands the SATL shall defer processing of subsequent commands, complete processing of all outstanding ATA queued commands, process the non ATA queued command, and then continue processing the previously deferred commands.

Dell comment number 99
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.4 Multi-initiator and multi-port command queuing
1st paragraph 2nd Sentence
change
"...by the I_T_nexus from..."
to
"...by the I_T nexus from..."

Dell comment number 100
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.4 Multi-initiator and multi-port command queuing
1st paragraph 3rd Sentence
change
"... SCSI I_T_nexus using"
to
"... I_T nexus using"

Dell comment number 101
Page=40 Subtype=Highlight Author=Kevin_Marks
Comment=
6.2.4 Multi-initiator and multi-port command queuing
1st paragraph 4th Sentence
change
"...if the SATA device has..."
to
"...if the ATA device has..."

Dell comment number 102
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.2 ABORT TASK
1st Paragraph a) in a,b,c list

change
"a) If no commands have yet been issued to the ATA device for the processing of the specified SCSI task tag the SATL shall delete the specified task from the SATL internal context and respond to the ABORT TASK request with FUNCTION COMPLETE."
to
"a) If no ATA commands have been issued to the ATA device for the

processing for the SCSI task tag specified in the ABORT TASK task management function request, the SATL shall delete the specified task from the SATL internal context and respond to the ABORT TASK task management function request with a task management function response of FUNCTION COMPLETE;"

This use the word task instead of command need to be fix elsewhere,

Dell comment number 103
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.2 ABORT TASK
1st Paragraph b) in a,b,c list
change
"b) If the only command(s) being processed in the ATA device are related to the SCSI task specified by the ABORT TASK request, then the SATL may abort the ATA command(s) and respond with FUNCTION COMPLETE."
to
"b) If the only ATA command(s) issued to the ATA device are related to the SCSI task specified in the ABORT TASK task management function request, then the SATL may abort the ATA command(s) and respond to the ABORT TASK task management function request with a task management function response of FUNCTION COMPLETE; or"

Believe this should be an or at the end.

How does one abort an ATA command on an ATA device? SRST? Additionally is any text needed about cleaning up the internal context as in a)?

Dell comment number 104
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.2 ABORT TASK
1st Paragraph, 2nd Sentent
change
"...the ABORT TASK service request an any of the following ways:"
to
"...the ABORT TASK task management function request as follows:"

service requests are generally for commands not TMFs.

Dell comment number 105
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.2 ABORT TASK
1st Paragraph c) in a,b,c list
change
"c) If the ATA device is processing commands for SCSI tasks in addition to the task specified by the ABORT TASK request the SATL shall:
  A) abort outstanding ATA commands and respond to the ABORT TASK request with FUNCTION COMPLETE (see SAM3); and
  B) for each initiator port associated with an I_T_Nexus that had a task aborted, the SATL shall complete at least one command for that I_T_Nexus with CHECK CONDITION status with the sense key set to UNIT

ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR."
to
"c) If the ATA device is processing ATA commands for SCSI tasks in addition to the task tag specified in the ABORT TASK task management function request theSATL shall:
  A) abort all outstanding ATA commands and respond to the ABORT TASK task management function request with a task management function response of FUNCTION COMPLETE (see SAM3); and
  B) for each SCSI initiator port associated with an I_T nexus that had a task aborted, complete at least one command for that I_T nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR."

How are all outstanding ATA commands aborted? SRST? COMRESET?

Dell comment number 106
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
In Note 3

Change
"...domain, but instead return FUNCTION COMPLETE for the ABORT TASK request."
to
"...domain, but instead return a task management response of FUNCTION COMPLETE for the ABORT TASK task management request."

Dell comment number 107
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.3 ABORT TASK SET
1st Paragraph, 1st Sentence
change
"The SATL may handle the ABORT TASK SET service request differently depending on whether the SATL provides multiple initiators access to the emulated SCSI device or not."
to
"The SATL may handle the ABORT TASK SET task management function request differently depending on whether the SATL provides multiple initiators access to the emulated SCSI logical unit or not."

Dell comment number 108
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.4 CLEAR ACA
1st Paragraph, 2nd Sentence
change
"...returning zero in the NORMACA bit in standard INQUIRY..."
to
"...returning the NORMACA bit set to zero in standard INQUIRY..."

Dell comment number 109
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=

6.3.3 ABORT TASK SET
2nd Paragraph

"If the SATL does not provide multiple I_T nexuses access to the emulated SCSI device, the SATL shall process the service request as follows:
  1) If commands have not been issued to the ATA device for the processing of the specified SCSI task tag the SATL shall delete all tasks in the task set from the SATL internal context and respond to the ABORT TASK SET request with FUNCTION COMPLETE.
  2) If the only command(s) being processed in the ATA device are associated to the SCSI tasks in the task set, then the SATL shall abort the ATA command(s) and respond with FUNCTION COMPLETE.
  3) The SATL shall abort outstanding ATA command(s) and respond to the ABORT TASK SET request with a FUNCTION COMPLETE."
to
"Ifthe SATL does not provide multiple initiators access to the emulated SCSI logical unit, the SATL shall process the ABORT TASK SET task management function request by aborting any outstanding ATA command(s), deleting all tasks in the task set from the SATL internal context and respond to the ABORT TASK SET task management function request with a task management response of FUNCTION COMPLETE."

If the SATL only supports 1 initiator, then there is only one task set, so abort all the ATA commands and SATL internal context and response FUNCTION COMPLETE. Don't see what the SCSI task tag has to do with ABORT TASK SET?

Dell comment number 110
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.3 ABORT TASK SET
3nd Paragraph
change

"If the SATL provides multiple initiators access to the emulated SCSI device, the SATL shall process the service request as follows:
  a) If commands have not been issued to the ATA device for the processing of the specified SCSI task tag the SATL shall delete the specified task from the SATL internal context and respond to the ABORT TASK SET request with FUNCTION COMPLETE.
  b) For each initiator port associated with an I_T_Nexus that had a task aborted, the SATL shall complete at least one command for that I_T_Nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR."

Current text directly violates SAM-3, in that the ABORT TASK SET shall not affect tasks from other I_T nexuses.

to

"If the SATL does provide multiple initiators access to the emulated SCSI logical unit, the SATL shall process the ABORT TASK SET task management function request as follows:
  1)allow any outstanding ATA command(s) to complete related to the processing of tasks associated with the I_T nexus which the ABORT TASK SET

task management function was received;
  2) delete all tasks in the task set from the SATL internal context for tasks associated with the I_T nexus which the ABORT TASK SET task management function was received; and
  3) respond to the ABORT TASK SET task management function request with a task management function response of FUNCTION COMPLETE."

Dell comment number 111
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.4 CLEAR ACA
1st Paragraph, 3rd Sentence
change
"The SATL shall respond to a CLEAR ACA service request with FUNCTION REJECTED."
to
"The SATL shall respond to a CLEAR ACA task management function request with a task management function response of FUNCTION REJECTED."

Dell comment number 112
Page=41 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.5 CLEAR TASK SET
1st Paragraph, 1st Sentence
change

"The SATL may handle the CLEAR TASK SET service request differently depending on whether the SATL provides multiple initiators access to the emulated SCSI device or not."

to

"The SATL may handle the CLEAR TASK SET task management function request differently depending on whether the SATL provides multiple initiators access to the emulated SCSI logical unit."

Probably need to add a statement about it being optional for LU's supporting only the basic task management model.

Dell comment number 113
Page=42 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.5 CLEAR TASK SET
2nd Paragraph, 1st Sentence
change
"If the SATL does not provide multiple initiators access to the emulated SCSI device, the SATL shall process the service request as follows:
  1) If commands have not been issued to the ATA device for the processing of the specified SCSI task tag the SATL shall delete all tasks in the task set from the SATL internal context and respond to the CLEAR TASK SET request with FUNCTION COMPLETE.
  2) If the only command(s) being processed in the ATAdevice are associated to the SCSI tasks in the task set, then the SATL shall abort the SATA command(s) and respond with FUNCTION COMPLETE.
  3) The SATL shall abort outstanding ATA command(s) and respond to

the CLEAR TASK SET request with FUNCTION COMPLETE."

to
"If the SATL does not provide multiple initiators access to the emulated SCSI logical unit, the SATL shall process the CLEAR TASK SET task management function request by aborting any outstanding ATA command(s), deleting all tasks in thetask set from the SATL internal context and respond to the CLEAR TASK SET task management function request with a task management response of FUNCTION COMPLETE."

Dell comment number 114
Page=42 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.5 CLEAR TASK SET
3rd Paragraph, 1st Sentence
change

"If the SATL provides multiple initiators access to the emulated SCSI device, the SATL shall process the service request as follows:
  1) If commands have not been issued to the ATA device for the processing of the specified SCSI task tag the SATL shall delete the specified task from the SATL internal context and respond to the CLEAR TASK SET request with FUNCTION COMPLETE.
  2) For each initiator port associated with an I_T_Nexus that had a task aborted, the SATL shall complete at least one command for that I_T_Nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR."

to

"If the SATL does provide multiple initiators access to the emulated SCSI logical unit, the SATL shall process the CLEAR TASK SET task management function request as follows:
  1) Abort any outstanding ATA command(s), delete all tasks in the task set from the SATL internal context and respond to the CLEAR TASK SET task management function request with a task management response of FUNCTION COMPLETE; and
  2) For each initiator port associated with an I_T nexus that had a task aborted, complete at least one command for that I_Tnexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR."

This assumes TST=0 for SAT devices

Dell comment number 115
Page=42 Subtype=Text Author=Kevin_Marks
Comment=
Not sure what NOTE 4 has to do with Logical Unit Reset? And the inclusion of the SAS PHY HARD RESET in the e.g.?

Dell comment number 116
Page=42 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.6 LOGICAL UNIT RESET

1st Paragraph, 1st Sentence
change
"LOGICAL UNIT RESET shall cause the SATL to issue a software reset (i.e., set the SRST bit to one in the Device Control register, then set the bit to zero) to the ATA device representing the specified logical unit. Any persistent behaviors shall be reestablished by the SATL afterwards, including any behaviors related to saveable mode parameters."
to
"A LOGICAL UNIT RESET task management function request shall cause the SATL to issue a software reset (i.e., set the SRST bit to one in the Device Control register, then set the bit to zero) to the ATA device representing the specified logical unit and delete all tasks in the task set from the SATL internal context and respond to the LOGICALUNIT RESET task management function request with a task management response of FUNCTION COMPLETE. Any persistent behaviors shall be reestablished by the SATL afterwards, including any behaviors related to saveable mode parameters. "

Another instance of saveable mode page support?

Dell comment number 117
Page=42 Subtype=Highlight Author=Kevin_Marks
Comment=
6.3.7 QUERY TASK
1st Paragraph, 1st Sentence
change
"QUERY TASK shall cause the SATL to search for the specified task and, if found, respond with FUNCTION SUCCEEDED. If the specified task is not found the SATL shall respond with FUNCTION COMPLETE."
to
"A QUERY TASK task management function request shall cause the SATL to respond with QUERY TASK task management function response of FUNCTION SUCCEEDED if the specified task is present in the task set and FUNCTION COMPLETE if the task is not present in the task set.."

Does a note need to be added that not all SCSI transport require/support the QUERY TASK TMF?

Dell comment number 118
Page=43 Subtype=StrikeOut Author=Kevin_Marks
Comment=
from 6.4 subclause title.
remove
"SAM-3"

Dell comment number 119
Page=43 Subtype=Highlight Author=Kevin_Marks
Comment=
6.5 I_T nexus loss
1st paragraph, 1st Sentence

change

"The SATL may detect an I_T nexus loss (see SAM-3). If the SATL detects an I_T nexus loss (e.g., in a SAS domain the expander device with an STP/SATA bridge transmits a BROADCAST (CHANGE) and the subsequent REPORT PHY SATA

response from the affected phy contains an STP I_T NEXUS LOSS OCCURRED bit set to one), the SATL:
  1) shall issue an ATA hard reset (see 3.1.9) to the affected ATA device;
  2) shall terminate processing of any commands to the affected ATA device; and
  3) should establish a unit attention with the additional sense code set to I_T NEXUS LOSS OCCURRED."
to

"The SATL may detect an I_T nexus loss event (see SAM-3). If the SATL detects an I_T nexus loss the SATL may handle the I_T nexus loss differently depending on whether the SATL provides multiple initiators access to the emulated SCSI logical unit.

If the SATL does not provide multiple initiators access to the emulated SCSI logical unit, the SATL shall handle the I_T nexus loss as follows:
  1) abort any outstanding ATA command(s);
  2) delete all tasks in the task set from the SATL internal context; and
  3) establish a unit attention with the additional sense code set to I_T NEXUS LOSS OCCURRED.

If the SATL does provide multiple initiators access to the emulated SCSI logical unit, the SATL shall handle the I_T nexus loss as follows:
  1) allow any outstanding ATA command(s) to complete for the I_T nexus for which the I_T nexus loss event occured;
  2) delete all tasks in the task set from the SATL internal context for tasks associated with the I_T nexus that the I_T nexus loss event occured; and
  3) establish a unit attention with the additional sense code set to I_T NEXUS LOSS OCCURRED for the SCSI initiator port associated with the I_T nexus."

The e.g. given in the original text is not an I_T nexus loss in terms of what this section is trying to define. The e.g. I_T nexus loss is between the SATL and the ATA device, and not between the SATL and SCSI initiator port.

Also why is the UA a should and not shall? SAM-3 says a shall.

Dell comment number 120
Page=44 Subtype=Highlight Author=Kevin_Marks
Comment=
7.1 Translated and emulated commands
3rd Paragraph,1st sentence

change
"Unless otherwise noted, the IMMED bit (immediate return) shall be ignored."
to
"Unless otherwise noted, the SATL shall ignore the IMMED bit (immediate return)"

Dell comment number 121

Page=44 Subtype=Highlight Author=Kevin_Marks
Comment=
7.1 Translated and emulated commands
4th Paragraph, 1st Sentence

change
"All ATA commands with the exception of ATA queued commands (see 3.1.14) shall be single threaded per device."
to
"The SATL shall not issue more than one ATA command to the ATA device representing the logical unit with the exception of ATA queued commands (see 3.1.14)."

Dell comment number 122
Page=46 Subtype=StrikeOut Author=Kevin_Marks
Comment=
8.1.1
remove
"SCSI" from 1st Sentence

Dell comment number 123
Page=46 Subtype=StrikeOut Author=Kevin_Marks
Comment=
8.1.1
remove
"SCSI" from 2nd Sentence

Dell comment number 124
Page=46 Subtype=Highlight Author=Kevin_Marks
Comment=
8.1.1 INQUIRY command overview
1st paragraph, 1st Sentence

"... or component LUN."
to
".. and component logical unit."

Dell comment number 125
Page=46 Subtype=Text Author=Kevin_Marks
Comment=
8.1.1 INQUIRY command overview
1st Paragraph after Table 7.

This paragraph does not seem correct. The SATL should return the INQUIRY data, with the PF=O11b and PDT=1fh. I agree this is the response to other command types to an incorrect LU, expect request sense and report luns.

Additionally it contradicts what is in footnote a of Table 8.

Dell comment number 126
Page=46 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 7 - INQUIRY command CDB fields
Row: OPERATION CODE

change
"...an IDENTIFY DEVICE command..."
to
"...an ATA IDENTIFY DEVICE command..."

Dell comment number 127
Page=46 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 7 - INQUIRY command CDB fields
Row: OPERATION CODE
remove "(ECh)" and "attached"

Dell comment number 128
Page=47 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 1 of 3)
Row: RMB

change
"...the GENERAL CONFIGURATION field..."
to
"...the general configuration word..."

field is ok, but the word is defined with bit positions defining different functions, so I think word is better.

Dell comment number 129
Page=47 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 1 of 3)
Footnote b - in all 3 parts

change
"data MODEL NUMBER field contents and the REVISION NUMBER field"

to

"data Model number field contents and the Firmware revision field"

I assume the REVISION NUMBER was supposed to be the Firmware Revision

Dell comment number 130
Page=47 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 1 of 3)
Footnote a - in all 3 parts
change
"...to an unsupported logical unit..."
to
"...to an incorrect logical unit..."

Dell comment number 131
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)

Row: VENDOR IDENTIFICATION
change

"VENDOR IDENTIFICATION The SATL shall set the VENDOR IDENTIFICATION field to ␣ATA¬¬¬¬¬'."
to
"T10 VENDOR IDENTIFICATION The SATL shall set the T10 VENDOR IDENTIFICATION field to ␣ATA¬¬¬¬¬'."

Dell comment number 132
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)

Row: LINKED
change
"...set this field to 0 to indicate..."
to
"...set this bit to zero to indicate..."

Dell comment number 133
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)
Row: PRODUCT IDENTIFICATION
change
"... the ATA device IDENTIFY DEVICE data MODEL NUMBER field, where..."
to
"... the ATA IDENTIFY DEVICE data Model number field, where..."

Dell comment number 134
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)
Row: PRODUCT IDENTIFICATION
change

"1) byte 0 contains IDENTIFY DEVICE word 27 bits 15:8 (i.e., byte 1);
2) byte 1 contains IDENTIFY DEVICE word 27 bits 7:0 (i.e., byte 0);
3) byte 2 contains IDENTIFY DEVICE word 28 bits 15:8 (i.e., byte 3);
4) byte 3 contains IDENTIFY DEVICE word 28 bits 7:0 (i.e., byte 2);
...
15) byte 14 contains IDENTIFY DEVICE word 34 bits 15:8 (i.e., byte 15); and
16) byte 15 contains IDENTIFY DEVICEword 34 bits 7:0 (i.e., byte 14)."

to

"1) byte 0 contains ATA IDENTIFY DEVICE data word 27 bits 15:8 (i.e., byte 1);
2) byte 1 contains ATA IDENTIFY DEVICE data word 27 bits 7:0 (i.e., byte 0);
3) byte 2 contains ATA IDENTIFY DEVICE dataword 28 bits 15:8 (i.e., byte 3);
4) byte 3 contains ATA IDENTIFY DEVICE data word 28 bits 7:0 (i.e., byte 2);

...
15) byte 14 contains ATA IDENTIFY DEVICE data word 34 bits 15:8 (i.e., byte 15); and
16) byte 15 contains ATA IDENTIFY DEVICE data word 34 bits 7:0 (i.e., byte 14)."

Dell comment number 135
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)
Row: PRODUCT REVISION LEVEL
change

"The SATL shall set the PRODUCT REVISION LEVEL field to a four byte ASCII character representation of the ATA device IDENTIFY DEVICE data Firmware Revision field. Each pair of bytes are swapped to create a valid ASCII string format. Since the ATA device IDENTIFY DEVICE data Firmware Revision field contains eight ASCII characters and the Standard INQUIRY data PRODUCT REVISION LEVEL field is four ASCII characters, the SATL shall select four of the eight ASCII characters from the IDENTIFY DEVICE data Firmware Revision field to return in the PRODUCT REVISION LEVEL field as follows:"
to
"The SATL shall set the PRODUCT REVISION LEVEL field to a four byte ASCII character representation of the ATA IDENTIFY DEVICE data Firmware revision field. Each pair of bytes are swapped to create a valid ASCII string format. Since the ATA IDENTIFY DEVICE data Firmware revision field contains eight ASCII characters and the standard INQUIRY data PRODUCT REVISION LEVEL field is four ASCII characters, the SATL shall select four of the eight ASCII characters from the ATA IDENTIFY DEVICE data Firmware revision field to return in the PRODUCT REVISION LEVEL field as follows:"

Dell comment number 136
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)
Row: PRODUCT REVISION LEVEL - in a) of a,b
change
"shall be:"
to
"shall contain:"

Dell comment number 137
Page=48 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 2 of 3)
Row: PRODUCT REVISION LEVEL - in b) of a,b
change
"shall be:"
to
"shall contain:"

Dell comment number 138
Page=49 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 8 - Standard INQUIRY data fields (part 3 of 3)

Row: VERSION DESCRIPTOR 1 THROUGH VERSION DESCRIPTOR 6c

Change

"...DEVICE data MAJOR VERSION NUMBER field (i.e., word 80) and MINOR VERSION NUMBER field ..."
to
"...DEVICE data Major version number field (i.e., word 80) and Minor version number field ..."

Dell comment number 139
Page=49 Subtype=StrikeOut Author=Kevin_Marks
Comment=
8.2.1 2nd sentence
remove
"(see SPC-3)."

None of the other commands in this SPC section say see SPC-3.

Dell comment number 140
Page=50 Subtype=Highlight Author=Kevin_Marks
Comment=
8.2.1 LOG SENSE command overview
1st Paragraph after Table 9

Remove paragraph or change to

"The SATL shall return SMART data log page data. If the PAGE CODE is another value, the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
to
"If the PAGE CODE is set to an unsupported value, the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."

Dell comment number 141
Page=50 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 11 - PAGE CODE field values
Code value 10h

"Self-Test Results log page: The SATL shall determine if the ATA SMART self-test is supported from the ATA IDENTIFY DEVICE data word 84, bit 1. If the ATA SMART selftest is not supported the SATL shall return a CHECK CONDITION status with SENSE KEY set to ILLEGAL REQUEST and ADDITIONAL SENSE CODE set to INVALID FIELD IN CDB. If the ATA SMART self-test is supported the SATL shall return the translated Self-Test Results log page to the application client(see 10.2.4)."
to
"Self-Test Results log page: The SATL shall determine if the ATA SMART self-test is supported from the ATA IDENTIFY DEVICE data word 84, bit 1. If the ATA SMART self-test is not supported (i.e., word 84, bit 1 is set to zero) the SATL shall return a CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and additional sense code set to INVALID FIELD IN CDB.

If the ATA SMART self-test is supported (i.e., word 84, bit 1 is set to one) the SATL shall return the translatedSelf-Test Results log page to the application client (see 10.2.4)."

Dell comment number 142
Page=50 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 11 - PAGE CODE field values
Code value 2Fh
change
"Informational Exceptions log page: The SATL shall determine if the ATA SMART feature set is supported from the ATA IDENTIFY DEVICE data word 82, bit 0. If the ATA SMART feature set is not supported the SATL shall return a CHECK CONDITION status with SENSE KEY set to ILLEGAL REQUEST and ADDITIONAL SENSE CODE set to INVALID FIELD IN CDB. If the ATA SMART feature set is supported the SATL shall determine if the ATA SMART feature set is enabled or disabled from the ATA IDENTIFY DEVICE data word 85, bit 0. If the ATA SMART feature set is disabled the SATL shall return a CHECK CONDITION status with SENSE KEY set to ABORTED COMMAND and ADDITIONAL SENSE CODE set to ATA DEVICE FEATURE NOT ENABLED. If theATA SMART feature set is enabled the SATL shall return the translated Informational Exceptions log page to the application client (see 10.2.3)."

to

"Informational Exceptions log page: The SATL shall determine if the ATA SMART feature set is supported from the ATA IDENTIFY DEVICE data word 82, bit 0. If the ATA SMART feature set is not supported (i.e., word 82, bit 0 is set to zero) the SATL shall return a CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and additional sense codeset to INVALID FIELD IN CDB. If the ATA SMART feature set is supported (i.e., word 82, bit 0 is set to one) the SATL shall determine if the ATA SMART feature set is enabled or disabled from the ATA IDENTIFY DEVICE data word 85, bit 0. If the ATA SMART feature set is disabled (i.e., word 85, bit 0 is set to zero) the SATL shall return a CHECK CONDITION status with the sense key set to ABORTED COMMAND and additional sense code set to ATA DEVICE FEATURE NOT ENABLED. If the ATA SMART feature set is enabled (i.e., word 85, bit 0 is set to one) the SATL shall return the translated Informational Exceptions log page to the application client (see 10.2.3)."

Dell comment number 143
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 12 - MODE SELECT (6) command CDB fields
Row: PARAMETER LIST LENGTHA

make superscript "A" lower case "a", if the footnote is kept, see next comment.

Dell comment number 144
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
8.3.1 MODE SELECT (6) command overview
2nd Paragraph
change

"The Mode Page Policy VPD page (see 10.3) should be implemented. The MODE PAGE POLICY shall be set to 'Shared', and only one copy of 'current' mode page values shall maintained for all logical units of a target. After a logical unit reset, the SATL shall set all mode page values to default values. See clause 10 for supported mode pages."

to

"The Mode Page Policy VPD page (see 10.3) should be implemented. If implemented, the MODEPAGE POLICY field in each mode page policy descriptor shall be set to 00b (Shared) for each mode page and only one copy of mode page values shall be maintained for all logical units within a target device (.i.e., the MLUS bit is set to one in each mode page policy descriptor). After a logical unit reset, the SATL shall revert to saved values if supported or default values if saved values are not supported. See 10.1 for supported mode pages."

Because the SP is unspecified, if the SP is supported, then mode pages should go to saved values after a LUR. Also see comment in section 10.1

Dell comment number 145
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
8.3.1 MODE SELECT (6) command overview
1st Paragraph, 3rd Sentence
change
"same mode page, to determine the format, length changeable field etc."
to
"same mode page, to determine the format, length, changeable field, etc."

Dell comment number 146
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 13 - Mode parameter header (6) fields
Row: MEDIUM TYPE

Is there some reason this is unspecified, but in the header (10) it says should be 00h?

Change
"Unspecified (see 3.4.3)"
to
"Unspecified (see 3.4.3) For direct access block devices, this field shall be set to 00h."

Dell comment number 147
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
8.3.1 MODE SELECT (6) command overview
1st Paragraph, 1st Sentence
change
"...parameters of the target or a logical unit."
to
"...parameters of the target device or logical unit(s)."

Dell comment number 148
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 12 - MODE SELECT (6) command CDB fields
Row: PF - 1st three sentences

"The SATL shall not support 0b (indicating modes pages are vendor specific). The SATL shall support 1b (indicating all page formats correspond to SPC-3 and SBC-2 MODE PAGE formats). If this bit is set to 0b, the"

to

"The SATL shall set this bit to one. If this bit is set to zero, the..."

Dell comment number 149
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 12 - MODE SELECT (6) command CDB fields
Footnote a

I see no need for this footnote, the MODE SELECT (10) should reference this subclause for field translations, except say parameter list length is different. The note is confusing, as the SATL should recognized? The CDB is a different format, more than just long PLL.

Remove
"a The SATL shall recognize the differing PARAMETER LIST LENGTH field size in the MODE SELECT (10)
command and the MODE SELECT (6) command."

Dell comment number 150
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 13 - Mode parameter header (6) fields
Row: BLOCK DESCRIPTOR LENGTH

"See SPC-3. This value shall be obtained by multiplying the number of block descriptors by 8. The SATL shall support at most one mode parameter block descriptor, so this value should be set to 8 if a mode parameter block descriptor is provided."
to
"See SPC-3. This value is obtained by multiplying the number of block descriptors by 8. The SATL shall support zero or one mode parameter block descriptors."

Dell comment number 151
Page=51 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 13 - Mode parameter header (6) fields
Row: MODE DATA LENGTH
change
"See SPC-3"
to

"Reserved (See SPC-3)"

Dell comment number 152
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
8.4.1 MODE SELECT (10) command overview
1st Paragraph, 1st Sentence
change
"The SATL shall implement the MODE SELECT (10) command as described in 8.3, except that the SATL shall recognize the longer PARAMETER LIST LENGTH field in the CDB, and shall recognize the LONGLBA bit in the mode parameter header (10)."
to
"The SATL shall implement the MODE SELECT (10) command using the translation described in 8.3"

The definition of the PLL does not change between (6) and (10), so why call it out. Additionally the LONGLBA bit translation is shown/described below.

Dell comment number 153
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 15 - Mode parameter header (10) fields
Row: MEDIUM TYPE
change

"For direct access devices, this field should be set to 00h"
to
"8.3.3"

see comment on mode parameter header (6) - MEDIUM TYPE

Dell comment number 154
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 14 - Mode parameter block descriptor fields
footnote a is missing period

Dell comment number 155
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
8.3.3.1 Mode parameter block descriptor fields
1st Paragraph

"The SATL may support the direct-access mode parameter block descriptor. The SATL may support the long LBA mode parameter block descriptor. The SATL shall not support the general mode parameter block descriptor. The DENSITY CODE (see SPC-3) is reserved for SATL devices. Table 14 shows the fields in the mode parameter block descriptors supported by the SATL."
to
"The SATL may support the direct-access short LBA mode parameter block descriptor or the long LBA mode parameter block descriptor. Table 14 shows the fields in the short LBA mode parameter block descriptor and long LBA block descriptor supported by the SATL."

Text says SATL shall not support the general mode parameter block descriptor, but this descriptor is defined in the MODE SENSE section?

Dell comment number 156
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 14 - Mode parameter block descriptor fields
Row: BLOCK LENGTH
change
"The SATL shall return the same block length for the entire LUN. For direct access devices, the SATL shall set this field to 200h."
to
"For direct access block devices, the SATL shall set this field to 200h (i.e., 512 bytes)."

Dell comment number 157
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 15 - Mode parameter header (10) fields
Row: LONGLBA

change
"Describes the length of the block descriptors.
  a) If set to 0b, the mode parameter block descriptor is 8 bytes long.
  b) If set to 1b, the mode parameter block descriptor is 16 bytes long."
to
"Describes the length of the block descriptors:
  a) If set to zero, the mode parameter block descriptor is 8 bytes long; or
  b) If set to one, the mode parameter block descriptor is 16 bytes long."

Dell comment number 158
Page=52 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 15 - Mode parameter header (10) fields
Row: BLOCK DESCRIPTOR LENGTH
change
"This field indicates the length of the mode parameter block descriptor. This value shall be obtained by multiplying the number of block descriptors by 8 if LONGLBA bit is set to 0, or by 16 if LONGLBA bit is set to 1. No more than one mode parameter block descriptor shall be supported, so this value should be set to 8 or 16. (see 8.3.3)"
to
"This field specifies the length of the mode parameter block descriptor. This value is obtained by multiplying the number of block descriptors by 8 if LONGLBA bit is set to zero or by 16 if LONGLBA bit is set to one. The SATL shall support zero or one mode parameter block descriptor."

Why should I see 8.3.3 for this field and the values can be 0,8 or 16.

Dell comment number 159
Page=53 Subtype=Highlight Author=Kevin_Marks

Comment=
Table 16 - MODE SENSE (6) CDB fields
Row: DBD
change
"A value 0b indicates that one or more block descriptors may be returned in mode sense data. The SATL shall support only the mode parameter block descriptor format for direct-attach devices."
to
"A value set to zero specifies that zero or more block descriptors may be returned in MODE SENSE data. The SATL shall support only the mode parameter block descriptor format for direct-access block devices."

Dell comment number 160
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 16 - MODE SENSE (6) CDB fields
Row: PAGE CODE
change
"This field identifies the particular page requested. See section on Mode pages for further details."
to
"This field specifies the particular mode page requested. See 10.1 for more details."

Dell comment number 161
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 16 - MODE SENSE (6) CDB fields
Row: SUB PAGE CODE
change
"This field identifies the sub page code within the page code specified by PAGE CODE field that is required by the client. See section on Mode pages for further details."
to
"This field specifies the sub page code within the page code specified by PAGE CODE field that is requested by the application client. See 10.1 for more details."

Dell comment number 162
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 16 - MODE SENSE (6) CDB fields
Row: ALLOCATION LENGTH
change

"The SATL shall return no more bytes of data than the number specified in this field, but any length fields in the returned data shall be consistent with the number of bytes that would have been returned if this field had specified at least as many bytes as required to transmit the information requested".
to
"The SATL shall implement support for this field as defined in SPC-3."

That or add the current text to the LOG SENSE command field translation, but this seems to be the definition of ALLOCATION LENGTH.

Dell comment number 163
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
8.5.3 PC (Page Control) change section header to
"8.5.3 PC (Page Control) field"

Dell comment number 164
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
8.5.3 PC (Page Control)
1st Sentence
change
"Table 17 shows the values of the PC field."
to
"Table 17 shows the supported values of the PC field."

Dell comment number 165
Page=53 Subtype=Text Author=Kevin_Marks
Comment=
In 8.5.3 PC (Page Control)

Not sure the value of this section/table 17. Seems a lot easier to say SATL shall support the field set to 00b in table 16 and if not 00b, then check condition/illegal request/invalid field in CDB?

However, since the SP bit in the MODE SELECT is unspecified, it would seem to me that Saved Values would be supported also if the device allowed for saving values.

The more I think about it, they should be set to unspecified for all the No values.

Dell comment number 166
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
8.5.4 Mode parameter header (6)
1st Sentence
change
"Table 18 shows the fields in the mode parameter header (6)"
to
"Table 18 shows the fields in the mode parameter header (6) for a MODE SENSE (6) command."

Dell comment number 167
Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 17 - PC values and their descriptions

change title to "Table 17 - Supported PC values"
and
change first column title to "Code"
and change 2nd column title to make P in parameter lower case.

Dell comment number 168

Page=53 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 16 - MODE SENSE (6) CDB fields

Change table title to
"Table 16 - MODE SENSE (6) command CDB fields"

To match other command translation table titles, however I suppose this one is correct and all the others are wrong, and "command Command Descriptor Block" fields does seem strange.

Dell comment number 169
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 18 - Mode parameter header (6) fields
Row: MEDIUM TYPE
change
"For direct access devices, this field should be set to 00h."
to
"Unspecified (see 3.4.3) For direct access block devices, this field shall be set to 00h."

Dell comment number 170
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 18 - Mode parameter header (6) fields
Row: DEVICE SPECIFIC PARAMETER
change
"See SBC-2.
If the DPOFUA bit is set to 0b it indicates that SATL does not support DPO and FUA bits. If the DPOFUA bit is set to 1b it indicates that the SATL supports DPO and FUA bits.

If the WP bit is set to 0b, it indicates that the device is write enabled. This is the only supported value for this bit. If the WP bit is set to 1b, it indicates that the device is write protected. A WP bit set to 1b shall not be supported."

to

"See SBC-2 for direct access block devices..
If the DPOFUA bit is set to zero, it indicates that the SATL does not support the DPO and FUA bits. If the DPOFUA bit is set to one it indicates that the SATL supports the DPO and FUA bits.

If the WP bit is set to zero, it indicates that the logical unit is write enabled. If the WP bit is set to one, it indicates that the logical unit is write protected. A WP bit set to one shall not be supported by the SATL."

Dell comment number 171
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 18 - Mode parameter header (6) fields
Row: BLOCK DESCRIPTOR LENGTH
change

"This field indicates the length of the mode parameter block descriptor. This value is obtained by multiplying the number of block descriptors by 8, for MODE SELECT (6) commands and MODE SELECT (10) commands, if LONGLBA bit is set to zero, or by 16 for MODE SELECT (10) commands and LONGLBA bit is set to one. Only one mode parameter block descriptor is supported, so this value should be set to 8 or 16."

to
"Thisfield indicates the length of the mode parameter block descriptor. This value is obtained by multiplying the number of block descriptors by 8. The SATL shall return zero or one mode parameter block descriptors."

LONGLBA is not defined in the (6), soit can not return a 16 byte descriptor.

Dell comment number 172
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 18 - Mode parameter header (6) fields
Row: MORE DATA LENGTH
change
"Indicates the number of bytes following this field that was transferred."
to
"Indicates the length in bytes of the following data that is available for transfer."
or
"see SPC-3"

Dell comment number 173
Page=54 Subtype=StrikeOut Author=Kevin_Marks
Comment=
8.5.6 Mode Sense Block Descriptor (8 byte format)

Remove whole subclause 8.5.6, as it is redundant.

Dell comment number 174
Page=54 Subtype=Text Author=Kevin_Marks
Comment=
8.5.5 General mode parameter block descriptor fields

In Section 8.3.3.1, it states that the SATL shall not support the General mode parameter block descriptor. Yet it is shown here.

This comes back to the point of, is this standard(v1.0) only for block devices? If so, this should be changed to the Mode parameter descriptor section, defining the fields for the short and long LBA mpbd.

And Delete 8.5.6

Dell comment number 175
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
8.5.5 General mode parameter block descriptor fields

change section title to

"8.5.5 Mode parameter block descriptor"

based on comments in note

Dell comment number 176
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
8.5.5 General mode parameter block descriptor fields
1st Sentence
change
"Table 19 describes the translation of the general mode parameter block descriptor fields."
to
"Table 19 describes the translation of the short LBA mode parameter block descriptor and long LBA mode parameter block descriptor fields."

Dell comment number 177
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 19 - General mode parameter block descriptor fields

change title to
"Table 19 - Mode parameter block descriptor fields"

Dell comment number 178
Page=54 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 19 - General mode parameter block descriptor fields
Row: DENSITY CODE

remove DENITY CODE row.

As it is reserved in the short LBA and not defined in the Long LBA mode parameter block descriptor

Dell comment number 179
Page=54 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 19 - General mode parameter block descriptor fields
Row: BLOCK LENGTH
change
"Describes the block length for the section of the LUN described by this mode parameter block descriptor. Since there is only one mode parameter block descriptor, this describes the block length of the entire LUN. For direct access devices, the block length is set to 200h or 512 bytes per block."
to
"For direct access block devices, the SATL shall set this field to 200h (i.e., 512 bytes)."

Dell comment number 180
Page=54 Subtype=StrikeOut Author=Kevin_Marks
Comment=remove subclause 8.5.6

Dell comment number 181

Page=54 Subtype=StrikeOut Author=Kevin_Marks
Comment=
8.5.5 General mode parameter block descriptor fields
1st Sentence after Table 19

Remove sentence

"SATL shall support only the mode parameter block descriptor formats for direct access devices."

Dell comment number 182
Page=55 Subtype=StrikeOut Author=Kevin_Marks
Comment=remove subclause 8.5.6

Dell comment number 183
Page=55 Subtype=StrikeOut Author=Kevin_Marks
Comment=remove subclause 8.5.6

Dell comment number 184
Page=55 Subtype=StrikeOut Author=Kevin_Marks
Comment=remove subclause 8.5.6

Dell comment number 185
Page=55 Subtype=Highlight Author=Kevin_Marks
Comment=
8.6.1 MODE SENSE (10) command overview
1st Paragraph

"The MODE SENSE (10) shall be implemented according to clause 8.5, except that the SATL shall recognize the longer PARAMETER LIST LENGTH field in the CDB, and shall recognize the long lba bit in the mode parameter header (10). The translator emulates the SCSI behavior for ATA devices. The MODE SENSE (10) command is the complementary command of the MODE SELSECT (10) command. See 10.1 for supported mode pages."
to
"The MODE SENSE (10) shall be implemented according to the translation described in 8.5. The translator emulates the SCSI behavior for ATA devices. The MODE SENSE (10) command is the complementary command of the MODE SELSECT (10) command. See 10.1 for supported mode pages."

Dell comment number 186
Page=55 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 21 - Mode parameter header (10) fields
Row: LONG LBA
change
"Describes the length of the block descriptors.
  a) If set to 0b, block descriptors are 8 bytes long.
  b) If set to 1b, block descriptors are 16 bytes long".
to
"Describes the length of the block descriptors:
  a) If set to zero, the mode parameter block descriptor is 8 bytes long; or
  b) If set to one, the mode parameter block descriptor is 16 bytes long."

Dell comment number 187
Page=55 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 21 - Mode parameter header (10) fields
Row: BLOCK DESCRIPTOR LENGTH
change

"This field indicates the length of the mode parameter block descriptor. This value is obtained by multiplying the number of block descriptors by 8 if the LONGLBA bit is set to 0, or by 16 if the LONGLBA bit is set to 1. The SATL shall support no more than one mode parameter block descriptor, so this value should be set to 8 or 16 (see 8.5.4).
"
to

"This field indicates the length of the mode parameter block descriptor. This value is obtained by multiplying the number of block descriptors by 8 if the LONGLBA bit is set to zero, or by 16 if the LONGLBA bit is set to one. The SATL shall return zero or one one mode parameter block descriptor."

Dell comment number 188
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
8.7.1 READ BUFFER command overview
1st Sentence
change
"The READ BUFFER command is used with the write buffer command to determine the integrity of the target device's buffer memory and the physical interconnect that connects the target device and the initiator."
to
"The READ BUFFER command is used with the WRITE BUFFER command to determine the integrity of the buffer memory in the target device and the physical interconnect that connects the target and initiator device. Table 22 shows the translation for fields specified in the READ BUFFER CDB."
"

Dell comment number 189
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 22 - READ BUFFER command CDB fields
Row: BUFFER OFFSET
change
"Refers to the offset in the buffer to start reading data from. The BUFFER OFFSET should be less than the size of the buffer size, otherwise a CHECK CONDITION shall be sent back with sense key set to ILLEGAL REQUEST and additional sense code set to INVALID FIELD IN CDB."
to
"This value refers to the offset in the buffer specified by the BUFFER ID field to start reading data from. The BUFFER OFFSET field should be less than the size of the buffer , otherwise a CHECK CONDITION status shall be returned with sense key set to ILLEGAL REQUEST and additional sense code set to INVALID FIELD IN CDB."

Wondering about the should ..., then shall ...

Dell comment number 190
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 22 - READ BUFFER command CDB fields
Row: ALLOCATION LENGTH
change
"Refer to individual sections for the meaning of this term."
to
"This value is dependent on the value in the MODE field (see 8.7.3 and 8.7.4)

Dell comment number 191
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
8.7.2 MODE field
1st Paragraph
change
"Table 23 describes modes supported. Only data and data buffer descriptor shall be supported."
to
"Table 23 describes required supported MODE field values."

The second sentence contradicts the "all others = unspecified"

Dell comment number 192
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
8.7.3 Data Only mode (02h)
change
subclause title to
"8.7.3 Data mode (02h)"

Dell comment number 193
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
8.7.3 Data Only mode (02h)
1st Paragraph
change
"In this mode, data is read from the device's logical sector buffer and returned to the requestor. Note that logical sector buffer in the ATA device is being used to emulate the SCSI READ BUFFER command, so the maximum length of data that can be written is 512 bytes. Valid fields in the CDB, apart from the MODE field, are BUFFER ID, BUFFER OFFSET and ALLOCATION LENGTH. The BUFFER OFFSET shall be less than or equal to 512. The ALLOCATION LENGTH shall beless than or equal to 512. A write buffer command may sent to the same BUFFER ID before it is read."
to
"In this mode, data is read from the logical sector buffer of the device and returned to the application client. The logical sector buffer in an ATAdevice is being used to emulate the READ BUFFER command, so the maximum length of data that may be read is 512 bytes. Valid fields in the CDB, apart from the MODE field, are BUFFER ID, BUFFER OFFSET and ALLOCATION LENGTH fields. The BUFFER OFFSET field shall be less than or equal to 512.

The ALLOCATION LENGTH shall be less than or equal to 512. A WRITE BUFFER command may be sent to the same buffer ID before it is read with the READ BUFFER command."

Dell comment number 194
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
8.7.4 Descriptor mode (03h)
1st Paragraph
change
"Four bytes of information shall be returned to the requestor describing the requested buffer. These four bytes include the OFFSET BOUNDARY and the BUFFER CAPACITY. The BUFFER ID should be set to 0. For all other BUFFER ID's, all zeros shall be returned. ALLOCATION LENGTH should be set to 4."
to
"Four bytes of data shall be returned to the application client describing the requested buffer. These four bytes include the OFFSET BOUNDARY and BUFFER CAPACITY fields. The BUFFER ID field should be set to zero. For all other BUFFER ID's, all zeros shall be returned. The BUFFER OFFSET field is Reserved in the this mode. The ALLOCATION LENGTH should be set to 4h."

Dell comment number 195
Page=56 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 22 - READ BUFFER command CDB fields
Row: OPERATION CODE
remove
"(E4h)"

Dell comment number 196
Page=56 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 23 - MODE field
2nd column title

change
"Translated ATA Opcode"
to
"Translated ATA command"

Dell comment number 197
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 24
change

"As defined in SPC-3"
to
"This field specifies the number bytes allocated for the returned media serial number. This field shall be implemented as described in SPC-3."

To match other commands.

Dell comment number 198
Page=57 Subtype=Highlight Author=Kevin_Marks

Comment=
8.8.1 READ MEDIA SERIAL NUMBER command overview
1st Paragraph
change
"READ MEDIA SERIAL NUMBER returns the serial number of the currently mounted media, as returned by the device. This command is emulated in the ATA environment as ATA provides no direct corresponding command to the device."
to
"READ MEDIA SERIAL NUMBER returns the serial number of the currently mounted media, as returned by the ATA device. This command is emulated in the ATA environment as ATA provides no direct corresponding command to the ATA device. Table 24 shows the translation for fields specified in the READ MEDIA SERIAL NUMBER CDB."

Dell comment number 199
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=
8.8.2 READ MEDIAL SERIAL NUMBER emulation
1st Paragraph

"A SATL emulating the READ MEDIA SERIAL NUMBER command shall issue an IDENTIFY DEVICE (ECh) ATA opcode to the attached ATA device. If the IDENTIFY DEVICE command completes with success, the SATL shall return a media serial number to the application client as defined in SPC-3. The media serial number shall be generated as follows:"
to
"A SATL emulating the READ MEDIA SERIAL NUMBER command shall issue an ATA IDENTIFY DEVICE command to the ATA device. If the ATA IDENTIFY DEVICE command completes with no error, the SATL shall return a media serial number to the application client in the format defined in SPC-3. The media serial number shall be generated as follows:"

Dell comment number 200
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=
8.8.2 READ MEDIAL SERIAL NUMBER emulation
1st Paragraph , 1) in 1,2 list.

"1) If IDENTIFY DEVICE data, word 87, bit 2 is set, the SATL shall return the media serial number located in words 176-205. The data from the medial serial number shall be treated as an ASCII string, defined in ATA/ATAPI-7"
to
"a) If ATA IDENTIFY DEVICE data, word 87, bit 2 is set to one, the SATL shall return the media serial number located in words 176-205. The data from the medial serial number shall be treated as an ASCII string, defined in ATA/ATAPI-7; or"

Don't see why this is an ordered list?
Any requirements on endian when returning from ATA to SCSI?

Dell comment number 201
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=

8.8.2 READ MEDIAL SERIAL NUMBER emulation
1st Paragraph , 2) in 1,2 list.

"2) If IDENTIFY DEVICE data, word 87, bit 2 is not set, the SATL shall issue a READ VERIFY SECTOR(S) or READ VERIFY SECTOR(S) EX to LBA 0. Alternatively, if the ATA device indicates support for the Removable Media Status Notification feature set, the SATL may issue a GET MEDIA STATUS command to verify presence of the medial. If the READ VERIFY SECTOR(S) or READ
VEIRFY SECTOR(S) EX commands complete successfully, or the GET MEDIA STATUS command completes successfully without the NM bit set, the SATL shall return a media serial number of zero as defined in SPC-3. Otherwise, the SATL shall terminate the command with CHECK CONDITION status, with the sense key set to NOT READY, and the additional sense code set to MEDIUM NOT PRESENT."
to
"b) If ATA IDENTIFY DEVICE data, word 87, bit 2 is set to zero, the SATL shall issue an ATA READ VERIFY SECTOR(S) or READ VERIFY SECTOR(S) EX command to LBA 0. Alternatively, if the ATA device indicates support for the Removable Media Status Notification feature set (i.e., ATA IDENTIFY DEVICE data, word 127, bits (1:0) is set to 01b), the SATL may issue an ATA GET MEDIA STATUS command to verify presence of media. If the ATA READ VERIFY SECTOR(S) or READ VERIFY SECTOR(S) EXT command complete without error, or the ATA GET MEDIA STATUS command completes with the NM bit set to zero in the Error register, the SATL shall return a media serial number of zero as defined in SPC-3. Otherwise, the SATL shall terminate the command with CHECK CONDITION status, with the sense key set to NOT READY, and the additional sense code set to MEDIUM NOT PRESENT."

Dell comment number 202
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=
8.9.1 REQUEST SENSE command overview
1st Paragraph, 2nd Sentence
change
"A SATL may implement sense data processing as defined SAM-2 and not support autosense (see 3.1.21). If the SCSI transport protocol for the SATL supports autosense (see 3.1.21) the SATL shall support autosense (see SAM-3). The SATL shall implement the REQUEST SENSE command as specified in SPC-3."
to
"A SATL may implement sense data processing as defined in SAM-2 and not support autosense (see 3.1.21). If a SCSI transportprotocol of the target port for the SATL supports autosense the SATL shall support autosense (see SAM-3). The SATL shall implement the REQUEST SENSE command as defined in SPC-3."

Dell comment number 203
Page=57 Subtype=Highlight Author=Kevin_Marks
Comment=
8.9.1 REQUEST SENSE command overview
2nd Paragraph
change
"The SATL shall determine if any of the conditions listed in table 25 exist. If none of these conditions exist and the SATL has no status other

than GOOD to return, the SATL shall complete this command with GOOD status..."
to
"If the SATL receives a REQUEST SENSE command, the SATL shall determine if any of the conditions listed in table 25 exist. If none of the conditions listed in Table 25 exist and the SATL has GOOD status to return, the SATL shall complete the command with GOOD status..."

Dell comment number 204
Page=58 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 25 - Special Request Sense behavior reference
1st column title

The column title "ATA Device Condition" does not seem to cover the first to rows, as the Format Unit, or some status other than good are not ATA Device Conditions. Need another title.

Dell comment number 205
Page=58 Subtype=Highlight Author=Kevin_Marks
Comment=
8.9.2 FORMAT UNIT In Progress
1st Paragraph, 1st Sentence
change

"If a FORMAT UNIT command is in progress, ..."
to

"If the emulation of a FORMAT UNIT command is in progress ..."

Dell comment number 206
Page=58 Subtype=Highlight Author=Kevin_Marks
Comment=
8.9.3 SMART Threshold Exceeded Condition
1st Paragraph
change
"If the ATA device has the SMART feature set enabled, the MRIE field in the Informational Exceptions Control mode page is set to 6h (see 10.1.7.2), and the most recent SMART RETURN STATUS command to the device indicates that the error threshold has been reached, then the SATL shall return GOOD status with the sense key set to NO SENSE with the additional sense code set to HARDWARE IMPENDING FAILURE GENERAL HARD DRIVE FAILURE."
to
"If the ATA device has the SMART feature set enabled (i.e., IDENTIFY DEVICE data word 85 bit 0 is set to one), the MRIE field in the Informational Exceptions Control mode page of the SATL is set to 6h (see 10.1.7.2), and the most recent ATA SMART RETURN STATUS command to the ATA device indicates that the error threshold has been exceeded, then the SATL shall return GOOD status with the sense key set to NO SENSE with the additional sense code set to HARDWARE IMPENDING FAILURE GENERAL HARD DRIVE FAILURE."

Does the DEXCPT bit need to be added here, i,e. and DEXCPT bit =0

Dell comment number 207
Page=58 Subtype=Highlight Author=Kevin_Marks

Comment=
8.9.4 ATA Device in Low Power State
1st Paragraph
change

"If the ATA device is in a low power state (i.e., ATA state of STANDBY) the SATL shall return GOOD status with the sense key set to NO SENSE with the additional sense code set to LOW POWER CONDITION ON."
to
"If the ATA device is in the Standby power management state, the SATL shall return GOOD status with the sense key set to NO SENSE with the additional sense code set to LOW POWER CONDITION ON."

Dell comment number 208
Page=58 Subtype=Text Author=Kevin_Marks
Comment=
Table 26 - REQUEST SENSE command CDB fields
Row: DESC

Does a footnote need to be added, that the descriptor format shall be supported if supporting ATA PASSTHROUGH commands?

Dell comment number 209
Page=59 Subtype=Highlight Author=Kevin_Marks
Comment=
8.10.1 SEND DIAGNOSTIC command overview
1st Paragraph

"The SEND DIAGNOSTIC command provides a mechanism for an application client to request diagnostic operations to be performed on the SCSI target device, SCSI logical unit, or both. The SATL shall implement the default self-test feature (see SPC-3)."
to
"The SEND DIAGNOSTIC command provides a mechanism for an application client to request diagnostic operations to be performed on the SCSI target device, logical unit, or both. The SATL shall implement the default self-test feature (see SPC-3).Table 27 shows the translation for fields specified in the SEND DIAGNOSTIC CDB."

Dell comment number 210
Page=59 Subtype=Highlight Author=Kevin_Marks
Comment=
8.10.2 SELF-TEST CODE field
1st & 2nd Paragraph
change
"The SATL shall determine if the contents of this field are valid depending on the value of the SELFTEST bit and what is reported by the attached ATA device with respect to the SMART EXECUTE OFF-LINE IMMEDIATE command (see 8.10.3).

If the contents of the SELF-TEST CODE field are valid, then the SATL shall process the command as described in table 28."
to
"The SATL shall determine if the value in this field is valid depending on the value of the SELFTEST bit and what is reported by the ATA device with

respect to the ATA SMART EXECUTE OFF-LINE IMMEDIATE command (see 8.10.3).

If the value of the SELF-TEST CODE field is valid, then the SATL shall process the command as described in table28."

Dell comment number 211
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode

change title to
"Table 28 - SELF-TEST CODE field translation"

Dell comment number 212
Page=60 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 011b
remove
"Unspecified (see 3.4.3)"

Dell comment number 213
Page=60 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 111b
remove
"Unspecified (see 3.4.3)"

Dell comment number 214
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 001b
In 1) in 1,2 list
change
"the command as"
to
"the SEND DIAGNOSTIC command as"

Dell comment number 215
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 010b
In 1) in 1,2 list
change
"the command as"
to
"the SEND DIAGNOSTIC command as"

Dell comment number 216
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode

Row: 100b
1st Paragraph
change
"If a previous SEND DIAGNOSTIC command specified a background self-test function and that self-test has not completed (see SPC-3), then the SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 7Fh (i.e., Abort off-line mode self-test routine) to the ATA device. If the command completes successfully, the SATL shall return GOOD status. If the command fails the SATL shall respond as defined in SPC-3."
to
"If a previous SEND DIAGNOSTIC command specified a background self-test function and that self-test has not completed (see SPC-3), then the SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 127 (i.e., Abort off-line mode self-test routine) to the ATA device. If the ATA command completes with no error, the SATL shall return GOOD status. If the ATA command completes with an error the SATL shall respond as defined in SPC-3."

Dell comment number 217
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 101b
1st Paragraph
"The SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 81h (i.e., Execute SMART Short self-test routine immediately in captive mode) to the ATA device. If the command completes successfully, the SATL shall update the Self-Test Results log page prior to returning GOOD status. If the command fails the SATL shall first update the Self-Test Results log page (if capable, see SPC-3) then return a CHECK CONDITION status with sense key set to HARDWARE ERROR and additional sense codeset to LOGICAL UNIT FAILED SELF-TEST."
to
"The SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 129 (i.e., ExecuteSMART Short self-test routine immediately in captive mode) to the ATA device. If the ATA command completes with no error, the SATL shall update the Self-Test Results log page prior to returning GOOD status. If the ATA command completes with an error theSATL shall first update the Self-Test Results log page (if capable, see SPC-3) then return a CHECK CONDITION status with the sense key set to HARDWARE ERROR and additional sense code set to LOGICAL UNIT FAILED SELF-TEST."

Dell comment number 218
Page=60 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 28 - SELF-TEST CODE field decode
Row: 110b
1st Paragraph
change
"The SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 82h (i.e., Execute SMART Extended self-test routine immediately in captive mode) to the ATA device. If the command completes successfully, the SATL shall update the Self-Test Results log

page prior to returning GOOD status. If the command fails the SATL shall first update the Self-Test Results log page (if capable, see SPC-3)then return a CHECK CONDITION status with sense key set to HARDWARE ERROR and additional sense code set to LOGICAL UNIT FAILED SELF-TEST."
to
"The SATL shall issue an ATA SMART EXECUTE OFF-LINE IMMEDIATE command with the LBA Low register set to 130 (i.e., Execute SMART Extended self-test routine immediately in captive mode) to the ATA device. If the ATA command completes with no error, the SATL shall update the Self-Test Results log page prior to returning GOOD status. If the ATA command completes with an error the SATL shall first update the Self-Test Results log page (if capable, see SPC-3) then return a CHECK CONDITION status with the sense key set to HARDWARE ERROR and additional sense code set to LOGICAL UNIT FAILED SELF-TEST."

Dell comment number 219
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
2nd Column title
change
"SMART EXECUTE OFF-LINE
IMMEDIATE command a"
to
"ATA SMART EXECUTE OFF-LINE
IMMEDIATE command a"

Dell comment number 220
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
footnote a
change
"The SATL shall determine if the SMART EXECUTE OFF-LINE IMMEDIATE command is supported and enabled from the ATA device IDENTIFY DEVICE data word 84, bit 1, and word 85, bit 0 (see ATA/ATAPI-7)."
to
"The SATL shall determine if the ATA SMART EXECUTE OFF-LINE IMMEDIATE command is supported and enabled based on the ATA IDENTIFY DEVICE data word 84, bit 1, and word 85, bit 0 (see ATA/ATAPI-7)."

Dell comment number 221
Page=61 Subtype=Text Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: Code 0, Yes, No

Have a little problem with this, in that if informational exception reporting is disabled (i.e. DEXCPT=1), then one can not run a self-test. Would almost say for this row, enable SMART OPS run test then disable SMART OPS..

Dell comment number 222
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=

8.10.3 SELFTEST bit
1st Paragraph, 1st Sentence
change
"SMART EXECUTE OFF-LINE IMMEDIATE"
to
"ATA SMART EXECUTE OFF-LINE IMMEDIATE"

Dell comment number 223
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 1 no N/a
change

"The SATL shall disregard the contents of the SELF-TEST CODE FIELD.

The SATL shall send three ATA verify commands (see 3.1.17) to the attached ATA device with with the LBA set as follows:
  a) an ATA verify command with the Sector Count set to one and the LBA set to zero;
  b) an ATA verify command with the Sector Count set to one and the LBA set to the maximum LBA; and
  c) an ATA verify command with the Sector Count set to one and the LBA set toa random number between zero and the maximum LBA.
If any of the three ATA verify commands fails, then the SATL shall terminate the command with CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to LOGICAL UNIT FAILED SELF-TEST.

If all three commands complete successfully, then the SATL shall return GOOD status."

to

"The SATL shall send three ATA verify commands (see 3.1.17) to the ATA device with the Sector Count set to one and the LBA set to:
a) zero;
  b) the maximum LBA; and
  c) a random number between zero and the maximum LBA.

If any of the three ATA verify commands end with an error, then the SATL shall terminate the SEND DIAGNOSTIC command with a CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to LOGICAL UNIT FAILED SELF-TEST.

If all three ATA verify commands complete with no error, then the SATL shall return GOOD status."

Dell comment number 224
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 1 yes yes
1st Sentence
change

"... set to 81h (i.e.,"
to
"... set to 129 (i.e.,"

Dell comment number 225
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 1 yes yes
2nd Sentence
change
"If the command completes successfully, the SATL shall return GOOD status. If the command fails the SATL shall terminate the command with CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to LOGICAL UNIT FAILED SELF-TEST."
to
"If the ATA command completes with no error, the SATL shall return GOOD status. If the ATA command completes with an error, the SATL shall terminate the SEND DIAGNOSITC command with a CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to LOGICAL UNIT FAILED SELF-TEST."

Dell comment number 226
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 0 no n/a
change
"the command with"
to
"the SEND DIAGNOSTIC command with a"

Dell comment number 227
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 0 yes no
change
"the command with"
to
"the SEND DIAGNOSTIC command with a"

Dell comment number 228
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 29 - SELFTEST bit
Row: 0 yes yes
change
"process the command"
to
"process the SEND DIAGNOSTIC command"

Dell comment number 229
Page=61 Subtype=Highlight Author=Kevin_Marks
Comment=

Table 29 - SELFTEST bit
Row: 1 yes yes
1st Sentence
change
"a SMART EXECUTE OFF-LINE
IMMEDIATE"
to
"an ATA SMART EXECUTE OFF-LINE
IMMEDIATE"

Dell comment number 230
Page=61 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 231
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE

change subclause title to
"8.11.2 TEST UNIT READYcommand translation"

Dell comment number 232
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE
2) in 1,2,..7 list
change
"2) If the device is being formatted ("
to
"2) If the device is emulating a formatted operation ("

And would the device be the SATL device? for 1) and 2)?

Dell comment number 233
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE
1st paragraph
"The SATL shall:"

Reword or remove SATL shall from each of the numbered list entries below.

Dell comment number 234
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE
3) in 1,2,..7 list
change
"3) If the ATA device supports the removable media feature set, then the SATL shall issue a GET MEDIA STATUS command to the attached ATA device. If the device reports an error with the NM bit set to one, then the SATL shall terminate the TEST UNIT READY command with CHECK CONDITION status with the sense key set to NOT READY and the additional sense code of MEDIUM NOT PRESENT;"

to
"3) If the ATA device supports the Removable Media feature set (ATA IDENTIFY DEVICE data word 82 bit 2 is set to one), then the SATL shall issue an ATA GET MEDIA STATUS command to the ATA device. If the ATA device completes the command with the NM bit set to one in the Error register, then the SATL shall terminate the TEST UNIT READY command with CHECK CONDITION status with the sense key set to NOT READY and the additional sense code of MEDIUM NOT PRESENT;"

Dell comment number 235
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE
7) in 1,2,..7 list
change

"7) If the ATA CHECK POWER MODE command completes without error, then the SATL shall complete the TEST UNIT READY command with GOOD status."
to

"7) If the ATA CHECK POWER MODE command completes with no error, then the SATL shall complete the TEST UNIT READY command with GOOD status."

Dell comment number 236
Page=62 Subtype=Highlight Author=Kevin_Marks
Comment=
8.11.2 TEST UNIT READY OPERATION CODE
2nd Paragraph, 1st Sentence
change
"terminate the command"
to
"terminate the TEST UNIT READY command"

Dell comment number 237
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.1 WRITE BUFFER command overview
1st Paragraph

"The WRITE BUFFER command is used with the read buffer command to determine the integrity of the target device's buffer memory and the physical interconnect that connects the target device and the initiator. "

to

"The WRITE BUFFER command is used with the read buffer command to determine the integrity of the buffer memory in target device and the physical interconnect that connects the target and initiator device.

Table 31 shows the translation for fields specified in the WRITE BUFFER CDB."

Dell comment number 238
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=

Table 31 - WRITE BUFFER command CDB fields
Row: OPERATION CODE
1st Sentence

"The SATL shall issue either an ATA WRITE BUFFER command or an ATA DOWNLOAD MICROCODE command to the attached ATA device, depending on the setting of MODE."
to
"The SATL shall issue either an ATA WRITE BUFFER command or an ATA DOWNLOAD MICROCODE command to the ATA device, depending on the value in the MODE field in the WRITE BUFFER CDB."

Dell comment number 239
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 31 - WRITE BUFFER command CDB fields
Footnote a

"a The logical sector buffer in a ATA device shall be used to emulate the WRITE BUFFER command,
therefore the size of the buffer is limited to 512 bytes for data buffer and echo buffers."
to
"a The logical sector buffer in a ATA device is used to emulate the WRITE BUFFER command,
therefore the size of the buffer is limited to 512 bytes for data buffer and echo buffers."

Seems strange to have a shall in a table footnote.

Dell comment number 240
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 31 - WRITE BUFFER command CDB fields
Row: BUFFER ID
1st Sentence

"Refers to the offset in the buffer to start reading data from. The BUFFER OFFSET should be less than the size of the buffer, otherwise a CHECK CONDITION shall be sent back with sense key set to ILLEGAL REQUEST and additional sense
code set to INVALID FIELD IN CDB.
This applies to modes 06h and 07h."

to

"This value refers to the offset in the buffer specified by the BUFFER ID field to start writing data to. The BUFFER OFFSET field should be less than the size of the buffer, otherwise a CHECK CONDITION status shall be returned with sense key set to ILLEGAL REQUEST and additional sense code set to INVALID FIELD IN CDB."

Wondering about the should ..., then shall ...

Also wondering why it refers to 06h and 07h modes, when they are not

specified in this section?

Dell comment number 241
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 22 - READ BUFFER command CDB fields
Row: PARAMETER LIST LENGTH
change
"Refer to individual sections for the meaning of this term."
to
"This value is dependent on the value in the MODE field (see 8.12.3 and 8.12.4)

Dell comment number 242
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 32 - MODE field
2nd column title

change
"Translated ATA Opcode"
to
"Translated ATA command"

Dell comment number 243
Page=63 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.2 MODE field
1st paragraph

"The MODE field specifies the function to be performed by the SATL. If the MODE is 02h, the SATL shall issue an ATA WRITE BUFFER command to the attached ATA device. If the MODE is 05h, 6h, or 07h, the SATL shall issue a DOWNLOAD MICROCODE command to the attached ATA device as specified in table 32."
to
"The MODE field specifies the function to be performed by the SATL. If the MODE field is set to 02h, the SATL shall issue an ATA WRITE BUFFER command to the ATA device. If the MODE field is set to 05h the SATL shall issue a DOWNLOAD MICROCODE command to the ATA device as specified in table 32."

Since table 32 shows 06h, and 07h as unspecified, paragraph should not define a translation.

Dell comment number 244
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.3 Data Only mode (02h)

change subclause title to
"8.12.3 Write data mode (02h)"

Dell comment number 245
Page=64 Subtype=Text Author=Kevin_Marks
Comment=

8.12.3 Data Only mode (02h)
2nd Paragraph

Paragraph says 'shall' terminate command ...., when fields do not meet conditions in Table 33, which says Buffer ID should be set to zero (which should be 00h). , but Buffer ID is unspecified above.

Dell comment number 246
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 33 - Constraints for fields in the WRITE BUFFER command CDB
Row: BUFFER ID
change
"zero"
to
"00h"

Dell comment number 247
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.4 Download microcode mode (5h)
Subclause title
change to
"8.12.4 Download microcode mode (05h)"

Dell comment number 248
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.4 Download microcode mode (5h)
1st Paragraph
change

"In this mode, data is transferred from the application client is transmitted to the device using the ATA DOWNLOAD MICROCODE command."

to

"In this mode, data transferred to the SATL from the application client is transmitted to the ATA device using the ATA DOWNLOAD MICROCODE command."

Dell comment number 249
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.4 Download microcode mode (5h)
2nd Paragraph
change

"The SATL shall issue an ATA DOWNLOAD MICROCODE command when it receives a WRITE BUFFER command specifying mode 05h. The SATL shall transfer the microcode image or control information from the application client to the attached ATA device, and then complete the WRITE BUFFER command with GOOD status. The SATL shall check the attached ATA device for any returned errors, or confirmation that the ATA DOWNLOAD MICROCODE command has completed. If the ATA DLOWNLOAD MICROCODE command terminates with an error returned, the SATL shall generate a unit attention condition and return a

deferred error (see SPC-3)."

to

"The SATL shall issue an ATA DOWNLOAD MICROCODE command to the ATA device when it receives a WRITE BUFFER command with the MODE field set to 05h. The SATL shall transfer the microcode image or control information from the application client to the ATA device, and then complete the WRITE BUFFER command with GOOD status. The SATL shallcheck if the ATA DOWNLOAD MICROCODE command completed with an error. If the ATA DLOWNLOAD MICROCODE command completed with an error, the SATL shall generate a unit attention condition and return a deferred error (see SPC-3)."

What is ASC for the deferred error, or is this one where you follow clause 11.

Dell comment number 250
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.4 Download microcode mode (5h)
3rd paragraph, 1st Sentence
change
"generate"
to
"establish"

Dell comment number 251
Page=64 Subtype=Text Author=Kevin_Marks
Comment=Marked set by Kevin_Marks

Dell comment number 252
Page=64 Subtype=Highlight Author=Kevin_Marks
Comment=
8.12.3 Data Only mode (02h)
1st Paragraph
change
"In this mode, data is written to the device's logical sector buffer. Note that the logical sector buffer in the ATA device is being used to emulate the SCSI WRITE BUFFER command, so the maximum length of data that can be written is 512 bytes."
to
"In this mode, data is written to the logical sector buffer of the device. The logical sector buffer in the ATA device is being used to emulate the WRITE BUFFER command, so the maximum length of data that may be written is 512 bytes."

Dell comment number 253
Page=65 Subtype=StrikeOut Author=Kevin_Marks
Comment=
9.1 Translating LBA and transfer length and ATA command use constraints
1st Paragraph, 2nd Sentence
remove
"SCSI"
from
"The SCSI BLOCK LENGTH IN..."

Dell comment number 254
Page=65 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 255
Page=66 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 34 - Read and write type command translation selection
remove 1st Row and footnotes f & g

"n/a n/a n/a n/a n/a FLUSH CACHE f
FLUSH CACHE EXT g"

They are not R/W commands as title says.

If not removing row, FLUSH CACHE EXT needs to be moved to row 7, as it requires 48- bit feature set.

Dell comment number 256
Page=66 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 34 - Read and write type command translation selection
footnote b
change
"b If the attached ATA device does not support the 48-bit Address feature set (see ATA/ATAPI-7) or NCQ (see SATA 2.5) and the SATL receives a request to access an LBA beyond (228-1), the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the sense code set to LOGICAL BLOCK ADDRESS OUT OF RANGE."
to
"b If the ATA device does not support the 48-bit Address feature set (ATA IDENTIFY DEVICE data word 83, bit 10 is set to zero) nor NCQ (see SATA 2.5) and the SATL receives a request to access an LBA beyond (228-1), the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to LOGICAL BLOCK ADDRESS OUT OF RANGE."

Dell comment number 257
Page=66 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Table 34 - Read and write type command translation selection
Remove footnotes f & g, per prior comment removing flush commands.

"f The FLUSH CACHE command may be used if ATA IDENTIFY DEVICE data indicates the command is
supported in word 83 bit 12, and the command is enabled in word 86 bit 12 (see ATA/ATAPI-7).
g The FLUSH CACHE EXT command may be used if ATA IDENTIFY DEVICE data indicates the command
is supported in word 83 bit 13, and the command is enabled in word 86 bit 13 (see ATA/ATAPI-7)."

Additionally f is not needed, ATA FLUSH CACHE is mandatory.

Dell comment number 258
Page=66 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 34 - Read and write type command translation selection
footnote c
change
"c The DMA prerequisite requires both the ATA host in the SATL and the attached ATA device to have the same DMA transfer mode enabled (i.e., bit 8 of word 49 in the IDENTIFY DEVICE data is set to one and at least one DMA mode is enabled in word 63 or word 88 of the IDENTIFY DEVICE data)."
to
"c The DMA prerequisite requires both the ATA host in the SATL and the ATA device to have the same DMA transfer mode enabled (i.e., ATA IDENTIFY DEVICE data word 49, bit 8 is set to one and at least one DMA mode is enabled in the ATA IDENTIFY DEVICE data word 63 or word 88)."

Dell comment number 259
Page=66 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 34 - Read and write type command translation selection
footnote e
change
"e The SATL may transfer the number of logical blocks requested in the TRANSFER LENGTH field by sending multiple ATA commands, each time incrementing the ATA LBA by the ATA Sector Count transferred."
to
"e The SATL may transfer the number of logical blocks requested in the TRANSFER LENGTH field of the SCSI CDB by sending multiple ATA commands, each time incrementing the ATA LBA by the ATA Sector Count transferred."

Dell comment number 260
Page=67 Subtype=Highlight Author=Kevin_Marks
Comment=
9.2.1 FORMAT UNIT command overview
1st Paragraph
change
"The FORMAT UNIT command verifies that all logical block addresses accessible to SCSI application clients are formatted and ready for data transfers."
to
"The FORMAT UNIT command verifies that all logical block addresses accessible to an application client are formatted and ready for data transfers. Table 35 shows the translation for fields specified in the FORMAT UNIT CDB."

Dell comment number 261
Page=67 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 35 - FORMAT UNIT command CDB fields
Row: FMTPINFO

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not zero, then CHECK CONDITION/IR/IFIC.

Dell comment number 262
Page=67 Subtype=Text Author=Kevin_Marks
Comment=
Table 35 - FORMAT UNIT command CDB fields

The translation for RTO_REQ is missing from the table.

Add RTO_REQ as set to zero if you accept change on FMTPINFO comment, or unspecified if changing PROTECT bit in INQUIRY data.

Dell comment number 263
Page=67 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 35 - FORMAT UNIT command CDB fields
Row: FMTDATA
change
"If set to zero no data shall be transferred from the data-out buffer. If set to one the FORMAT UNIT parameter list shall be transferred from the client's data out buffer. The SATL may accept a FORMAT UNIT parameter list specifying the IMMED bit and an initialization pattern. The SATL shall ignore any defect list descriptors and any other fields provided in the FORMAT UNIT parameter list (see 9.2.2)."
to
"If set to zero, no data shall be transferred from the application client. If set to one the FORMAT UNIT parameter list shall be transferred from the application client. The SATL may accept a FORMAT UNIT parameter list specifying the IMMED bit and an initialization pattern. The SATL shall ignore any defect list descriptors and any other fields provided in the FORMAT UNIT parameter list (see 9.2.2)."

Should it say IMMED bit set to one?

Dell comment number 264
Page=68 Subtype=Highlight Author=Kevin_Marks
Comment=
9.2.5 DCRT bit
1st Paragraph, 1st Sentence
change
"If the DCRT bit is set to zero and media certification is supported by the SATL, then the SATL shall issue ATA verify commands (see 3.1.17) to access all the logical sectors on the ATA device's medium that comprise every SCSI logical block emulated by the SATL."
to
"If the DCRT bit is set to zero and media certification is supported by the SATL, then the SATL shall issue ATA verify commands (see 3.1.17) to access all the logical sectors on the medium of the ATA device that comprise every logical block emulated by the SATL."

Dell comment number 265
Page=69 Subtype=StrikeOut Author=Kevin_Marks
Comment=SCSI

Dell comment number 266
Page=69 Subtype=Highlight Author=Kevin_Marks

Comment=
9.3.2 READ commands with FUA
2nd Paragraph a) in a,b list

"a) If the attached device supports NCQ (i.e., bit-8 in word 77 of ATA IDENTIFY DEVICE data is set to one) the SATL shall issue a READ FPDMA QUEUED command (see SATA 2.5) with the FUA bit in the Device field set to one;"
to
"a) If the ATA device supports NCQ (i.e., ATA IDENTIFY DEVICE data word 76, bit 8 is set to one) the SATL shall issue a READ FPDMA QUEUED command (see SATA 2.5) with the FUA bit in the Device register set to one; or"

Dell comment number 267
Page=69 Subtype=Highlight Author=Kevin_Marks
Comment=
9.3.2 READ commands with FUA
2nd Paragraph b) in a,b list
change
"b) otherwise, the SATL shall,
  1) if the ATA device's write cache is enabled (see ATA/ATAPI-7), issue an ATA verify command (see 3.1.17); and
  2) issue an ATA read command as specified in 9.3.1."

"b) otherwise, the SATL shall:
  1) if the write cache is enabled (see ATA/ATAPI-7) on the ATA device, issue an ATA verify command (see 3.1.17); and
  2) issue an ATA read command as specified in 9.3.1."

Dell comment number 268
Page=69 Subtype=Highlight Author=Kevin_Marks
Comment=
9.3.2 READ commands with FUA
2nd Paragraph, 1st Sentence

"The SATL shall process a SCSI read command with the FUA bit set to one as follows depending on whether or not the attached ATA device supports NCQ:"
to

"The SATL shall process a SCSI read command with the FUA bit set to one as follows:"

Dell comment number 269
Page=69 Subtype=Highlight Author=Kevin_Marks
Comment=
9.3.1 READ commands operation code translation
3rd Paragraph
change
"If the SATL returns an error other than an ILLEGAL REQUEST while processing the command the SATL may transfer a vendor-specific amount of data before terminating the command."
to
"If the SATL returns a CHECK CONDITION status with a sense key set to a value other than ILLEGAL REQUEST while processing the command, the SATL may transfer a vendor-specific amount of data before terminating the command."

Dell comment number 270
Page=69 Subtype=Highlight Author=Kevin_Marks
Comment=
9.2.6 IP bit
Note 7 after 2nd Paragraph
change
"NOTE 7 The SATL should..."
to
"NOTE 7 - The SATL should..."

Dell comment number 271
Page=70 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 38 - READ (6) command CDB fields
footnote a
change
"a A transfer length of zero specifies to transfer 256 data blocks from the attached ATA device to the application client (see SBC-2)."
to
"a A transfer length of zero specifies that 256 logical blocks shall be read from the ATA device and transferred to the application client (see SBC-2)."

Dell comment number 272
Page=70 Subtype=Highlight Author=Kevin_Marks
Comment=
9.4 READ (6) command
1st Paragraph

"The READ (6) command is used to request the device to transfer logical blocks of user data to the requester
Data may be read from ATA device's medium or, data may be read from the ATA device's cache if the most recent copy is in the ATA device's cache (see SBC-2)"

to

"The READ (6) command is used to request the device to transfer logical blocks of user data to the application client. The requested data may be read from the medium or cache of the ATAdevice, if the most recent copy is in the cache (see SBC-2)

Table 38 shows the translation for fields specified in the READ (6) CDB."

This kind of prohibits the SATL from having cache?

Dell comment number 273
Page=70 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 39 - READ (10) command CDB fields
Row: RDPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the

INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 274
Page=70 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 39 - READ (10) command CDB fields
Row: FUA_NV
"...the command with ..."
to
"...the READ (10) command with ..."

Dell comment number 275
Page=71 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 40 - READ (12) command CDB fields
Row: RDPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 276
Page=71 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 41 - READ (16) command CDB fields
Row: RDPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 277
Page=71 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 40 - READ (12) command CDB fields
Row: FUA_NV
"...the command with ..."
to
"...the READ (12) command with ..."

Dell comment number 278
Page=71 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 41 - READ (16) command CDB fields
Row: FUA_NV
"...the command with ..."
to
"...the READ (16) command with ...

Dell comment number 279
Page=72 Subtype=Highlight Author=Kevin_Marks

Comment=
Table 44 - READ CAPACITY(16) command CDB fields
Row: OPERATION CODE
change
"The SATL shall use ATA IDENTIFY DEVICE information to compute the ATA device's maximum user addressable medium capacity."
to
"The SATL shall use ATA IDENTIFY DEVICE data to compute the maximum user addressable medium capacity of the ATA device"

Dell comment number 280
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 44 - READ CAPACITY(16) command CDB fields
Row: PMI
change
"If the PMI bit is not zero the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
to
"If the PMI bit is not set to zero the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
or
"Shall be set to zero"

Dell comment number 281
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 44 - READ CAPACITY(16) command CDB fields
Row: LOGICAL BLOCK ADDRESS

"OOOOOOOh"
to
"Oh"
or
"OOOO_OOOOh"

Dell comment number 282
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 42 - READ CAPACITY(10) command CDB fields
Row: OPERATION CODE
change
"The SATL shall use ATA IDENTIFY DEVICE information to compute the ATA device's maximum user addressable medium capacity."
to
"The SATL shall use ATA IDENTIFY DEVICE data to compute the maximum user addressable medium capacity of the ATA device"

Dell comment number 283
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
9.8.1 READ CAPACITY command overview
1st Paragraph

change
"The READ CAPACITY (10) command shall request information about the capacity of the block device being addressed."
to
"The READ CAPACITY (10) command requests information about the capacity of the block device being addressed.

Table 42 shows the translation for fields specified in the READ CAPACITY(10) CDB."

Dell comment number 284
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
9.9.1 READ CAPACITY command overview
1st Paragraph
change
"The READ CAPACITY (16) command shall request information about the capacity of the block device being addressed."
to
"The READ CAPACITY (16) command requests information about the capacity of the block device being addressed.

Table 44 shows the translation for fields specified in the READ CAPACITY(16) CDB."

Dell comment number 285
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
9.8.1 READ CAPACITY command overview

change subclause title to
"9.8.1 READ CAPACITY (10) command overview"

Dell comment number 286
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 42 - READ CAPACITY(10) command CDB fields
Row: PMI
change
"If the PMI bit is not zero the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
to
"If the PMI bit is not set to zero the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
or
"Shall be set to zero"

Dell comment number 287
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
9.8.2 READ CAPACITY data
1st Paragraph, 2nd Sentence
change

"Table 45 describes the translation of fields in the READ CAPACITY data."
to
"Table 43 describes the translation of fields in the READ CAPACITY data."

Dell comment number 288
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 43 - READ CAPACITY (10) data
Row: BLOCK LENGTH IN BYTES

The mode page block descriptors says that the BLOCK LENGTH field shall be 512, how can this be Unspecified then?

Dell comment number 289
Page=72 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 42 - READ CAPACITY(10) command CDB fields
Row: LOGICAL BLOCK ADDRESS
1st Sentence
"...set to zero the SATL..."
to
"...set to Oh the SATL..."

Dell comment number 290
Page=73 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 45 - READ CAPACITY (16) data
Row: PROT_EN

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to shall be set to zero.

Dell comment number 291
Page=73 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 45 - READ CAPACITY (16) data
Row: RTO_EN

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to shall be set to zero.

Dell comment number 292
Page=73 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 43 - READ CAPACITY (16) data
Row: BLOCK LENGTH IN BYTES

The mode page block descriptors say that the BLOCK LENGTH shall be 512, how can this be Unspecified then?

Dell comment number 293
Page=73 Subtype=StrikeOut Author=Kevin_Marks
Comment=SCSI

Dell comment number 294
Page=73 Subtype=Highlight Author=Kevin_Marks
Comment=
1st two paragraphs after Table 46 - REASSIGN BLOCKS command CDB fields

change

"The REASSIGN BLOCKS command parameter list provided in the data-out buffer contains the LBAs to be reassigned. The LBAs provided in the parameter list shall be utilized for the LBAs in any ATA verify commands(see 3.1.17) or ATA write commands (see 3.1.18) issued by the SATL.

The SATL shall support the LONGLBA field and the LONGLIST field (see SBC-2)."

to
"The REASSIGN BLOCKS command parameter list transferred from the application client contains the LBAs to be reassigned. The LBAs provided in the parameter list shall be utilized for the ATA LBAs in any ATA verify commands(see 3.1.17) or ATA write commands (see 3.1.18) issued by the SATL.

The SATL shall support the LONGLBA and LONGLIST bits (see SBC-2)."

data-out /data-in buffer is not used in all the other commands, so why here.

Dell comment number 295
Page=73 Subtype=Highlight Author=Kevin_Marks
Comment=
9.10.2 REASSIGN BLOCKS operation code
1,2,..7 list

change
"1) issue an ATA verify command (see 3.1.17) to the specified LBA;
2) if the ATA verify command completes successfully, then the SATL shall return GOOD status for the REASSIGN BLOCKS command;
3) if the ATA verify command does not complete successfully, then the SATL shall Issue an ATA write command (see 3.1.18) with vendor-specific data to the LBA that failed the ATA verify command;
4) if the ATA write command fails, then the SATL shall terminate the REASSIGN BLOCKS command with CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to WRITE ERROR - AUTO REALLOCATION FAILED;
5) if the write command completes successfully, then the SATL shall issue a second ATA verify command to the same LBA;
6) if the second ATA verify command completes successfully, then the SATL shall return GOOD status for the REASSIGN BLOCKS command; and
7) if the second ATA verify command does not complete successfully, then the SATL shall terminate the REASSIGN BLOCKS command with CHECK CONDITION status with the sense key set to MEDIUM..."
to

"1) issue an ATA verify command (see 3.1.17) to the specified LBA;
2) if the ATA verify command completes with no error, the SATL shall return

GOOD status for the REASSIGN BLOCKS command;
3) if the ATA verify command completes with an error, the SATL shall issue an ATA write command (see 3.1.18) with vendor-specific data to the LBA of the ATA verify command that completed with an error;
4) if the ATA write command completes with an error, the SATL shall terminate the REASSIGN BLOCKS command with CHECK CONDITION status with the sense key set to HARDWARE ERROR and the additional sense code set to WRITE ERROR - AUTO REALLOCATION FAILED;
5) if the ATA write command completes with no error, the SATL shall issue a second ATA verify command to the same LBA;
6) if the second ATA verify command completes with no error, the SATL shall return GOOD status for the REASSIGN BLOCKS command; and
7) if the second ATA verify command completes with an error, the SATL shall terminate the REASSIGN BLOCKS command with CHECK CONDITION status with the sense key set to MEDIUM..."

Dell comment number 296
Page=73 Subtype=Text Author=Kevin_Marks
Comment=Marked set by Kevin_Marks

Dell comment number 297
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
9.11.1 START STOP UNIT command overview
1st Sentence

"The START STOP UNIT command provides a method for controlling the power state of a logical unit."

to

"The START STOP UNIT command provides a method for controlling the power state of a logical unit.

Table 47 shows the translation for fields specified in the START STOP UNIT CDB."

Dell comment number 298
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 47 - START/STOP UNIT command CDB fields
Row: OPERATION CODE
change
"Commands issued to the attached device depend upon the other values in the CDB as described in 9.11.3."
to
"Commands issued to the ATA device depend upon the other values in the CDB as described in 9.11.3."

Dell comment number 299
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 47 - START/STOP UNIT command CDB fields
Row: POWER CONDITIONS
change

"The SATL shall ignore this field."
to
"The field shall be set to 000b."

The way SBC-2 reads to me is that if the POWER CONDITIONS field is not set to zero, the the LEOF and START bits are ignored.

Dell comment number 300
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
9.11.1 START STOP UNIT command overview

1st Paragraph after Table 47 - START/STOP UNIT command CDB fields
change
"If a SATL receives a command other than a START STOP UNIT command for a device that is in the Stopped state (see SBC-2), then the SATL shall return CHECK CONDITION status, with the sense key set to NOT READY and the additional sense code set to LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED."
to
"If a SATL receives a command that requires medium access while the device is in the Stopped state (see SBC-2), the SATL shall return CHECK CONDITION status, with the sense key set to NOT READY and the additional sense code set to LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED."

Shouldn't this be "receives a medium access command", not any command. To my knowledge, in standby mode, an ATA device will still response to commands that do not require media access.

Dell comment number 301
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 47 - START/STOP UNIT command CDB fields
Row: IMMED
change
"The SATL shall implement this field as defined in 9.11.3."
to
"The SATL shall implement this field as defined in 9.11.2 and 9.11.3."

Dell comment number 302
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
9.11.2.3 After START STOP UNIT completes with an error
1st Paragraph, 1st Sentence
change
"...key of ABORTED COMMAND, and the additional sense code for specified for the error being reported."
to
"...key of ABORTED COMMAND, and the additional sense code set to the value specified for the error being reported."

Dell comment number 303
Page=74 Subtype=Highlight Author=Kevin_Marks
Comment=
9.11.2.3 After START STOP UNIT completes with an error

2st Paragraph, 1st Sentence
change
"...terminate the command and..."
to
"...terminate the START STOP UNIT command and..."

Dell comment number 304
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 0 In Definition column 6) in 1,2..6 list
change

"6) If the STANDBY command completes with no error a, then process GOOD status according to the IMMED bit (see 9.11.2.2) b."

to

"6) If the ATA STANDBY command completes with no error a, and the IMMED bit is set to zero, return GOOD status (see 9.11.2.2) b."

6) is kind of strange, in that if the IMMED bit was one, then GOOD status is already returned, and 9.11.2.2 only deals with IMMED set to zero. This applied to Rows: 0 0, 1 0 and 0 1.

Dell comment number 305
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 1 0 In Definition column 2) in 1,2,3 list
change

"2) Issue an ATA verify command (see 3.1.17) to the ATA device with one in Sector Count and a value in LBA from zero to the maximum LBA supported by the ATA device in its current configuration d; and"

to

"2) Issue an ATA verify command (see 3.1.17) to the ATA device with the Sector Count set to 1 and the ATA LBA set to a value between 0 and the maximum ATA LBA supported by the ATA device in its current configuration d; and"

Dell comment number 306
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 0 In Definition column 2) in 1,2..6 list
change
"2) Issue a FLUSH CACHE or FLUSH CACHE EXT command to the attached ATA device;"

to

"2) Issue an ATA flush command (see 3.1.8) command to the ATA device;"

Dell comment number 307
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 0 In Definition column 3) in 1,2..6 list
change

"3) If the FLUSH CACHE or FLUSH CACHE EXTENDED command completes with any error, then process ending status according to the IMMED bit (see 9.11.2.3) with
the additional sense code set to COMMAND SEQUENCE ERROR;"

to

"3) If the ATA flush command (see 3.1.8) completes with an error, process ending status according to the IMMED bit (see 9.11.2.3) with the additional sense code set to COMMAND SEQUENCE ERROR;"

Dell comment number 308
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 0 In Definition column 4) in 1,2..6 list
change

"4) If the FLUSH CACHE or FLUSH CACHE EXT command completes with no error, then issue a STANDBY command to the attached ATA device with zero in Sector Count;"

to

"4) If the ATA flush command (see 3.1.8) completes with no error, issue an ATA STANDBY command to the ATA device with the Sector Count set to 0;"

Dell comment number 309
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 0 In Definition column 5) in 1,2..6 list
change

"5) If the STANDBY command completes with any error, then process ending status according to the IMMED bit (see 9.11.2.3) with the additional sense code set to COMMAND SEQUENCE ERROR; and"

to

"5) If the ATA STANDBY command completes with an error, process ending

status according to the IMMED bit (see 9.11.2.3) with the additional sense code set to COMMAND SEQUENCE ERROR; and"

Dell comment number 310
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
Row: 0 1 In Definition column
change
"If the attached ATA device supports the Removable Media feature set, then the SATL shall:
  1) Process the IMMED bit (see 9.11.2.1);
  2) Issue a MEDIA EJECT command to the attached ATA device;
  3) If the MEDIA EJECT command completes with any error, then process ending status according to the IMMED bit (see 9.11.2.3) with the additional sense code set to MEDIA LOAD OR EJECT FAILED; and
  4) If the MEDIA EJECT command completes with no error, then process GOOD status according to the IMMED bit (see 9.11.2.2).
If the attached ATA device does not support the Removable Media feature set, then the SATL shall return CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."

to

"If the ATA device supports the Removable Media feature set (i.e., ATA IDENTIFY DEVICE data word 82, bit 2 is set to one), then theSATL shall:
  1) Process the IMMED bit (see 9.11.2.1);
  2) Issue an ATA MEDIA EJECT command to the ATA device;
  3) If the ATA MEDIA EJECT command completes with an error, process ending status according to the IMMED bit (see 9.11.2.3) with the additional sense code set to MEDIA LOAD OR EJECT FAILED; and
  4) If the ATA MEDIA EJECT command completes with no error, process GOOD status according to the IMMED bit (see 9.11.2.2).
If the ATA device does not support the Removable Media feature set,then the SATL shall return CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."

Dell comment number 311
Page=75 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 48 - Definition of IMMED, LOEJ, and START bits in the START STOP UNIT CDB
footnote a
change
"a An ATA device may return completion status for a STANDBY command before removal of the ATA device may be accomplished without damaging the ATA device."
to
"a An ATA device may return completion status for an ATA STANDBY command before removal of the ATA device may be accomplished without damaging the ATA device."

Dell comment number 312

Page=76 Subtype=Highlight Author=Kevin_Marks
Comment=
9.12.1 SYNCHRONIZE CACHE (10) command overview
1st Paragraph
change

"The SYNCHRONIZE CACHE (10) command is used to flush the most recent data values in the ATA device's cache to physical medium. Unlike in SCSI, ATA does not provide a way to specify a particular LBA to start flushing the ATA device's cache."

to

"The SYNCHRONIZE CACHE (10) command is used to flush the most recent data in the cache of the ATA device to physical medium. Unlike in SCSI, ATA protocol does not provide a way to specify a particular LBA to start flushing the cache of the ATA device.

Table 49 shows the translation for fields specified in the SYNCHRONIZE CACHE(10) CDB."

Dell comment number 313
Page=76 Subtype=Text Author=Kevin_Marks
Comment=
Table 49 - SYNCHRONIZE CACHE (10) command CDB fields
Row: OPERATION CODE

Per comment on Table 34 - FLUSH CACHE and FLUSH CACHE EXT are removed from table, and there are no constraints described for these.

Dell comment number 314
Page=76 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 49 - SYNCHRONIZE CACHE (10) command CDB fields
Row: NUMBER OF BLOCKS
change
"The SATL shall ignore this field and shall process this command as though this field contained zero (i.e., synchronize all logical blocks starting with the one specified in the LOGICAL BLOCK ADDRESS field to the last logical block on the ATA device's medium)."
to
"The SATL shall ignore this field and shall process this command as though this field contained zero (see SBC-2)."

Dell comment number 315
Page=77 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 51 - VERIFY (10) command CDB fields
Row: VRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 316
Page=77 Subtype=Highlight Author=Kevin_Marks
Comment=
9.13.1 SYNCHRONIZE CACHE (16) command overview
1st Paragraph
change

"The SYNCHRONIZE CACHE(16) command is used to flush the most recent data values in the ATA device's cache to ATA device's physical medium. Unlike in SCSI, ATA does not provide a way to specify a particular LBA to start flushing the device cache."

to

"The SYNCHRONIZE CACHE (16) command is used to flush the most recent data in the cache of the ATA device to physical medium. Unlike in SCSI, ATA protocol does not provide a way to specify a particular LBA to start flushing the cache of the ATA device.

Table 50 shows the translation for fields specified in the SYNCHRONIZE CACHE(16) CDB."

Dell comment number 317
Page=77 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 50 - SYNCHRONIZE CACHE(10) command CDB fields

change table 50 title to
"Table 50 - SYNCHRONIZE CACHE(16) command CDB fields"

Dell comment number 318
Page=77 Subtype=Text Author=Kevin_Marks
Comment=
Table 50 - SYNCHRONIZE CACHE (10) command CDB fields
Row: OPERATION CODE

Per comment on Table 34 - FLUSH CACHE and FLUSH CACHE EXT are removed from table, and there are no constraints described for these.

Dell comment number 319
Page=77 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 50 - SYNCHRONIZE CACHE (10) command CDB fields
Row: NUMBER OF BLOCKS
change
"The SATL shall ignore this field and shall process this command as though this field contained zero (i.e., synchronize all logical blocks starting with the one specified in the LOGICAL BLOCK ADDRESS field to the last logical block on the ATA device's medium)."
to
"The SATL shall ignore this field and shall process this command as though this field contained zero (see SBC-2)."

Dell comment number 320
Page=77 Subtype=Highlight Author=Kevin_Marks

Comment=
Table 51 - VERIFY (10) command CDB fields
Row: BYTCHK
change

"If the SATL supports a bytchk value of one and the CDB specifies one in the BYTCHK field, the SATL perform a byte by byte comparison of the data transferred from the SCSI application client to the SATL with data read from the ATA device by the SATL, and shall return the results of that comparison as described in SBC-2."

to

"If the SATL supports a BYTCHK bit set to one and the CDB specifies one in the BYTCHK field, the SATL shall perform a byte by byte comparison of the data transferred from the application client to the SATL with data read from the ATA device by the SATL and return the results of that comparison as described in SBC-2."

Dell comment number 321
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 52 - VERIFY (12) command CDB fields
Row: VRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not OOOb, then CHECK CONDITION/IR/IFIC.

Dell comment number 322
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 53 - VERIFY (16) command CDB fields
Row: VRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not OOOb, then CHECK CONDITION/IR/IFIC.

Dell comment number 323
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 52 - VERIFY (12) command CDB fields
Row: BYTCHK
change

"If the SATL supports a bytchk value of one and the CDB specifies one in the BYTCHK field, the SATL perform a byte by byte comparison of the data transferred from the SCSI application client to the SATL with data read from the ATA device by the SATL, and shall return the results of that comparison as described in SBC-2."

to

"If the SATL supports a BYTCHK bit set to one and the CDB specifies one in the BYTCHK field, the SATL shall perform a byte by byte comparison of the data transferred from the application client to the SATL with data read from the ATA device by the SATL and return the results of that comparison as described in SBC-2."

Dell comment number 324
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 53 - VERIFY (16) command CDB fields
Row: BYTCHK
change

"If the SATL supports a bytchk value of one and the CDB specifies one in the
BYTCHK field, the SATL perform a byte by byte comparison of the data transferred from the SCSI application client to the SATL with data read from the ATA device by the SATL, and shall return the results of that comparison as described in SBC-2."

to

"If the SATL supports a BYTCHK bit set to one and the CDB specifies one in the BYTCHK field, the SATL shall perform a byte by byte comparison of the data transferred from the application client to the SATL with data read from the ATA device by the SATL and return the results of that comparison as described in SBC-2."

Dell comment number 325
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
9.17.1 WRITE commands OPERATION CODE translation
change subclause title to
"9.17.1 WRITE commands operation code translation"

or if supposed to be in small caps, fix 9.3.1 title

Dell comment number 326
Page=78 Subtype=Highlight Author=Kevin_Marks
Comment=
9.17.1 WRITE commands OPERATION CODE translation
1st paragraph
Change
"The SATL shall transfer the logical blocks specified in the SCSI write command (see 3.1.68) from the SCSI application client and shall issue ATA write commands (see 3.1.18) in accordance with the constraints specified in 9.1 to transfer the specified logical blocks through the ATA host in the SATL to the ATA device."
to
"The SATL shall transfer the logical blocks specified in the SCSI write command (see 3.1.68) from the application client to the ATA device. The SATL shall issue ATA write commands (see 3.1.18) in accordance with the constraints specified in 9.1 to accomplish the SCSI write command (see 3.1.68.)"

Dell comment number 327
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 55 - WRITE (10) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 328
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 55 - WRITE (10) command CDB fields
Row: FUA_NV
change

"...the command with..."
to
"...the WRITE (10) command with..."

Dell comment number 329
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
9.17.2 WRITE commands with FUA
2nd & 3rd paragraphs
change

"If the FUA bit is zero the SATL shall process this command as described in 9.17.1.

If the FUA bit is one the SATL shall issue an ATA write FUA command sequence (see 3.1.19) to the attached ATA device in accordance with the constraints described in 9.1."

to

"If the FUA bit is set to zero in the SCSI write command CDB, the SATL shall process this command as described in 9.17.1.

If the FUA bit is set to one in the SCSI write command CDB, the SATL shall issue an ATA write FUA command sequence (see 3.1.19) to the ATA device in accordance with the constraints described in 9.1."

Dell comment number 330
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
9.18 WRITE (6) command
1st Paragraph
change

"The WRITE (6) command is used to request the ATA device to transfer user data to the ATA device's medium or to the ATA device's cache. Data may be

written to the ATA device's medium or to the ATA device's cache."

to

"The WRITE (6) command is used to request the SATL transfer user data from the application client to the ATA device. Data may be written to the medium or cache of the ATA device.

Table 54 shows the translation for fields specified in the WRITE(6) CDB."

Do we need to add depending on the state of the write cache?

Dell comment number 331
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
9.19 WRITE (10) command
1st Paragraph
change

"The WRITE (10) command is used to request the ATA device to transfer user data to the ATA device's medium or to the ATA device's cache. Data may be written to the ATA device's medium or to the ATA device's cache."

to

"The WRITE (10) command is used to request the SATL transfer user data from the application client to the ATA device. Data may be written to the medium or cache of the ATA device.

Table 55 shows the translation for fields specified in the WRITE(10) CDB."

Do we need to add depending on the state of the write cache?

Dell comment number 332
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 54 - WRITE (6) command CDB fields
Footbote a
change

"a A transfer length of zero specifies to transfer 256 data blocks from the application client to the
attached ATA device (see SBC-2)."
to
"a A TRANSFER LENGTH field set to 0h specifies a transfer length of 256 logical blocks (see SBC-2)."

Dell comment number 333
Page=79 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 55 - WRITE (10) command CDB fields
footnote a
change

"a A transfer length of zero indicates that a data transfer shall not take

place."
to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 334
Page=79 Subtype=StrikeOut Author=Kevin_Marks
Comment=
9.17.1 WRITE commands OPERATION CODE translation
2nd Paragraph
change
remove
"Data blocks specified in the LOGICAL BLOCK ADDRESS field shall be transferred to the specified ATA device, and the ATA device may transfer the data to its cache or medium."

Sentence does not add to what is stated above and in the CDB translation fields, additionally whether the data has the possibility to go in cache or directly to medium is dependent on the state of the write cache.

Dell comment number 335
Page=80 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 56 - WRITE (12) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 336
Page=80 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 56 - WRITE (12) command CDB fields
Row: FUA_NV
change
"...the command with..."
to
"...the WRITE (10) command with..."

Dell comment number 337
Page=80 Subtype=Highlight Author=Kevin_Marks
Comment=
9.20 WRITE (12) command
1st Paragraph
change

"The WRITE (12) command is used to request the ATA device to transfer user data to the ATA device's medium or to the ATA device's cache. Data may be written to the ATA device's medium or to the ATA device's cache."

to

"The WRITE (12) command is used to request the SATL transfer user data from

the application client to the ATA device. Data may be written to the medium or cache of the ATA device.

Table 56 shows the translation for fields specified in the WRITE(12) CDB."

Do we need to add depending on the state of the write cache?

Dell comment number 338
Page=80 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 56 - WRITE (12) command CDB fields
footnote a
change

"a A transfer length of zero indicates that a data transfer shall not take place."
to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 339
Page=81 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 57 - WRITE (16) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 340
Page=81 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 57 - WRITE (16) command CDB fields
Row: FUA_NV
change
"...the command with..."
to
"...the WRITE (10) command with..."

Dell comment number 341
Page=81 Subtype=Highlight Author=Kevin_Marks
Comment=
9.19 WRITE (16) command
1st Paragraph
change

"The WRITE (16) command is used to request the ATA device to transfer user data to the ATA device's medium or to the ATA device's cache. Data may be written to the ATA device's medium or to the ATA device's cache."

to

"The WRITE (16) command is used to request the SATL transfer user data from

the application client to the ATA device. Data may be written to the medium or cache of the ATA device.

Table 57 shows the translation for fields specified in the WRITE(16) CDB."

Do we need to add depending on the state of the write cache?

Dell comment number 342
Page=81 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 57 - WRITE (16) command CDB fields
footnote a
change

"a A transfer length of zero indicates that a data transfer shall not take place."
to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 343
Page=81 Subtype=StrikeOut Author=Kevin_Marks
Comment=SCSI

Dell comment number 344
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 58 - WRITE AND VERIFY (10) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 345
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 59 - WRITE AND VERIFY (12) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 346
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
9.23 WRITE AND VERIFY (10) command
1st Paragraph
change
"The WRITE AND VERIFY (10) command is used to transfer application data to the ATA device's medium and then to verify that data was written correctly."

to

"The WRITE AND VERIFY (10) command is used to transfer user data from the application client to the medium of the ATA device and then to verify that data was written correctly.

Table 58 shows the translation for fields specified in the WRITE AND VERIFY (10) CDB"

Dell comment number 347
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
9.24 WRITE AND VERIFY (12) command
1st Paragraph
change
"The WRITE AND VERIFY (12) command is used to transfer application data to the ATA device's medium and then to verify that data was written correctly."

to

"The WRITE AND VERIFY (12) command is used to transfer user data from the application client to the medium of the ATA device and then to verify that data was written correctly.

Table 59 shows the translation for fields specified in the WRITE AND VERIFY (12) CDB"

Dell comment number 348
Page=82 Subtype=Text Author=Kevin_Marks
Comment=
Table 58 - WRITE AND VERIFY (10) command CDB fields
Row: BYTCHK

Why is BYTCHK not supported here, but is supported in a VERIFY command?

Dell comment number 349
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 58 - WRITE AND VERIFY (10) command CDB fields
footnote a
change

"a A transfer length of zero indicates that a data transfer shall not take place."
to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 350
Page=82 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 59 - WRITE AND VERIFY (12) command CDB fields
footnote a

change

"a A transfer length of zero indicates that a data transfer shall not take place."
to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 351
Page=82 Subtype=Text Author=Kevin_Marks
Comment=
Table 59 - WRITE AND VERIFY (12) command CDB fields
Row: BYTCHK

Why is BYTCHK not supported here, but is supported in a VERIFY command?

Dell comment number 352
Page=83 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 60 - WRITE AND VERIFY (16) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 353
Page=83 Subtype=Highlight Author=Kevin_Marks
Comment=
9.25 WRITE AND VERIFY (16) command
1st Paragraph
change
"The WRITE AND VERIFY (16) command is used to transfer application data to the ATA device's medium and then to verify that data was written correctly."

to

"The WRITE AND VERIFY (16) command is used to transfer user data from the application client to the medium of the ATA device and then to verify that data was written correctly.

Table 60 shows the translation for fields specified in the WRITE AND VERIFY (16) CDB"

Dell comment number 354
Page=83 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 60 - WRITE AND VERIFY (16) command CDB fields
footnote a
change

"a A transfer length of zero indicates that a data transfer shall not take place."

to
"a A TRANSFER LENGTH set to 0h specifies that a data transfer shall not take place."

Dell comment number 355
Page=83 Subtype=Text Author=Kevin_Marks
Comment=
Table 60 - WRITE AND VERIFY (16) command CDB fields
Row: BYTCHK

Why is BYTCHK not supported here, but is supported in a VERIFY command?

Dell comment number 356
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 61 - WRITE SAME (10) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 357
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
9.26.1 WRITE SAME (10) command overview
1st Paragraph

change
"The WRITE SAME (10) command (see table 61) requests that the SATL transfer a single logical block from the data-out buffer and write the contents of that single logical block, with modifications based on the LBDATA bit and the PBDATA bit, to the specified range of logical block addresses."

to

"The WRITE SAME (10) command (see table 61) requests that the SATL transfer a single logical block from the application client and write the contents of that single logical block, with modifications based on the LBDATA bit and the PBDATA bit, to the specified range of logical block addresses on the ATA device."

If you are going to start using data-out buffer then most of the command overviews need to be changed to a data-in and data-out buffer type explanations.

Dell comment number 358
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 61 - WRITE SAME (10) command CDB fields
Row: NUMBER OF BLOCKS
change

"A number of blocks of zero indicates that the data-out buffer shall be

repeatedly written from the specified logical block address through the last user addressable logical sector on the media. If the number of blocks is not zero, the SATL shall repeatedly write the data-out buffer for the number of logical sectors specified to the device. The SATL shall send as many ATA commands as required to satisfy the number of logical blocks specified by the WRITE SAME (10) command."

to

"A NUMBER OF BLOCKS field set to 0h specifics that the SATL shall repeatedly write the data block transferred from the application client to the value specified in the LOGICAL BLOCK ADDRESS field through the last user addressable logical sector on the medium of the ATA device. If the value in the NUMBER OF BLOCKS field is non-zero, the SATL shall repeatedly write the data block transferred from the application client for the number of logical sectors specified to the ATA device. The SATL shall send as many ATA write commands as required to satisfy the number of blocks specified by the WRITE SAME (10) command."

Dell comment number 359
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 61 - WRITE SAME (10) command CDB fields
Row: OPERATION CODE

"If the ATA device supports SCT LBA Segment Access (see SCT), the SATL should issue SCT LBA Segment Access to repeatedly write the data in the buffer to the device. If the device does not implement SCT then the SATL shall issue ATA write commands as defined in 9.17.1."

to

"If the ATA device supports SCT LBA Segment Access (see SCT), the SATL should issue SCT LBA Segment Access to repeatedly write the data block transferred from the application client to the ATA device. If the ATA device does not implement SCT then the SATL shall issue ATA write commands as defined in 9.17.1."

Dell comment number 360
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 62 - LBDATA and PBDATA fields
Row: 0 0 in Description column
change

"The SATL shall transfer the single block of data from the data output buffer to the range of blocks specified in LOGICAL BLOCK ADDRESS and NUMBER OF BLOCKS repeatedly on the media. If the ATA device supports the SCT LBA Segment Access capability, then this should be used for the data transfer. Otherwise, write commands shall be used as documented in 9.12.2. See SBC-2"

to

"The SATL shall write the block of data transferred from the application client to the range of blocks specified in LOGICAL BLOCK ADDRESS and NUMBER

OF BLOCKS repeatedly on the medium of the ATA device. If the ATA device supports the SCT LBA Segment Access capability, then the SATL should used the SCT LBA Segment Access for writing the data. Otherwise, the SATL shall use ATA write commands as defined in 9.17.2. See SBC-2"

Not sure if the link should be 9.17.2, but 9.12.2 does not exist.

Dell comment number 361
Page=84 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 62 - LBDATA and PBDATA fields
Row: 1 0 in Description column
change
"The SATL shall replace the first four bytes of the logical block received from the data-out buffer with the least significant four bytes of the LBA of the logical block being written to the media, ending with the least significant byte (e.g., if the LBA is 77665544_33221100h, 33221100h is written with 33h written first and 00h written last)."

to

"The SATL shall replace the first four bytes of the logical block received from the application client with the least significant four bytes of the LBA of the logical block being written to the media, ending with the least significant byte (e.g., if the LBA is 77665544_33221100h, 33221100h is written with 33h written first and 00h written last)."

Does a comment about SCT need to be added here?

Dell comment number 362
Page=85 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 63 - WRITE SAME (16) command CDB fields
Row: WRPROTECT

This field can not be set to Unspecified, because the PROTECT bit in the INQUIRY data is a shall be set to zero. Change the PROTECT bit to Unspecified or change this field to if not 000b, then CHECK CONDITION/IR/IFIC.

Dell comment number 363
Page=85 Subtype=Highlight Author=Kevin_Marks
Comment=
9.27 WRITE SAME (16) command
1st Paragraph

change
"The WRITE SAME (16) command (see table 63) requests that the SATL transfer a single logical block from the data-out buffer and write the contents of that single logical block, with modifications based on the LBDATA bit and the PBDATA bit, to the specified range of logical block addresses."

to

"The WRITE SAME (16) command (see table 63) requests that the SATL transfer

a single logical block from the application client and write the contents of that single logical block, with modifications based on the LBDATA bit and the PBDATA bit, to the specified range of logical block addresses on the ATA device."

If you are going to start using data-out buffer then most of the command overviews need to be changed to a data-in and data-out buffer type explanations.

Dell comment number 364
Page=85 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 63 - WRITE SAME (16) command CDB fields
Row: NUMBER OF BLOCKS
change

"A number of blocks of zero indicates that the data-out buffer shall be repeatedly written from the specified logical block address through the last user addressable logical sector on the media. If the number of blocks is not zero, the SATL shall repeatedly write the data-out buffer for the number of logical sectors specified to the device. The SATL shall send as many ATA commands as required to satisfy the number of logical blocks specified by the WRITE SAME (16) command."

to

"A NUMBER OF BLOCKS field set to 0h specifics that the SATL shall repeatedly write the data block transferred from the application client to the value specified in the LOGICAL BLOCK ADDRESS field through the last user addressable logical sector on the medium of the ATA device. If the value in the NUMBER OF BLOCKS field is non-zero, the SATL shall repeatedly write the data block transferred from the application client for the number of logical sectors specified to the ATA device. The SATL shall send as many ATA write commands as required to satisfy the number of blocks specified by the WRITE SAME (16) command."

Dell comment number 365
Page=85 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 63 - WRITE SAME (16) command CDB fields
Row: OPERATION CODE

"If the ATA device supports SCT LBA Segment Access (see SCT), the SATL should issue SCT LBA Segment Access to repeatedly write the data in the buffer to the device. If the device does not implement SCT then the SATL shall issue ATA write commands as defined in 9.17.1."

to

"If the ATA device supports SCT LBA Segment Access (see SCT), the SATL should issue SCT LBA Segment Access to repeatedly write the data block transferred from the application client to the ATA device. If the ATA device does not implement SCT then the SATL shall issue ATA write commands as defined in 9.17.1."

Dell comment number 366
Page=86 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.1 General information
1st Paragraph

"SCSI mode parameters provide a mechanism to be used to set operating parameters for SCSI devices. MODE SENSE command is used to obtain operating parameters while MODE SELECT command is used to set operating parameters. In the context SCSI to SATA command translation most operating parameters defined by the contents of MODE PAGES are not supported due to lack of equivalent operations or features in ATA devices. The translator emulates a SCSI device server for all MODE SENSE and MODE SELECT commands and emulates the MODE PAGES listed in 10.1.3."

to

"SCSI mode parameters provide a mechanism used to set operating parameters for SCSI devices and logical units. MODE SENSE command is used to obtain operating parameters while MODE SELECT command is used to set operating parameters. In the context SCSI to ATA command translation most operating parameters defined by the contents of mode pages are not supported due to lack of equivalent operations or features in ATA devices. The SATL emulates a SCSI device server for all MODE SENSE and MODE SELECT commands and emulates the mode pages listed in 10.1.3."

Dell comment number 367
Page=86 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.1 General information
2nd Paragraph
change

"In SCSI, four types of mode page values are defined: current values, saved values, default values, and changeable values. The save parameters operation shall not be supported. Default values are manufacturing time initial values and are not changeable. All pages are shared between all logical units in the target. Mode Page Policy VPD is not implemented, therefore sharing of Mode pages across logical units is implied."

to

"In SCSI, four types of mode page values are defined: current values, saved values, default values, and changeable values. The save parameters operation may be supported. Default values are manufacturing time initial values and are not changeable. All pages are shared between all logical units in the target device. If the Mode Page Policy VPD page is not implemented, sharing of mode pages across logical units is implied."

1. I see no reason that saveable pages can not be implemented by the SATL, and can think of reason whythey might be useful. Additionally, the SP bit in the MODE SELECT command on each mode page is Unspecified, which to me conflicts with the statement that saving shall not be supported.
2. Saying "Mode Page Policy VPD is not implemented" goes against theMODE

SENSE section that says should be implemented.

Dell comment number 368
Page=86 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.2 Changeable parameters
1st Paragraph
change
"Except as specified in the descriptions of specific fields in supported mode pages, the SATL shall not implement changeable parameters mode pages. If the SATL receives a MODE SENSE command with 01b in the PC field, the SATL shall terminate the command with CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST, and the additional sense code set to INVALID FIELD IN CDB."

to

"Except as specified in the descriptions of specific fields in supported mode pages, the SATL should not implement changeable parameter mode pages."

Based on current text:

1. Don't understand the "shall" not implement changeable parameters, except as specified. A SATL implementing changeable fields on a mode pages that are not defined in the document should be changeable since they are unspecified by default. This paragraph does not allow this.
2. If returning the changeable values generates an error, how would an application client know that WCE, DEXCPT, and DRA are changeable?

Dell comment number 369
Page=86 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.2 Changeable parameters
change

"An attempt to change a non-changeable mode parameter using the MODE SELECT command shall result in an error condition, and the command shall be terminated with CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST, and the additional sense code shall be set to INVALID FIELD IN CDB."

to

"An attempt to change a non-changeable mode parameter using the MODE SELECT command shall result in the command being terminated with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and additional sense code set to INVALID FIELD IN CDB."

Dell comment number 370
Page=86 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.3 Commonly used SCSI mode pages overview
1st Sentence
"Mode parameters for which this standard defines translations are listed in table 64."

to

"Mode pages for which this standard defines translations are listed in table 64."

Dell comment number 371
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
"a"
to
"the"

Dell comment number 372
Page=87 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 373
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: PAGE CODE
change
"Set to 01h. This field value is specific to the Read-Write Error Recovery mode page."

to

"Shall be set to 0Ah."

Dell comment number 374
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: PAGE LENGTH
change
"See SBC-2."
to
"Shall be set to 0Ah."

See no reason why the length should just not be stated, instead of referring to another spec. In any case it should refer to SPC-3 and not SBC-2 if recommended change not accepted.

Dell comment number 375
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: PAGE CODE
change

"a SATL implementations shall not support ACA, therefore this field shall be 0b."
to
"a SATL implementations shall not support ACA."

Dell comment number 376
Page=87 Subtype=Text Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: GLTSD

Although the ATA device does not save the actual log parameters, Not sure that Set to 1b would be correct. Seems to me that the 2 defined log pages are both persistent across POR, etc, so it seems they do do an implicitly save, when looking at it from a point of view of the SATL plus ATA drive being the SCSI target device.

Dell comment number 377
Page=87 Subtype=Text Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: QUEUE ALGORITHM

This needs some work, in that if the basic task management model is implemented, then the QAR bit shall be set to 1b, regardless if the ATA device supports queuing.

Additional on a different front, if the SATL queues commands internally, but the ATA device does not support queueing, then why can't the SATL be capable of reordering.

Dell comment number 378
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: QERR
change

"If the SATL resubmits queued commands that did not fail to the drive on behalf of any I_T Nexus, this field shall be set to 00b. Otherwise, the SATL shall set this field to 01b and comply with the unit attention requirements for a task completed with CHECK CONDITION status (see SPC-3)"

to

"If the SATL supports the full task management model and resubmits ATA queued commands that were aborted because of an error on another queued command ,this field shall be set to 00b. Otherwise, the SATL shall set this field to 01b and comply with the unit attention requirements for a task completed with CHECK CONDITION status (see SPC-3)"

Dell comment number 379
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.4.2 Extended self-test completion time
1st Paragraph
change

"A SATL implementation shall set this field to 0000h unless the attached

ATA device supports SMART self-tests and the SATL supports a non-000b value for the SELF-TEST CODE field for a SEND DIAGNOSTIC command. The SATL determines if the attached ATA device supports SMART self-test by examining the..."

to

"The SATL shall set this field to 0000h unless the ATA device supports SMART self-tests and the SATL supports a value other than000b for the SELF-TEST CODE field for a SEND DIAGNOSTIC command. The SATL determines if the ATA device supports SMART self-test by examining the value of ..."

Dell comment number 380
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: PS

Based on the current text, this shall be zero for MODE SENSE. I think saveable pages should be an options and therefore think Unspecified is correct.

Dell comment number 381
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields

1. Through out table change 1b and 0b to one and zero.
2. Missing SPF bit (0b) Row

Dell comment number 382
Page=87 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Footnote c
change
"b If the SATL supports the optional behavior for this field, the SATL may support this field as changeable."

to

"b If the SATL supports the optional behavior for this field, the SATL shall support this field as changeable."

Both fields that define optional behaviors, imply a shall.

Dell comment number 383
Page=87 Subtype=Text Author=Kevin_Marks
Comment=
Table 65 - Control mode page fields
Row: D_SENSE

add additional footnote to the effect
"D_SENSE set one shall be supported if the SATL supports the ATA PASSTHROUGH (12) and (16) commands"

Dell comment number 384
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.4.2 Extended self-test completion time
1st Paragraph, Continuation of 2nd Sentence

Change

"... IDENTIFY DEVICE data word 84, bit 1. If word 84, bit 1 is set to one, the ATA device supports the SMART self-test. Under these conditions, the SATL shall set the EXTENDED SELF-TEST COMPLETION TIME field as follows:
1) The SATL shall obtain the device SMART data structure by sending a SMART READ DATA command to the attached device. The SATL may cache this information for future use when a subsequent MODE SENSE command requests the control mode page. If the SATL caches such data, it is not mandatory to send a SMART READ DATA more than one time.
2) If byte 373 of the SMART data structure is not FFh, the SATL shall set the extended self-test completion time to 60 times the contents of byte 373.
3) If byte 373 of the SMART data structure is FFh, the SATL shall set the extended self-test completion time to the lesser of FFFFh or the result of the following formula:

EXTENDED SELF-TEST COMPLETION TIME field = ((w x 256) + z) x 60;

where z is the contents of byte 375 and w is the contents of byte 376."

to

"... ATA IDENTIFY DEVICE data for word 84, bit 1. If word 84, bit 1 is set to one, the ATA device supports the SMART self-test and shall obtain the ATA device SMART data structure by sending an ATA SMART READ DATA command to the ATA device. Then the SATL shall set the EXTENDED SELF-TEST COMPLETION TIME field as follows:
1) If byte 373 of the returned SMART data structure is not set to FFh, the SATL shall set the EXTENDED SELF-TEST COMPLETION TIME field to a value that is 60 times the contents of byte 373; or
3) If byte 373 of the returned SMART data structure is set to FFh, the SATL shall set the EXTENDED SELF-TEST COMPLETIONTIME field to a value that is the lesser of FFFFh or the result of the following formula:

EXTENDED SELF-TEST COMPLETION TIME field = ((w x 256) + z) x 60;

where w is the contents of byte 376 and z is the contents of byte 375."

Dell comment number 385
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 66 - Read-write error recovery mode page fields
Row: PAGE LENGTH
Change
"See SBC-2."
to

"Shall be set to 0Ah."

Dell comment number 386
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 66 - Read-write error recovery mode page fields
Row: PAGE CODE
Change
"Set to 01h. This field value is specific to the Read-Write Error Recovery mode page."
to
"Shall be set to 01h"

Dell comment number 387
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 66 - Read-write error recovery mode page fields

change title to
"Table 66 - Read-Write Error Recovery mode page fields"

Dell comment number 388
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.5 Read-Write Error Recovery mode page
1st Sentence
change

"The Read-Write Error Recovery mode page specifies the error recovery parameters the SATL shall use during any command that performs a read or write operation to the ATA device's medium (see SBC-2)."

to

"The Read-Write Error Recovery mode page specifies the error recovery parameters the SATL shall use during a command that performs a read or write operation to the medium of the ATA device (see SBC-2)."

Dell comment number 389
Page=88 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 66 - Read-write error recovery mode page fields

Row: PS

Based on the current text, this shall be zero for MODE SENSE. I think saveable pages should be an options and therefore think Unspecified is correct.

Dell comment number 390
Page=88 Subtype=StrikeOut Author=Kevin_Marks
Comment=Remove footnote a from table 66, already stated in 10.1.2

Dell comment number 391
Page=88 Subtype=Text Author=Kevin_Marks

Comment=
Table 66 - Read-write error recovery mode page fields

Missing SPF bit (Ob) Row

Dell comment number 392
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 1of 2)

Row: PS

Based on the current text, this shall be zero for MODE SENSE. I think saveable pages should be an options and therefore think Unspecified is correct.

Dell comment number 393
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 1 of 2)
Row: PAGECODE
Change
"See SBC-2."
to
"Shall be set to O8h."

Dell comment number 394
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 1 of 2)
Row: PAGE LENGTH
Change
"See SBC-2."
to
"Shall be set to 12h."

Dell comment number 395
Page=89 Subtype=Text Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 1 of 2) and Table 67 - Caching mode page fields (part 2 of 2)

1. In table change all the Ob and 1b to zero and one.
2. In table change all the "Set to .." to "Shall be set to ..." and remove second sentence about A value of x is not supported in this standard", as "Shall be set to " implies this.
3. Remove Footnote a, as this is standard response to MODE SELECT trying to change a non-changeable mode page parameter and already stated in 10.1.2. If this footnote is not removed, then it needs to be added to every mode page fields table.
4. Missing SPF bit (Ob) Row

Dell comment number 396
Page=89 Subtype=StrikeOut Author=Kevin_Marks
Comment=Remove footnote a from table 67, already stated in 10.1.2

Dell comment number 397
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 1 of 2)
Row: WCE
Change

"When processing a MODE SENSE command, the SATL shall determine if the ATA device's write cache is enabled or disabled from the ATA IDENTIFY DEVICE data word 85, bit 5. If the ATA device's write cache is enabled the SATL shall return 1b for the WCE bit. If the ATA device's write cache is disabled the SATL shall return 0b for the WCE bit.

When processing a MODE SELECT command,
  a) if the WCE bit is set to zero, then the SATL shall disable the ATA device's write cache by issuing an ATA SET FEATURES- Disable write cache command (i.e., send a Command code of EFh with the Features register set to 82h); or
  b) if the WCE bit is set to one, then the SATL shall enable the ATA device's write cache by issuing an ATA SET FEATURES - Enable write cache command (i.e., send a Command code of EFh with the Features register set to 02h)."

to

"When processing a MODE SENSE command, the SATL shall determine if the write cache of the ATA device is enabled from the ATA IDENTIFY DEVICE data word 85, bit 5. If the write cache of the ATA device is enabled the SATL shall return a value of one for the WCE bit. If the write cache of the ATA device is disabled the SATL shall return a value of zero for the WCE bit.

When processing a MODE SELECT command:
  a) if the WCE bit is set to zero, the SATL shall disable the write cache of the ATA device by issuing an ATA SET FEATURES - Disable write cache command (i.e., Features register set to 82h); or
  b) if the WCE bit is set to one, the SATL shall enable the write cache of the ATA device by issuing an ATA SET FEATURES - Enable write cache command (i.e., Features register set to 02h)."

Dell comment number 398
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.6 Caching mode page (08h)
1st two Sentences
change

"The caching mode page (08h) defines parameters that affect the behavior of the ATA device's cache.
Table 67 shows the translation of fields in the caching mode page."

to

"The Caching mode page defines parameters that affect the behavior of the cache in the ATA device.

Table 67 shows the translation of fields in the Caching mode page."

Removed (08h), because none of the other mode pages have the number.

Dell comment number 399
Page=89 Subtype=Highlight Author=Kevin_Marks
Comment=
10.1.6 Caching mode page (08h)
change title to
"10.1.6 Caching mode page"

to match other Mode page subclause titles

Dell comment number 400
Page=90 Subtype=StrikeOut Author=Kevin_Marks
Comment=Remove footnote a from table 67, already stated in 10.1.2

Dell comment number 401
Page=90 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 67 - Caching mode page fields (part 2 of 2)
Row: DRA
Change

"When processing a MODE SENSE command, the SATL shall determine if the ATA device look-ahead is enabled or disabled from the ATA IDENTIFY DEVICE data word 85, bit 6. If the look-ahead is enabled the SATL shall return 0b for the DRA bit. If the look-ahead is disabled the SATL shall return 1b for the DRA bit.

When processing a MODE SELECT command,
  a) if the DRA bit is set to zero, the SATL shall enable the ATA device read look-ahead feature by issuing an ATA SET FEATURES - Enable read look-ahead feature command (i.e., send a Command code of EFh with Features register set to AAh); or
  b) if the DRA bit is set to one, the SATL shall disable the ATA device read look-ahead feature by issuing an ATA SET FEATURES - Disable read look-ahead feature command (i.e., send a Command code of EFh with Features register set to 55h)."

to

"When processing a MODE SENSE command, the SATL shall determine if the ATA device look-ahead is enabled from the ATA IDENTIFY DEVICE data word 85, bit 6. If the look-ahead is enabled the SATL shall return a value of zero for the DRA bit. If the look-ahead is disabled the SATL shall return a value of one for the DRA bit.

When processing a MODE SELECT command,
  a) if the DRA bit is set to zero, the SATL shall enable the ATA device read look-ahead feature by issuing an ATA SET FEATURES - Enable read look-ahead feature command (i.e., Features register set to AAh); or
  b) if the DRA bit is set to one, the SATL shall disable the ATA device read look-ahead feature by issuing an ATA SET FEATURES - Disable read look-ahead feature command (i.e., Features register set to 55h)."

Dell comment number 402
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row: SPF

"Unspecified (see 3.4.3)"

to
"Shall be set to zero"

Dell comment number 403
Page=91 Subtype=StrikeOut Author=Kevin_Marks
Comment=Remove footnote a from table 68, already stated in 10.1.2

Dell comment number 404
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row: PAGE LENGTH

"Unspecified (see 3.4.3)"
to
"Shall be set to 0Ah"

Dell comment number 405
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row: SP

Based on the current text, this shall be zero for MODE SENSE. I think saveable pages should be an options and therefore think Unspecified is correct.

Dell comment number 406
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row :PAGE CODE
change

"Set to 1Ch. This field value is specific to the Informational Exceptions Control mode page. The SATL shall determine if the ATA SMART feature set is supported from the ATA IDENTIFY DEVICE data word 82, bit 0. If the ATA SMART feature set is not supported the SATL shall return CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
to
"Shall be setto 1Ch. The SATL shall determine if the ATA SMART feature set is supported from the ATA IDENTIFY DEVICE data word 82, bit 0. If the ATA SMART feature set is not supported the SATL shall return CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB for a MODE SENSE command or INVALID FIELD

IN PARAMETER LIST for a MODE SELECT command."

Dell comment number 407
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row :DEXCPT
change

"While processing a MODE SENSE command the SATL shall determine if the ATA SMART feature set is enabled or disabled from the ATA device ATA IDENTIFY DEVICE data word 85, bit 0. If the ATA SMART feature set is disabled the SATL shall return one for the DEXCPT bit. If the ATA SMART feature set is enabled the SATL shall return zero for the DEXCPT bit.

While processing a MODE SELECT command, if the DEXCPT bit is :
  a) set to zero, then the SATL shall enable informational exceptions reporting by issuing an ATA SMART ENABLE OPERATIONS command (i.e., B0h with Feature register value of D8h) to the ATA device; or
  b) set to one, then the SATL shall disable informational exceptions reporting by issuing an ATA SMART DISABLE OPERATIONS command (i.e., B0h with Feature register value of D9h) to the ATA device."

to

"While processing a MODE SENSE command the SATL shall determine if the ATA SMART feature set is enabled from the ATA device ATA IDENTIFY DEVICE data word 85, bit 0. If the ATA SMART feature set is disabled the SATL shall return a value of one for the DEXCPT bit. If the ATA SMART feature set is enabled the SATL shall return a value of zero for the DEXCPT bit.

While processing a MODE SELECT command, if the DEXCPT bit is :
  a) set to zero, the SATL shall enable informational exceptions reporting by issuing an ATA SMART ENABLE OPERATIONS command (i.e.,Feature register value set to D8h) to the ATA device; or
  b) set to one, the SATL shall disable informational exceptions reporting by issuing an ATA SMART DISABLE OPERATIONS command (i.e., Feature register value set to D9h) to the ATA device."

Dell comment number 408
Page=91 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 68 - Informational Exceptions Control mode page fields
Row :MRIE column: changeable.

Currently set to "No". Since this is a should be set to 6h, the changeable field needs a footnote, says if other modes besides 6h, are implemented, then it's changeable.

Dell comment number 409
Page=92 Subtype=Highlight Author=Kevin_Marks
Comment=
10.2.1 Log pages overview
1st Sentence
change

"Log parameters for which this standard defines translations are listed in table 69."

to

"Log pages for which this standard defines translations are listed in table 69."

Dell comment number 410
Page=92 Subtype=Text Author=Kevin_Marks
Comment=
10.2.2 Retrieving SMART data from targets

Not sure what this is trying to say. Issue a LOG SENSE to what page, to get the unaltered SMART data?

Dell comment number 411
Page=92 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 70 - Informational Exceptions log page header fields
Row: PAGE CODE

"Unspecified (see 3.4.3)"
to
"Shall be set to 2Fh"

Dell comment number 412
Page=93 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 71 - Informational Exceptions general parameter data
Row: PARAMETER CODE
change
"Unspecified (see 3.4.3)"
to
"A log parameter with a PARAMETER CODE field set to 0000h shall be returned. A parameter code values other than 0000h may be returned and are vendor-specific."

Dell comment number 413
Page=93 Subtype=Text Author=Kevin_Marks
Comment=
Table 71 - Informational Exceptions general parameter data
Row: Control bits

change them to: "Shall be set to ...

DU - zero
DS - zero
TSD - zero
ETC - zero
TMC - 00b
LBIN - one
LP - one

Dell comment number 414
Page=94 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 73 - Self-Test Results log page fields
Row: PAGE CODE
change
"Set to 10h. This field value is specific to the Self-Test Results log page."
to
"Shall be set to 10h."

Dell comment number 415
Page=94 Subtype=Text Author=Kevin_Marks
Comment=
Table 74 - Self-Test Results log parameters (part 1 of 2)

Row: Control bits

change them to: "Shall be set to ...

DU - zero
DS - zero
TSD - zero
ETC - zero
TMC - 00b
LBIN - one
LP - one

Dell comment number 416
Page=94 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 73 - Self-Test Results log page fields
Row: PAGE LENGTH
Change
"See SPC-3"
to
"Unspecified (see 3.4.3)"

Dell comment number 417
Page=94 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 74 - Self-Test Results log parameters (part 1 of 2)
Row: PARAMETER LENGTH
change
"Unspecified (see 3.4.3)"
to
"Shall be set to 10h."

Dell comment number 418
Page=94 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 74 - Self-Test Results log parameters (part 1 of 2)
Row: SELF TEST CODE

Why is this Unspecified? It appears to me that the first byte of the

self-test descriptor entry is the ATA self test that failed. This maps back to the SCSI SELF-TEST CODE using the text in the SEND DIAGNOSTIC command translation, i.e. a one to one mapping...

Dell comment number 419
Page=94 Subtype=Text Author=Kevin_Marks
Comment=
Table 74 - Self-Test Results log parameters (part 1 of 2)

The translation of this log page looks incomplete in terms of mapping the self-test index/descriptor index to the PARAMETER CODE field , and the byte n + 1. This then makes the text in the SELF-TEST RESULTS, TIMESTAMP, and ADDRESS OF FIRST FAILURE translations confusing as there is no indication of which descriptor these values are coming form.

If the PARAMETER CODE is used to indicate the descriptor then with limited word changes, these fields would make sense.

Dell comment number 420
Page=95 Subtype=Highlight Author=Kevin_Marks
Comment=
10.2.4.2 A method of determining ATA command selection for field translations
1st Paragraph 1,2,3,4 list

"1) Issue an IDENTIFY DEVICE command to the ATA device;
2) From the returned data the SATL shall determine if the ATA device supports the 48-bit Address feature set from bit 10 of word 83;
3) If the 48-bit Address feature set is supported the SATL shall issue a READ LOG EXT command with the Log address set to 07h (i.e., Extended SMART self-test log) to the ATA device; and
4) If the 48-bitAddress feature set is not supported the SATL shall issue a SMART READ LOG
command with the Log address set to 06h (i.e., SMART self-test log) to the ATA device."
to
"1) Issue an ATA IDENTIFY DEVICE command to the ATA device;
2) From the returneddata the SATL shall determine if the ATA device supports the 48-bit Address feature set from bit 10 of word 83;
3) If the 48-bit Address feature set is supported the SATL shall issue an ATA READ LOG EXT command with the Log address set to 7 (i.e., Extended SMART self-test log) to the ATA device; and
4) If the 48-bit Address feature set is not supported the SATL shall issue a SMART READ LOG
command with the Log address set to 6 (i.e., SMART self-test log) to the ATA device."

Dell comment number 421
Page=96 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 76 - Supported Log pages log page fields
Row: PAGE CODE
change
"Unspecified (see 3.4.3)"
to

"Shall be set to 00h."

Dell comment number 422
Page=97 Subtype=Text Author=Kevin_Marks
Comment=
Why are the VPD page translation formats different than all the other translations, i.e. shown in Bit/Byte Format, instead of the Field/Description or Reference format?

Change to match format except for the ATA Information VPD.

Dell comment number 423
Page=98 Subtype=Highlight Author=Kevin_Marks
Comment=
4th Paragraph after Table 79 - Unit Serial Number VPD page for SAT

change
"The PRODUCT SERIAL NUMBER field contains a representation of the SERIAL NUMBER field in the ATA IDENTIFY DEVICE data (i.e., words 10-19) last retrieved from the ATA device. Each pair of bytes in the SERIAL NUMBER field shall be swapped to create a valid ASCII string format in the PRODUCT SERIAL NUMBER field as described in table 80."
to
"The PRODUCT SERIAL NUMBER field contains a representation of the Serial number field in the ATA IDENTIFY DEVICE data (i.e., words 10-19) last retrieved from the ATA device. Each pair of bytes in the Serial number field shall be swapped to create a valid ASCII string format in the PRODUCT SERIAL NUMBER field as described in table 80."

Dell comment number 424
Page=98 Subtype=Highlight Author=Kevin_Marks
Comment=
"The PAGE LENGTH field contains the length of the remaining bytes of the VPD page."

This should change to Unspecified in the other format.

Dell comment number 425
Page=99 Subtype=Highlight Author=Kevin_Marks
Comment=
10.3.4.2.1 Logical unit name overview
1st two paragraphs
change

"If the ATA device returns word 87 bit 8 set to one in its IDENTIFY DEVICE data indicating that it supports the WORLD WIDE NAME field (i.e., words 108-111), the SATL shall include an identification descriptor containing a logical unit name as defined in 10.3.4.2.2.

If the ATA device returns word 87 bit 8 set to zero in its IDENTIFY DEVICE data indicating that it does not support the WORLD WIDE NAME field (i.e., words 108-111), the SATL shall include an identification descriptor containing a logical unit name as defined in 10.3.4.2.3."

to

"If the ATA device returns the ATA IDENTIFY DEVICE data word 87 bit 8 is set to one indicating that the ATA device supports the World widename field (i.e., ATA IDENTIFY DEVICE data words 108-111), the SATL shall include an identification descriptor containing a logical unit name as defined in 10.3.4.2.2.

If the ATA device returns the ATA IDENTIFY DEVICE data word 87 bit 8 is set to zero indicating that the ATA device does not supports the support the World wide name field (i.e., ATA IDENTIFY DEVICE data words 108-111), the SATL shall include an identification descriptor containing a logical unit name as defined in 10.3.4.2.3."

Dell comment number 426
Page=99 Subtype=Highlight Author=Kevin_Marks
Comment=
4th Paragraph after Table 82 - Logical unit name derived from the world wide name
change
"The ASSOCIATION field shall be set to 0h (i.e., logical unit)."
to
The ASSOCIATION field shall be set to 00b (i.e., logical unit)."

Dell comment number 427
Page=99 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 82 - Logical unit name derived from the world wide name
if keeping the format change byte 1
"ASSOCIATION (0h)"
to
"ASSOCIATION (00b)"

Dell comment number 428
Page=99 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 82 - Logical unit name derived from the world wide name
Byte 0
change
"PROTOCOL IDENTIFIER"
to
"PROTOCOL IDENTIFIER (0h)"

to match other fields in table if keeping

Dell comment number 429
Page=100 Subtype=Highlight Author=Kevin_Marks
Comment=
6th Paragraph after Table 82 - Logical unit name derived from the world wide name
change

"The NAA field, IEEE COMPANY_ID field, and VENDOR SPECIFIC IDENTIFIER field shall be based on the IDENTIFY DEVICE data WORLD WIDE NAME field as described in table 83."

to

"The NAA , IEEE COMPANY_ID , and VENDOR SPECIFIC IDENTIFIER fields shall be based on the ATA IDENTIFY DEVICE data World wide name field as described in table 83."

Dell comment number 430
Page=100 Subtype=Text Author=Kevin_Marks
Comment=
Table 83 - Fields in the logical unit name

Not sure why footnote a is needed, any ATA device that implements the WWN will have it as 5h or its not compliant.

Dell comment number 431
Page=100 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 84 - Logical unit name derived from the model number and serial number

Byte 0
change
"PROTOCOL IDENTIFIER"
to
"PROTOCOL IDENTIFIER (0h)"

Dell comment number 432
Page=100 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 84 - Logical unit name derived from the model number and serial number

if keeping the format change byte 1
"ASSOCIATION (0h)"
to
"ASSOCIATION (00b)"

Dell comment number 433
Page=100 Subtype=Highlight Author=Kevin_Marks
Comment=
4th Paragraph after Table 84 - Logical unit name derived from the model number and serial number

change
"The ASSOCIATION field shall be set to 0h (i.e., logical unit)."
to
The ASSOCIATION field shall be set to 00b (i.e., logical unit)."

Dell comment number 434
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
6th Paragraph after Table 84 - Logical unit name derived from the model number and serial number

change

"The VENDOR SPECIFIC IDENTIFIER field shall be set to a representation of the IDENTIFY DEVICE data MODEL NUMBER field concatenated with a representation of the IDENTIFY DEVICE data SERIAL NUMBER field as described in table 85."
to
"The VENDOR SPECIFIC IDENTIFIER field shall be set to a representation of the ATA IDENTIFY DEVICE data Model number field concatenated with a representation of the ATA IDENTIFY DEVICE data Serial number field as described in table 85."

Dell comment number 435
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 85 - VENDOR SPECIFIC IDENTIFIER field for logical unit name
Column: Source Field Name
change
"MODEL NUMBER field"
to
"Model number field"

Dell comment number 436
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 85 - VENDOR SPECIFIC IDENTIFIER field for logical unit name
Column: Source Field Name
change
"SERIAL NUMBER field"
to
"Serial number field"

Dell comment number 437
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
Note 9 after Table 85 - VENDOR SPECIFIC IDENTIFIER field for logical unit name
change
"NOTE 9 The logical unit name using the T10 vendor identification format is not guaranteed to be worldwide unique, since ATA/ATAPI-7 only requires the combination of the MODEL NUMBER field and SERIAL NUMBER field to be unique for a given manufacturer but defines no manufacturer identification field."
to
"NOTE 9 - The logical unit name using the T10 vendor ID based format is not guaranteed to be worldwide unique, since ATA/ATAPI-7 only requires the combination of the Model number field and Serial number field to be unique for a given manufacturer but defines no manufacturer identification field."

Dell comment number 438
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 5 - Identification descriptors included by a SATL in an ATA host
change
"ATA device provides IDENTIFY DEVICE data"
to
"ATA device returns ATA IDENTIFY DEVICE data"

Dell comment number 439
Page=101 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 5 - Identification descriptors included by a SATL in an ATA host
change
"IDENTIFY DEVICE command"
to
"ATA IDENTIFY DEVICE command"

Dell comment number 440
Page=102 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 6 - Identification descriptors included by a SATL in a SAS
initiator device

change
"SATA device returns IDENTIFY DEVICE data"
to
"SATA device returns ATA IDENTIFY DEVICE data"

Dell comment number 441
Page=102 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 86 - Target port identifier for SAS
change
"ASSOCIATION (1h)"
to
"ASSOCIATION (01b)"

Dell comment number 442
Page=102 Subtype=Highlight Author=Kevin_Marks
Comment=
3rd Paragraph after Table 86 - Target port identifier for SAS
change
"The ASSOCIATION field is set to 1h (i.e., target port)."
to
"The ASSOCIATION field is set to 01b (i.e., target port)."

Dell comment number 443
Page=102 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 6 - Identification descriptors included by a SATL in a SAS
initiator device

change
"IDENTIFY DEVICE command"
to
"ATA IDENTIFY DEVICE command"

Dell comment number 444
Page=103 Subtype=Highlight Author=Kevin_Marks
Comment=
10.3.5 ATA Information VPD page
1st Paragraph c) in a,b,c list
change

"c) IDENTIFY DEVICE or IDENTIFY PACKET DEVICE data from the ATA or ATAPI device."
to
"c) ATA IDENTIFY DEVICE or ATA IDENTIFY PACKET DEVICE data from the ATA or ATAPI device."

Dell comment number 445
Page=103 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 7 - Identification descriptors included by a SATL in a SCSI to ATA protocol bridge
change
"IDENTIFY DEVICE command"
to
"ATA IDENTIFY DEVICE command"

Dell comment number 446
Page=103 Subtype=Highlight Author=Kevin_Marks
Comment=
In Figure 7 - Identification descriptors included by a SATL in a SCSI to ATA protocol bridge
change
"ATA device returns IDENTIFY DEVICE data"
to
"ATA device returns ATA IDENTIFY DEVICE data"

Dell comment number 447
Page=103 Subtype=Text Author=Kevin_Marks
Comment=
Why isn't the ATA Information VPD page in clause 12? Seems pretty SAT specific to me.

Dell comment number 448
Page=104 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 87 - ATA Information VPD page
byte 60-571
change
"IDENTIFY DEVICE or IDENTIFY PACKET DEVICE data"
to
"IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA" in small CAPs, if this is indeed a field as indicated in the description further down.

Dell comment number 449
Page=104 Subtype=Text Author=Kevin_Marks
Comment=
If the ATA device is a PATA device, does the SIGNATURE contents still have the first byte set to 34h as the FIS type? Additionally, the FIS type is not part of the task file?

Dell comment number 450
Page=104 Subtype=Highlight Author=Kevin_Marks
Comment=
Is the SIGNATURE field really a field, since it is composed of more fields defined below? Should this be "Signature data (see Table 88)" and modify

description text below?

Dell comment number 451
Page=104 Subtype=Highlight Author=Kevin_Marks
Comment=
7th Paragraph, 3rd Sentence after Table 87 - ATA Information VPD page
change
"Table 88 defines the SIGNATURE field."
to
"Table 88 defines the signature data."

Dell comment number 452
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 88 - SIGNATURE field
byte 1 - PM PORT

PM Port for PATA?

Dell comment number 453
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 88 - SIGNATURE field
byte 0 - FIS TYPE (34)
What about for PATA device?

Dell comment number 454
Page=105 Subtype=Text Author=Kevin_Marks
Comment=
Table 88 -
Editorially, can you have fields within a field.

Dell comment number 455
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 88 - SIGNATURE field

change table title to
"Table 88 - Signature data"

Dell comment number 456
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 88
change
"All fields within the SIGNATURE field are defined in ATA/ATAPI-7 V1 and ATA/ATAPI-7 V3."
to
"All fields within the signature data (table 88) are defined in ATA/ATAPI-7 V1 and ATA/ATAPI-7 V3."

The "PM PORT" is not defined in ATA/ATAPI-7, it is only defined in SATA-2.5. Additionally all the fields in Table 88 are from an editorial perspective not defined in ATA/ATAPI-7, for example STATUS is not, but

Status is. Does the standard need a text/footnote saying STATUS=Status, etc.?

Dell comment number 457
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 89 - Common signature values (informative)
Remove Table 89 - it provides no value, if for some reason the signature does not match this, then what?
or
Values in Field column should not be in small caps.

Dell comment number 458
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 89 - Common signature values (informative)
change
"The COMMAND CODE field contains the command code used to retrieve the data in the IDENTIFY DEVICE or IDENTIFY PACKET DEVICE DATA field (e.g., ECh for IDENTIFY DEVICE (i.e., the ATA device type) or 01h for IDENTIFY PACKET DEVICE (i.e., the ATAPI device type) or 00h for other device types)."
to
"The COMMAND CODE field contains the ATA command code used to retrieve the data in the IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field (e.g., ECh for IDENTIFY DEVICE (i.e., the ATA device type), 01h for IDENTIFY PACKET DEVICE (i.e., the ATAPI device type) or 00h for other device types)."

Dell comment number 459
Page=105 Subtype=Highlight Author=Kevin_Marks
Comment=
2nd Paragraph after Table 89 - Common signature values (informative)
a,b,c list

change
" a) if the device is an ATA device, the IDENTIFY DEVICE data (see ATA/ATAPI-7 V1). If the IDENTIFY DEVICE command fails, 512 bytes each set to 00h;
  b) if the device is an ATAPI device, the IDENTIFY PACKET DEVICE data (see ATA/ATAPI-7 V1). If the IDENTIFY PACKET DEVICE command fails, 512 bytes each set to 00h; or
  c) if the device is any other device type, 512 bytes each set to 00h."

to

" a) if the device is an ATA device, the ATA IDENTIFY DEVICE data. If the ATA IDENTIFY DEVICE command completes with an error, the SATL shall set each of the 512 bytes to 00h;
  b) if the device is an ATAPI device, the ATA IDENTIFY PACKET DEVICE data. If the ATAIDENTIFY PACKET DEVICE command completes with an error, the SATL shall set each of the 512 bytes to 00h; or
  c) if the device is any other device type, the SATL shall set each of the 512 bytes to 00h."

Dell comment number 460

Page=106 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 90 - IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field
in byte 510
change
"(i.e., the SIGNATURE field)"
to
(i.e., the Signature field)"

Dell comment number 461
Page=106 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 90 - IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field
in byte 511
change
"(i.e., the CHECKSUM field)"
to
"(i.e., the Checksum field)"

Dell comment number 462
Page=106 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 90 - IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field
byte 0
change
"IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE word 0 bits 7:0 (i.e., byte 0)"
to
"ATA IDENTIFY DEVICE or ATA IDENTIFY PACKET DEVICE word 0 bits (7:0) (i.e.,
byte 0)"

change other rows similarly in table.

Dell comment number 463
Page=106 Subtype=Highlight Author=Kevin_Marks
Comment=
Note 10 after Table 90 - IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA
field

change
"NOTE 10 Although the SERIAL NUMBER field (words 10 to 19), FIRMWARE
REVISION field (words 23 to 26), and MODEL NUMBER field (words 27-46)
contain ASCII characters, every other byte is swapped within them (see
ATA/ATAPI-7 V1). For example, the SERIAL NUMBER field is interpreted as:
{word 10 bits 15:8, word 10 bits 7:0, word 11 bits 15:8, word 11 bits
7:0,...}, which corresponds to these bytes in the IDENTIFY DEVICE DATA
field: {byte 21, byte 20, byte 23, byte 22,...}."

to

"NOTE 10 - Although the Serial number field (words 10 to 19), Firmware
revision field (words 23 to 26), and Model number field (words 27-46)
contain ASCII characters, every otherbyte is swapped within them (see
ATA/ATAPI-7 V1). For example, the Serial number field is interpreted as:
{word 10 bits 15:8, word 10 bits 7:0, word 11 bits 15:8, word 11 bits
7:0,...}, which corresponds to these bytes in the IDENTIFY DEVICE OR

IDENTIFY PACKET DEVICE DATA field: {byte 21, byte 20, byte 23, byte 22,...}."

Dell comment number 464
Page=106 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 90 - IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field
change
"Since some of the fields within the IDENTIFY DEVICE command and IDENTIFY PACKET DEVICE command may change depending on the state of the attached ATA device, the SATL shall reissue the IDENTIFY DEVICE command or IDENTIFY PACKET DEVICE command to retrieve updated data whenever the ATA Information VPD page is requested."

to

"Since some of the fields within the ATA IDENTIFY DEVICE date or ATA IDENTIFY PACKET DEVICE data may change depending on the state of the ATA device, the SATL shall reissue the ATA IDENTIFY DEVICE command or ATA IDENTIFY PACKET DEVICE command to retrieve updated data whenever the ATA Information VPD page is requested."

Dell comment number 465
Page=107 Subtype=Highlight Author=Kevin_Marks
Comment=
11.1 Error Translation - ATA device error to SCSI error map
1st Paragraph, 2nd Sentence
change
"Unless otherwise specified in the subclause describing the translation of particular SCSI command, the SATL shall translate ATA non-packed device errors to SCSI errors as shown in table 91."

to

"Unless otherwise specified in the subclause describing the translation of particular SCSI command, log page, mode page or VPD page, the SATL shall translate ATA non-packeted device errors to SCSI errors as shown in table 91."

Dell comment number 466
Page=108 Subtype=Highlight Author=Kevin_Marks
Comment=
12.1 SAT-Specific SCSI Extensions Overview
1st Sentence
change

"...additional SCSI commands, mode pages, and log pages that may..."
to
"...additional SCSI commands and mode pages that may..."

This section does not define any log pages, unless this is a future statement?

Dell comment number 467

Page=108 Subtype=Highlight Author=Kevin_Marks
Comment=
12.2.1 ATA PASS-THROUGH commands overview
1st Sentence
change
"This standard provides for an application client to:"
to
"This subclause provides for an application client to:"

Dell comment number 468
Page=109 Subtype=Highlight Author=Kevin_Marks
Comment=
2nd Paragraph after Table 93 - PROTOCOL field
change

"A PROTOCOL value in the range from 3 to 12 requests the SATL to send an ATA command to the ATA device."
to
"If the PROTOCOL field specified is in the range from 3 to 12, the SATL shall send an ATA command to the ATA device."

Dell comment number 469
Page=109 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 470
Page=109 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 471
Page=109 Subtype=Highlight Author=Kevin_Marks
Comment=
5th Paragraph, 2nd Sentence after Table 93 - PROTOCOL field
change
"...COMRESET to SATA device."
to
"...COMRESET to the SATA device."

Dell comment number 472
Page=109 Subtype=StrikeOut Author=Kevin_Marks
Comment=attached

Dell comment number 473
Page=109 Subtype=StrikeOut Author=Kevin_Marks
Comment=
7th Paragraph, 1nd Sentence after Table 93 - PROTOCOL field
remove
"Some PROTOCOL values cause the SATL to reset the ATA device or to return information about the ATA device."

Does not seem to say anything useful.

Dell comment number 474
Page=109 Subtype=Text Author=Kevin_Marks
Comment=

8th Paragraph, after Table 93 - PROTOCOL field

1) Why Volume 2 for PATA and Vol 3 for SATA? Since these are the the register values associated with the COMMAND and PROTOCOL field, so I would argue that Vol 1 would be correct for both, with an additional note that for FPDMA see SATA 2.5.

2) Only if the command is 48 bit (EXT), which ATA PASS-THROUGH(12) does not support, does the (7:0) have meaning. So how can one say same names as in ATA/ATAPI-7?

Dell comment number 475
Page=109 Subtype=Text Author=Kevin_Marks
Comment=
4th Paragraph after Table 93

What about if the command value is for a 48 bit command with the protocol set correctly? Subclause says the SATL does not look at command code, only puts it in the Command register. Does this follow the error handling in clause 11?

Dell comment number 476
Page=110 Subtype=Highlight Author=Kevin_Marks
Comment=
9th Paragraph, after 3rd sentence - Table 93 - PROTOCOL field
change
"If the ATA command completes with an error, then a copy of the PATA registers, or a copy of the SATA Register - Device to Host FIS shall be returned in the ATA Status Return Descriptor (see 12.2.5)."
to
"If the ATA command completes with an error, the SATL shall provide a copy of the PATA registers, or a copy of the SATA Register - Device to Host FIS available for reading using the ATA Status Return Descriptor (see 12.2.5) format."

Or something similar as previously written, implies requirement for autosense and descriptor based sense.

Dell comment number 477
Page=110 Subtype=Highlight Author=Kevin_Marks
Comment=
Need to finish comment.

12th & 13th Paragraphs, - Table 93 - PROTOCOL field

These two paragraphs seem to conflict each other when CK_COND = 1. Not sure what the intended behavior is.

Is it NO SENSE or RECOVERED ERROR? Is it NO ADDITIONAL SENSE DATA INFORMATION OR ATA PASS-THROUGH INFORMATION AVAILIABLE (which is also stated in the in table 98 and 1st Paragraph after Table 98)

So I issue a pass thru command with ck_cond=1. The command completes with no error on the ATA side, the SATL thengenerates a check condition and if autosense autosense is supported return which sense/ASC + the ATA

descriptor(assuming D_SENSE in control mode page is 1) is it No Sense for this, and if autosense is not supported, the response to the REQUEST SENSE isRECOVERED ERROR + PASS-THRU INFO AVAILAIBLE + ATA descriptor, depending on DESC bit in the request sense?

What is the response with ck_cond=1 and the ATA command completes with an error?

If ck_cond=0 and ATA completes with an error, then check condition and use clause 11 for sense/asc?

Need to reword statements like "command completes successfully'" to "ATA command completes with no error"

Dell comment number 478
Page=110 Subtype=Highlight Author=Kevin_Marks
Comment=
14th Paragraphs, after Table 93 - PROTOCOL field
change
"The DEVICE field specifies a value for the SATL to load into the ATA DEVICE register or the DEVICE field of the Register - Host to Device FIS."
to
"The DEVICE field specifies a value for the SATL to load into the ATA Device register or the Device field of the Register - Host to Device FIS."

Dell comment number 479
Page=110 Subtype=StrikeOut Author=Kevin_Marks
Comment=
2nd Paragraph after Table 94 - ATA PASS-THROUGH (12) command and ATA PASS-THROUGH (16) command DEVICE field
remove
"The SATL shall set the ATA host registers or construct the Register - Host to Device FIS using the values from the CDB in the FEATURES (7:0) field, the SECTOR_COUNT (7:0) field, the LBA_LOW (7:0) field, the LBA_MID (7:0) field, the LBA_HIGH (7:0) field, the DEVICE field, and the COMMAND field."

This is already stated a couple of paragraphs above and has the (7:0) parts,see comment above.

Dell comment number 480
Page=110 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 94 - ATA PASS-THROUGH (12) command and ATA PASS-THROUGH (16) command DEVICE field

change

"The SATL shall ignore the DEV bit in the DEVICE field of the CDB. If the ATA host has two devices attached, the SATL may represent them as two distinct logical units or as two distinct SCSI target devices. The SATL shall set the DEV bit in the ATA DEVICE register to the value corresponding to the LUN or SCSI target port for each ATA device."

to

"The SATL shall ignore the DEVbit in the DEVICE field of the CDB. If the ATA host has two devices attached, the SATL may represent them as two distinct logical units or as two distinct SCSI target devices. The SATL shall set the DEV bit in the ATA Device register to the value corresponding to the logical unit or SCSI target device for each ATA device."

Not sure if this paragraph belongs her, as it is talking about the SATL model.

Dell comment number 481
Page=110 Subtype=Highlight Author=Kevin_Marks
Comment=
9th Paragraph, after 2nd sentence - Table 93 - PROTOCOL field
change

"...COMMAND field in..."
to
"...Command field in..."

Dell comment number 482
Page=111 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph 1st Sentence after Note 11
change
"If the Transfer Direction (T_DIR) and the..."
to
"If the Transfer Direction (T_DIR) bit and the..."

Dell comment number 483
Page=111 Subtype=Highlight Author=Kevin_Marks
Comment=
2nd Paragraph after Note 11
change

"If T_DIR is set to zero the SATL shall transfer from the application client to the ATA device. If T_DIR is set to one the SATL shall transfer from the ATA device to the application client. The SATL shall ignore T_DIR if T_LENGTH is set to zero."

to

"If T_DIR bit is set to zero the SATL shall transfer from the application client to the ATA device. If T_DIR bit is set to one the SATL shall transfer from the ATA device to the application client. The SATL shall ignore T_DIR bit if T_LENGTH field is set to 00b."

Dell comment number 484
Page=111 Subtype=StrikeOut Author=Kevin_Marks
Comment=
Remove
"The transfer length is an unsigned integer in the range of 00h to FFh."

Already in table 95, based on field size, if it was restricted then OK.

Dell comment number 485

Page=111 Subtype=StrikeOut Author=Kevin_Marks
Comment=
1st Paragraph after Table 95 - T_LENGTH field
remove
"The FEATURES (7:0) field, the SECTOR_COUNT (7:0) field, the LBA_LOW (7:0) field, the LBA_MID (7:0) field, the LBA_HIGH (7:0) field, the DEVICE field, and the COMMAND field shall be copied to the corresponding fields or registers of the same name in the ATA host within the SATL (see ATA/ATAPI-7)."

This is already stated similarly above.

Dell comment number 486
Page=111 Subtype=Text Author=Kevin_Marks
Comment=
Table 95 - T_LENGTH field

In Row 11b - What and where is the STPSIU field?

Dell comment number 487
Page=112 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Sentence after Table 96 - ATA PASS-THROUGH (16) command

"If the EXTEND bit is set to one and the value in the PROTOCOL field requests the SATL to send an ATA command to the device, then the SATL shall send a 48 bit ATA command to the ATA device."

Is this sentence necessary, since the command code field defines if it is 48 bit or not? It's not like the SATL gets to decide which command to use on pass thru.

Dell comment number 488
Page=113 Subtype=StrikeOut Author=Kevin_Marks
Comment=
2 Sentence before Table 97.

This is already stated in Table 97, based on field size.
remove
"If EXTEND bit is set to zero, the transfer length shall be an unsigned integer in the range from 00h to FFh. If EXTEND bit is set to one, the transfer length shall be an unsigned integer in the range from 0000h to FFFFh."

Dell comment number 489
Page=113 Subtype=Text Author=Kevin_Marks
Comment=
Table 97 - EXTEND bit and T_LENGTH field

In Both Rows where T_LENGTH = 11b - What and where is the STPSIU field?

Dell comment number 490
Page=113 Subtype=Highlight Author=Kevin_Marks
Comment=

12.2.4

More conflicting text and table 98 vs whats above table 94?

Dell comment number 491
Page=114 Subtype=Highlight Author=Kevin_Marks
Comment=
12.3.1 SAT-specific mode pages overview
1st Paragraph
"This subclause describes mode pages that the SATL may implement that are unique to the SCSI - ATA translation environment. These mode pages are for use by the SATL and are shown in table 100 and ..."
to
"This subclause describes mode pages that the SATL may implement that are unique to this SCSI/ATA Translation standard These mode pages are for use by the SATL and are shown in table 100. ..."

Dell comment number 492
Page=114 Subtype=Text Author=Kevin_Marks
Comment=12.2.5 - This implies support the descriptor format period.

Dell comment number 493
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
12.3.1 SAT-specific mode pages overview
1st Paragraph - continued from previous page
change
"... described in this subclause. Support for these mode pages is optional. A SATL should support the appropriate mode page for the attached ATA environment (e.g., PATA)."
to
"... A SATL should support the appropriate mode page for the ATA environment (e.g., PATA)."

or you could delete this sentence also, by changing the may to should in the first sentence of the paragraph.

Dell comment number 494
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 100 - SCSI - ATA Translation specific mode pages

change table title to
"Table 100 - SCSI/ATA Translation specific mode pages"

Additionally change 3rd column to "Mode page name"

Lastly I question having the "Reserved for SAT" in the table or at least just make it Reserved.

Dell comment number 495
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 101 - PATA Control mode page
Byte 2 & 3

change
"PAGE LENGTH (4h)"
to
"PAGE LENGTH (0004h)"

Dell comment number 496
Page=115 Subtype=Text Author=Kevin_Marks
Comment=
In 12.3.2 PATA Control Mode Page (Page 0Ah, Sub Page F1h)

Section 12.3.1 says mode pages in this section are a may, and then should if PATA attached, and now this section says Shall if attached to PATA?

Dell comment number 497
Page=115 Subtype=Text Author=Kevin_Marks
Comment=
6th Paragraph after Table 101 - PATA Control mode page.

This mode page shall support changeable parameters, does this imply that returning changeable parameters is required (PC=01b) as seems stated after table 102? If so this contradicts the text in the MODE SENSE command, but I think that changeable and saving should be unspecified for the other mode pages and shall for this mode page after the may/should/shall supported is determined.

Dell comment number 498
Page=115 Subtype=Text Author=Kevin_Marks
Comment=
6th Paragraph after Table 101 - PATA Control mode page.

May save contradicts the Mode Sense material, which has a shall not, assuming my comment (changing saving to unspecified) is rejected.

Dell comment number 499
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 101 - PATA Control mode page
byte 4
change

"MWDMA a field"
to
"MWDMA a bits", with MWDMA not in small CAPS.

Dell comment number 500
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
able 101 - PATA Control mode page
byte 4
change

"PIO b field"
to
"PIO b bits", with PIO not in small CAPS.

Dell comment number 501
Page=115 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 101 - PATA Control mode page
byte 4
change

"UDMA c field"
to
"UDMA c bits", with UDMA not in small CAPS.

Dell comment number 502
Page=116 Subtype=Highlight Author=Kevin_Marks
Comment=
2nd Paragraph, 1st Sentence after Table 102 - PIO modes
change
"...and the PIO field indicates a change..."
to
"...and the PIO bits specify a change..." with PIO not in small CAPS

Dell comment number 503
Page=116 Subtype=Highlight Author=Kevin_Marks
Comment=
3nd Paragraph, 1st Sentence after Table 102 - PIO modes
change
"...as the MWDMA field."
to
"... as the MWDMA bits." with MWDMA not in small CAPS.

Dell comment number 504
Page=116 Subtype=Highlight Author=Kevin_Marks
Comment=
3nd Paragraph, 2st Sentence after Table 102 - PIO modes
change
"...the MWDMA field is used..."
to
"... the MWDMA bits are used ..." with MWDMA not in small CAPS.

Dell comment number 505
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Sentence after Table 103 - MWDMA modes reported by MODE SENSE
change
"...and the MWDMA field indicates a change..."
to
"...and the MWDMA bits specify a change..." with MWDMA not in small CAPS.

Dell comment number 506
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=
1,2 list in 1st Sentence after Table 103 - MWDMA modes reported by MODE
SENSE
change

"1) issue a SET FEATURES, sub-command 03h (Set Transfer Mode) to

the ATA device, to set the MWDMA mode on the device to the requested state;
  2) check the status of the SET FEATURES command once completed, and if the command completes in error, the SATL shall not change any host timing modes and shall complete the MODE SELECT command with a CHECK CONDITION status with the sense key set to ABORTED COMMAND and the additional sense code set to ATA DEVICE FAILED SET FEATURES, and the SATL shall take no further action regarding this MWDMA mode request; or
    1) if the SET FEATURES command completes without error the SATL shall configure the ATA host to communicatewith the device at the requested MWDMA mode; and
    2) complete the MODE SELECT command with good status."
to
  "1) issue an ATA SET FEATURES - Set Transfer Mode (i.e., Features register set to 03h) to the ATA device, to set the MWDMA mode on the device to the requested state;
  2) if the ATA SET FEATURES command completes with an error, the SATL shall not change any host timing modes and shall complete the MODE SELECT command with a CHECK CONDITION status with the sense key set to ABORTED COMMAND and the additional sense code set to ATA DEVICE FAILED SET FEATURES, and the SATL shall take no further action regarding this MWDMA mode request; or
  3) if the ATA SET FEATURES command completes with no error, the SATL shall:
    1) configure the ATA host to communicate with the device at the requested MWDMA mode; and
    2) complete the MODE SELECT command with GOOD status."

Dell comment number 507
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=
2nd Paragraph after Table 103 - MWDMA modes reported by MODE SENSE
change
"The MWDMA field values to configure ATA hosts and ATA devices using MODE SELECT have the same meaning as the MWDMA field values returned by MODE SENSE when current values are requested as shown in table 103."

to

"The MWDMA bits values used to configure ATA hosts and ATA devices using MODE SELECT command have the same meaning as the MWDMA bits values returned by MODE SENSE command when current values are requested as shown in table 103." with MWDMA not in small CAPS

Dell comment number 508
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=
In Table 103 - MWDMA modes reported by MODE SENSE

Change column 1 title to:

"WMDMA a bits" with MWDMA not in small CAPS.

Dell comment number 509
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=

In 3nd Paragraph 1st Sentence after Table 103 - MWDMA modes reported by MODE SENSE
change

"...to as the UDMA field, and are used..."
to
"...to as the UDMA bits, and are used..." with UDMA not in small CAPS.

Dell comment number 510
Page=117 Subtype=Highlight Author=Kevin_Marks
Comment=
Note 13
change
"NOTE 13 - The ATA device returns the UDMA transfer mode specified in IDENTIFY DEVICE data, word 88, bits 6:0 (see ATA/ATAPI-7)."
to
"NOTE 13 - The ATA device returns the UDMA transfer mode specified in ATA IDENTIFY DEVICE data, word 88, bits 6:0 (see ATA/ATAPI-7)."

Dell comment number 511
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
4th Paragraph after Table 103 - MWDMA modes reported by MODE SENSE
change

"...the UDMA field shall be set..."
to
"...the UDMA bits shall be set..." with UDMA not in small CAPS.

Dell comment number 512
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 104 - UDMA Field Requirements for changeable MODE SENSE

change table 104 title to
"Table 104 - UDMA Bits Requirements for changeable MODE SENSE parameters"

Dell comment number 513
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 104 - UDMA Field Requirements for changeable MODE SENSE
change

"If the SATL receives a MODE SENSE command requesting the current values of the PATA Control mode page, the SATL shall set the UDMA field as defined in table 105. Only one UDMA bit shall bet set to one at any time for such a request. If UDMA is not the current DMA transfer mode, all the bits in the UDMA field shall be set to zero. If a UDMA transfer mode is being used, all the bits in the MWDMA field shall be setto zero."
to

"If the SATL receives a MODE SENSE command requesting the current values of the PATA Control mode page, the SATL shall set the UDMA bits as defined in table 105. Only one of the UDMA bits shall be set to one at any time for

such a request. If UDMA is not the current DMA transfer mode, all the UDMA bits shall be set to zero. If a UDMA transfer mode is being used, all the MWDMA bits shall be set to zero." with UDMA and MWDMA not SMALL CAPS

Dell comment number 514
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
Table 105 - UDMA for current MODE SENSE settings
Row: UDMA 6 0
change
"ATA host and device are communicating using UDMA Mode 6"
to
"ATA host and device are not communicating using UDMA Mode 6"

Dell comment number 515
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
1st Paragraph after Table 105 - UDMA for current MODE SENSE settings
change
"...command and the UDMA field indicates a change..."
to
"...command and the UDMA bits specify a change..."

Dell comment number 516
Page=118 Subtype=Highlight Author=Kevin_Marks
Comment=
1,2 list in 1st Paragraph after Table 105 - UDMA for current MODE SENSE settings
change
"
  1) issue a SET FEATURES, sub-command 03h, to set the UDMA timing mode on the device to the requested state;
  2) check the status of the SET FEATURES command once completed, and if the command completes in error, the SATL shall not change any host timing modes and shall complete the MODE SELECT command with a CHECK CONDITION status with the sense key set to ABORTED COMMAND with the additional sense code set toATA DEVICE FAILED SET FEATURES, and the SATL shall take no further action regarding this timing mode request; or"

to

1,2 list in 1st Paragraph after Table 105 - UDMA for current MODE SENSE settings
change
"
  1) issue an ATA SET FEATURES - Set Transfer Mode (i.e., Feature register set to 03h), to set the UDMA timing mode on the device to the requested state;
  2) if the ATA SET FEATURES command completes with an error, the SATL shall not change any host timing modes and shall complete the MODE SELECT command with a CHECK CONDITION status with the sense key set to ABORTED COMMAND with the additional sense code set to ATA DEVICE FAILED SET FEATURES, and the SATL shall take no further action regarding this timing mode request; or
  3) ..." see next comment for 3) content.

Dell comment number 517
Page=119 Subtype=Highlight Author=Kevin_Marks
Comment=
Continuation of 1,2 list in 1st Paragraph after Table 105 - UDMA for current MODE SENSE settings
change
" 1) if the SET FEATURES command completes without error the SATL shall configure the ATA host
to communicate with the device at the requested UDMA timing speeds; and
  2) complete the MODE SELECT command with GOOD status."

to

" 3) if the ATA SET FEATURES command completes with no error the SATL shall:
  1) configure the ATA host to communicate with the device at the requested UDMA timing speeds; and
  2) complete the MODE SELECT command with GOOD status."

Dell comment number 518
Page=120 Subtype=Highlight Author=Kevin_Marks
Comment=
13.2.1.3 ATA Information VPD page
1st Paragraph
remove period between "itself.and"

Dell comment number 519
Page=120 Subtype=StrikeOut Author=Kevin_Marks
Comment=
13.2.1.3 ATA Information VPD page
remove
"The SATL shall use the IDENTIFY PACKET DEVICE command (A1h) rather than the IDENTIFY DEVICE command (ECh) to retrieve information for the ATA Information VPD page from the attached ATAPI device."

The ATA Information VPD page material already takes care of ATA and ATAPI devices.

****

Comments attached to Yes ballot from Kenneth Hirata of Emulex:

Emulex-001 Location: Page 22, First Paragraph, Second Numbered item.

Comment:
The use of SATA in this numbered item should be replaced with ATA.

Preferred resolution:

Emulex-002 Location: Page 29, Version Descriptor field definitions, Item g

Comment:
Item agA seems to expose into the SCSI layer some ATA specific information that probably isnAt very meaningful to SCSI. If the host were SATL aware, wouldnAt it be better to get this information directly from the ATA Information VPD Page. Why duplicate it here.

Preferred resolution:
Agnostic. DoesnAt make the translation harder or easier. Just seems misplaced so I wanted to ask the question.

Emulex-003 Location: Page 32, Table 14, Block Length description.

Comment:
ShouldnAt the Block Length be reported as per the sector size field in the IDENTIFY DEVICE data? (Defaulting to 512-bytes if the IDENTIFY DEVICE field isnAt valid.) Why is this hard coded to 512 bytes?

Preferred resolution:
Clarification. If there is a good reason for this then I donAt care.

Emulex-004 Location: Page 34, Table 19, Block Length Description.

Comment:
Same comment as Emulex-003.

Preferred resolution:

Emulex-005 Location: Page 37, 8.8.2, Numbered item 1, Second sentence

Comment:
Typo. omedialo should be omediao

Preferred resolution:

Emulex-006 Location: Page 37, 8.8.2, Numbered item 2, Second sentence

Comment:
Same comment as Emulex-005.

Preferred resolution:

Emulex-007 Location: Page 37, 8.8.2, Numbered item 2, Second sentence

Comment:
Typo. oVEIRFYo should be oVERIFYo

Preferred resolution:

Emulex-008 Location: Page 41, 8.10.3, Table 29, Row 4 & 5.

Comment:
If the attached ATA device doesnAt implement a basic diagnostic routine then why is the SATL trying to emulate this with VERIFY commands? Perhaps itAs a value-add, but it seems like work that is beyond the scope of a translation layer.

Preferred resolution:
We can make the existing approach work, but it seems like work that the SATL perhaps shouldnAt be doing. Why not just fail the command as per some of the
surrounding table entries.

Emulex-009 Location: Page 58, 9.15 and 9.16, Table 52 and 53, Verification Length description.

Comment:
ShouldnAt the language used to describe the setting of the verification length
field be similar to the language used for the length fields in the READ and WRITE command descriptions?

Preferred resolution:

Emulex-010 Location: Page 84, 10.3.5, SIGNATURE field description.

Comment:
The description for the SIGNATURE field indicates that the signature register
values must be stored by the SATL so that they can be returned in the ATA Information VPD Page. For an HBA that may be communicating with a large number of attached targets this represents a potentially significant amount of
storage space. Could the wording be changed to allow this data to be synthesized by the SATL given that the SATL must know the device type that is
currently attached? This would allow the necessary storage requirements to be
greatly reduced.

Preferred resolution:
We will be unable to support the storage of the signature FIS for each individual target. We either need a way to retrieve this information at command execution time, or must be able to create the data based on our knowledge of the attached device type.

Emulex-011 Location: Page 94, 12.2.4,

Comment:
Support for PROTOCOL 15 seems to imply that the register FIS from a previous command needs to be stored by the SATL. This represents a potentially large storage burden for an HBA based translation that may be communicating with large numbers of target devices simultaneously. If autosense is supported is
PROTOCOL 15 also required to be supported? Can pass-through be supported

without support for PROTOCOL 15?

Preferred resolution:
Clarification. If IAve misinterpreted the intent of PROTOCOL 15 then there is
no problem. If my interpretation of PROTOCOL 15 is correct then it may be difficult for us to support because of the limited memory resources available
in the HBA.

****

Comments attached to No ballot from Ralph O. Weber of
ENDL:

ENDL 1
PDF pg 12, pg xii
Remove revision history

ENDL 2
PDF pg 18, pg xviii, Foreword
Do not place Global Engineering Telephone number on same line as company name

ENDL 3
PDF pg 18, pg xviii, Foreword
Remove blank lines between the line of the Global Engineering Address.

ENDL 4
PDF pg 18, pg xviii, Foreword
Do not allow page break between sentence fragment that introduces the T10 members list and the members list proper.

ENDL 5
PDF pg 19, pg xix, Foreword
RE: 'Note: Add members list before posting for letter ballot' It is a little late for Letter Ballot, but this advice needs to be followed prior to Public Review.

ENDL 6
PDF pg 20, pg xx, Introduction
Clause 10 also describes VPD page mappings, in addition to the mode page and log page mappings mentioned

ENDL 7
PDF pg 20, pg xx, Introduction
The Clause 11 described in this list appears to be absent. Recommend removing the Clause 11 entry and renumbering the entries that follow it.

ENDL 8
PDF pg 20, pg xx, Introduction
There is no Appendix A in this working draft. Recommend removing Appendix A

from this list.

ENDL 9
PDF pg 22, pg 2, Clause 1
Remove the period below the words 'Figure 2 shows ...' and above the actual Figure 2.

ENDL 10
PDF pg 23, pg 3, Clause 1
Remove this blank page

ENDL 11
PDF pg 24, pg 4, Clause 2
Remove editor's note 1.

ENDL 12 Technical
PDF pg 24, pg 4, 2.4
Please provide the contact information described in the subclause introduction for the SATA-2.5 reference.

ENDL 13
PDF pg 25, pg 5, 3.1.3
'V1' might be confused with 'Version 1'. Recommend spelling out 'Volume'.

ENDL 14
PDF pg 37, pg 17, 5.1, Figure 4
There are two vertical lines, one in the Virtual SCSI target ... box and one under the right-hand double arrowhead line. Remove them.

ENDL 15
PDF pg 37, pg 17, 5.1, 1st a,b,c list under figure 4
List entry d) appears to be a regular paragraph, not a list entry.

ENDL 16
PDF pg 37, pg 17, 5.2
Mark the two-line paragraph that introduces this subclause 'keep with next' so that it joins the main body of the subclause on the next page. This will not affect overall pagination because there is almost half a page of white space on the next page.

ENDL 17
PDF pg 39, pg 19, 6.2.2
There should not be a page break between the first entry of an a,b,c list and the text that introduces the list.

ENDL 18
PDF pg 41, pg 21, 6.3.2, a,b,c list
This list is not properly structured. Entries a and b end with periods. There is no conjunction between entries b and c.

ENDL 19
PDF pg 41, pg 21, 6.3.3, 1,2,3 list
This list is not properly structured. Entries 1 and 2 end with periods. There is no conjunction between entries 2 and 3.

ENDL 20
PDF pg 41, pg 21, 6.3.3, a,b list
This list is not properly structured. Entry a ends with a period. There is no conjunction between entries a and b.

ENDL 21
PDF pg 41, pg 21, 6.3.4
Should the reference to 'standard INQUIRY data' be accompanied by a '(see SPC-3)'?

ENDL 22
PDF pg 42, pg 22, 6.3.5, 1,2,3 list
This list is not properly structured. Entries 1 and 2 end with periods. There is no conjunction between entries 2 and 3.

ENDL 23
PDF pg 42, pg 22, 6.3.5, 1,2 list
This list is not properly structured. Entry 1 ends with a period. There is no conjunction between entries 1 and 2.

ENDL 24
PDF pg 42, pg 22, 6.4.1, Table 5
Since there are no references in the second column, remove 'or reference' from the column heading.

ENDL 25
PDF pg 42, pg 22, 6.4.1, Table 5
The description for the LINK bit should be identical to the description for the NACA bit.

ENDL 26
PDF pg 51, pg 31, 8.3.2, table 12, row 4
The table footnote reference for a is capitalized. It should be lower case.

ENDL 27 Technical
PDF pg 53, pg 33, 8.5.3, table 17
Does 'No' in the supported column mean 'unspecified' or does it mean the SATL is required to reject commands that specific the listed page code values? Clarify.

ENDL 28
PDF pg 54, pg 34, 8.5.6, p 1, s 1
Please refer SPC-3 [s/b] Please refer to SPC-3

ENDL 29 Technical
PDF pg 55, pg 35, 8.5.6, 2nd p after table 20, s 1
Is 'Persistent saving of parameters' the same as saving parameters to non-volatile storage? If the answer is yes, does this paragraph correctly represent the current goals of SAT?

ENDL 30
PDF pg 56, pg 36, 8.7.2, table 23, row 2
See 8.7.4. [s/b] 8.7.4

ENDL 31

PDF pg 57, pg 37, 8.8.2, 1,2 list, entry 1, s 2
string, defined in ATA/ATAPI-7. [s/b] string (see ATA/ATAPI-7).

ENDL 32
PDF pg 57, pg 37, 8.8.2, 1,2 list
This list is not properly structured. Entry 1 ends with a period. There is no conjunction between entries 1 and 2.

ENDL 33
PDF pg 57, pg 37, 8.8.2, 1,2 list, entry 2, multiple places
READ VERIFY SECTOR(S) EX [s/b] READ VERIFY SECTOR(S) EXT

ENDL 34
PDF pg 57, pg 37, 8.8.2, 1,2 list, entry 2, s 3
VEIRFY [s/b] VERIFY

ENDL 35
PDF pg 69, pg 49, 9.3.2, a,b list
There is no conjunction between entries a and b in this list.

ENDL 36
PDF pg 74, pg 54, 9.11.2.1
The introductory text for the 1,2 list should be more clear about when the SATL shall do what the list says.

ENDL 37
PDF pg 77, pg 57, 9.13.1, table 50, row 6
Remove the red strikeout text.

ENDL 38
PDF pg 88, pg 68, 10.1.4.2, 1,2,3 list
This list is not properly structured. Entries 1 and 2 end with periods. There is no conjunction between entries 2 and 3.

ENDL 39
PDF pg 88, pg 68, 10.1.4.2, 1,2,3 list, entry 3
The formula needs to be indented farther than the second-line indent for the preceding paragraph. The line that begins 'where ...' needs to be indented farther than the formula. Otherwise it is not clear what belongs to what.

ENDL 40 Technical
PDF pg 92, pg 72, 10.2.2, p 1, s 1
RE: 'An application client should use the LOG SENSE command (see 8.2) to retrieve 512 byte unaltered SMART data from ATA devices.' What values are required in the PAGE CODE, PC, PPC, and PARAMETER POINTER fields of this LOG SENSE command?

ENDL 41 Technical
PDF pg 92, pg 72, 10.2.2, p 1, s 2
RE: 'The page header shall not be appended to SMART data.' SPC-3 states 'Each log page begins with a four-byte page header ...' Remove this statement that clearly conflicts with SPC-3, or rephrase it to clarify that the reference is to some ATA page header or another.

ENDL 42

PDF pg 98, pg 78, 10.3.4.1, 2nd to last p on pg, s 1
(see clause 10.3.4.2) [s/b] (see 10.3.4.2)

ENDL 43
PDF pg 98, pg 78, 10.3.4.1, last p on pg, s 1
(see clause 10.3.4.3) [s/b] (see 10.3.4.3)

ENDL 44
PDF pg 104, pg 84, 10.3.5, last p on pg
'V3' might be confused with 'Version 3'. Recommend spelling out 'Volume'.

ENDL 45
PDF pg 105, pg 85, 10.3.5, 1st p after table 88
'V1' and 'V3' might be confused with 'Version 1' and 'Version 3'. Recommend spelling out 'Volume'.

ENDL 46
PDF pg 105, pg 85, 10.3.5, a,b,c list after table 89, entries a and b
'V1' might be confused with 'Version 1'. Recommend spelling out 'Volume'. [two times in this list]

ENDL 47
PDF pg 106, pg 86, 10.3.5, Note 10
'V1' might be confused with 'Version 1'. Recommend spelling out 'Volume'.

ENDL 48 Technical
PDF pg 111, pg 91, 12.2.2, table 95, row 4
What is the STPSIU field? It is mentioned only three times in the working draft and none of them define it.

ENDL 49 Technical
PDF pg 113, pg 93, 12.2.3, table 97, rows 4 & 8
What is the STPSIU field? It is mentioned only three times in the working draft and none of them define it. [two times in this table]

ENDL 50
PDF pg 117, pg 97, 12.3.2, 1,2 list
This list is structured incorrectly and I cannot tell for sure what is wrong with it. The clear syntax error is the 'or' at the end of the first list entry 2.

ENDL 51
PDF pg 118, pg 98, 12.3.2, 1,2 list
This list is structured incorrectly and I cannot tell for sure what is wrong with it. The clear syntax error is the 'or' at the end of the first list entry 2.

****

Comments attached to Abs ballot from Elwood Parsons of
Foxconn Electronics:

Abstain due to lack of expertise.

****

Comments attached to No ballot from William Ham of
Hewlett Packard Co.:

Comments on sat-r08 with RE comments.fdf

HPQ comment number 1
Page=1 Subtype=Text Author=relliott
Comment=
General

Adjust the PDF page numbers to match the printed page numbers

HPQ comment number 2
Page=18 Subtype=Highlight Author=relliott
Comment=
Foreword

NCITS.***:200x. s/b INCITS xxx-200x

HPQ comment number 3
Page=21 Subtype=Highlight Author=RElliott
Comment=
1
(global)

"attached ATA device" is not a good phrase, since in SAS attached means directly attached. The SAT in a SAS HBA, however, can be many expanders away from the ATA device.

Change "attached" globally to something like "mapped" or "translated"

HPQ comment number 4
Page=23 Subtype=Text Author=relliott
Comment=
Printed Page 3
Delete blank page before chapter 2

HPQ comment number 5
Page=24 Subtype=Text Author=relliott
Comment=
2.4
Add contact information for SATA-IO

HPQ comment number 6
Page=24 Subtype=StrikeOut Author=relliott
Comment=
2.3

Delete "ISO/IEC 14776-xxx, AT Attachment-8 Serial Transport (ATA8-AST) [T13/1697D]"

SATA 2.5 is the proper reference for anything related to SATA.

HPQ comment number 7
Page=25 Subtype=Highlight Author=relliott
Comment=
3.1.11

Delete leading .

HPQ comment number 8
Page=25 Subtype=Highlight Author=RElliott
Comment=
3.1.9

remove all ATA8-AST references

HPQ comment number 9
Page=25 Subtype=Highlight Author=RElliott
Comment=
3.1.7

"an ATA hosts" s/b singular (see SAS-1.1 and ATA8-AAM)

HPQ comment number 10
Page=25 Subtype=Highlight Author=relliott
Comment=
3.1.4

general s/b General

HPQ comment number 11
Page=25 Subtype=Highlight Author=relliott
Comment=
3.1.4

packet s/b Packet

HPQ comment number 12
Page=25 Subtype=Highlight Author=relliott
Comment=
3.1.12

"Packet Command feature set" s/b Packet feature set"

HPQ comment number 13
Page=25 Subtype=Highlight Author=relliott
Comment=
3.1.13

packet s/b Packet

HPQ comment number 14
Page=27 Subtype=Highlight Author=relliott
Comment=
3.1.45

"IDENTIFY DEVICE information" s/b "IDENTIFY DEVICE data"

HPQ comment number 15
Page=27 Subtype=Highlight Author=relliott
Comment=
3.1.39
After "logical unit number" add "(LUN)"

HPQ comment number 16
Page=29 Subtype=Highlight Author=relliott
Comment=
3.1.71
Change "in this standard" to "by SAS-1.1"

HPQ comment number 17
Page=29 Subtype=Highlight Author=relliott
Comment=
3.1.69

Add space to VERIFY(12)

HPQ comment number 18
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Serial ATA Tunneled Protocol" add "(see 3.1.71)"

HPQ comment number 19
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Tagged command queuing" add "(see 3.1.80)"

HPQ comment number 20
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Serial ATA" add (see 3.1.70)"

HPQ comment number 21
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Serial Attached SCSI" add "(see 3.1.72)"

HPQ comment number 22
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Most significant bit" add "(see 3.1.44)"

HPQ comment number 23
Page=30 Subtype=Highlight Author=relliott
Comment=

3.2
After "Least significant bit" add "(see 3.1.34)"

HPQ comment number 24
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2

After "Frame Information Structure" add "(see 3.1.30)"

HPQ comment number 25
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "auto-contingent allegiance" add "(see 3.1.20)"

HPQ comment number 26
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Command Descriptor Block" add "(see 3.1.24)"

HPQ comment number 27
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Logical unit number" add "(see 3.1.39)"

HPQ comment number 28
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Smart Command Transport" add "standard (see 2.3)"

HPQ comment number 29
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "SCSI Architecture Model-2" add "standard (see 2.2)"

HPQ comment number 30
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "SCSI Architecture Model-3" add "standard (see 2.2)"

HPQ comment number 31
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "SCSI Architecture Model-4" add "standard (see 2.3)"

HPQ comment number 32
Page=30 Subtype=Highlight Author=relliott
Comment=

3.2
After "Serial ATA 2.5" add "specification (see 2.4)"

HPQ comment number 33
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "Small Computer System Interface" add "family of standards"

HPQ comment number 34
Page=30 Subtype=Highlight Author=relliott
Comment=
3.2
After "SCSI Primary Commands-3" add "standard (see 2.2)"

HPQ comment number 35
Page=33 Subtype=Highlight Author=relliott
Comment=
3.5.4.1

indicates s/b defines

HPQ comment number 36
Page=33 Subtype=Highlight Author=relliott
Comment=
3.5.4.2.1

"in Table 2" s/b "in table 3"

HPQ comment number 37
Page=33 Subtype=Text Author=relliott
Comment=
3.5.4.1 and global

"Table nn" should be lowercase unless starting a sentence

HPQ comment number 38
Page=34 Subtype=StrikeOut Author=relliott
Comment=
3.5.5

Delete all references to ATA8-AST

HPQ comment number 39
Page=35 Subtype=Highlight Author=relliott
Comment=
4
"defined." s/b "defined:"

HPQ comment number 40
Page=37 Subtype=Text Author=relliott
Comment=
5.1
figure 4
remove extra lines in figure

HPQ comment number 41
Page=37 Subtype=StrikeOut Author=RElliott
Comment=
5.1

Delete d) - this should be a normal paragraph.

HPQ comment number 42
Page=39 Subtype=Highlight Author=relliott
Comment=
6.1

queued s/b Queued

HPQ comment number 43
Page=40 Subtype=Highlight Author=relliott
Comment=
6.2.2
After "mode page" add "(see 10.1.4)"

HPQ comment number 44
Page=41 Subtype=Text Author=RElliott
Comment=
6.3.2

End a)b) list entries with ; and "; and"

HPQ comment number 45
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.2
an s/b in

HPQ comment number 46
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.3

fix bare "initiators"

HPQ comment number 47
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.3

I_T_Nexus s/b I_T nexus

HPQ comment number 48
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.2

SAM3 s/b SAM-3

HPQ comment number 49
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.2

I_T_Nexus s/b I_T nexus

(several times)

HPQ comment number 50
Page=41 Subtype=Text Author=RElliott
Comment=
6.3.2

If TASK ABORTED status is enabled for an I_T nexus, that will be used instead of unit attention.

Unit attention wording should be traditional "establish a unit attention condition with the additional sense code set to"

HPQ comment number 51
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3
throughout these sections

"with FUNCTION COMPLETE" s/b "with a service response of FUNCTION COMPLETE (all caps)"

HPQ comment number 52
Page=41 Subtype=Highlight Author=RElliott
Comment=
6.3.2
note 3

place s/b time

HPQ comment number 53
Page=42 Subtype=Text Author=RElliott
Comment=
6.3.7

QUERY TASK only follows these rules if the SCSI transport protocol on the front side of the SATL supports QUERY TASK (since it is not required by SAM-3). This transport protocol may just be a software interface inside an HBA and its driver stack.

HPQ comment number 54
Page=42 Subtype=Highlight Author=relliott
Comment=
6.3.6

"including any behaviors related to
saveable mode parameters."

The mode page discussions say that SAT does not support saveable mode parameters.

HPQ comment number 55
Page=42 Subtype=Highlight Author=relliott
Comment=
6.3.6
note 4

HARD RESET s/b hard reset

HPQ comment number 56
Page=43 Subtype=Highlight Author=RElliott
Comment=
6.5

unit attention for whom?

HPQ comment number 57
Page=44 Subtype=StrikeOut Author=RElliott
Comment=
7.1

"Unless otherwise noted, the IMMED bit (immediate return) shall be ignored. For the FORMAT UNIT command,
this bit shall be supported."

Every command with an IMMED bit mentioned by this standard does describe rules for it. This default rule is unnecessary (and generally wrong).

HPQ comment number 58
Page=46 Subtype=Highlight Author=relliott
Comment=
8

Mapping s/b mapping

HPQ comment number 59
Page=46 Subtype=Text Author=RElliott
Comment=
8.1.1

"The logical unit ... should be set to 0" paragraph

SAT shouldn't care about which logical unit number the SATL is part of. Delete this paragraph.

HPQ comment number 60
Page=48 Subtype=Highlight Author=relliott
Comment=
8.1.2
table 8

"25 and 26" s/b "23 and 24"

HPQ comment number 61
Page=48 Subtype=Highlight Author=relliott
Comment=
8.1.2
table 8

"If the IDENTIFY DEVICE data received in words 25 and 26 from the ATA device are not ASCII spaces (20h)"

to
change to "If IDENTIFY DEVICE data words 26:25 are set to four ASCII spaces (i.e., 20202020h)"

and change preceding a) to follow (for words 24:23)

HPQ comment number 62
Page=49 Subtype=Highlight Author=RElliott
Comment=
8.2.1

fix bare "target"

HPQ comment number 63
Page=49 Subtype=Highlight Author=RElliott
Comment=
8.1.2
table 8

change "IDENTIFY DEVICE data MAJOR VERSION NUMBER field (i.e., word 80) and MINOR VERSION NUMBER field (i.e., word 81)"
to
"IDENTIFY DEVICE data word 80 (i.e., Major Version Number) and IDENTIFY DEVICE data word 81 (i.e., Minor Version Number)"

HPQ comment number 64
Page=50 Subtype=StrikeOut Author=relliott
Comment=
8.2.2
Table 10

Delete values

HPQ comment number 65
Page=50 Subtype=StrikeOut Author=relliott
Comment=
8.2.2
Table 10

Delete values

HPQ comment number 66
Page=51 Subtype=Highlight Author=relliott
Comment=
8.3.2
table 12

remove ^ (or change to superscript a)

HPQ comment number 67
Page=51 Subtype=Highlight Author=RElliott
Comment=
8.3.1

fix bare "target"

HPQ comment number 68
Page=51 Subtype=Highlight Author=RElliott
Comment=
8.3.1

Change 'Shared' to shared (no quotes or capitals)

HPQ comment number 69
Page=51 Subtype=Highlight Author=RElliott
Comment=
8.3.1

remove quotes from 'current'

HPQ comment number 70
Page=51 Subtype=Text Author=RElliott
Comment=
8.3.1

SAT shouldn't comment on mode pages across logical units. Restrict discussion to within one logical unit.

HPQ comment number 71
Page=52 Subtype=Highlight Author=relliott
Comment=
8.4.2

Table 13 shows s/b 15

HPQ comment number 72
Page=53 Subtype=StrikeOut Author=relliott
Comment=
8.5.3

Delete "(Page Control)"

HPQ comment number 73
Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.3

8.6.3 PC (Page Control)

Add "field" to the end of the title.

HPQ comment number 74

Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.3
Table 17
Change "values and their descriptions" to "field"

HPQ comment number 75
Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.3
Table 17

Change Value to Code

HPQ comment number 76
Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.2
table 16
change "A value Ob indicates" to "A DBD bit set to zero specifies"

HPQ comment number 77
Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.2
table 16

identifies s/b specifies

HPQ comment number 78
Page=53 Subtype=Highlight Author=relliott
Comment=
8.5.4

after (6) add .

HPQ comment number 79
Page=54 Subtype=Highlight Author=relliott
Comment=
8.5.4
table 18

Indicates s/b "This field indicates"

HPQ comment number 80
Page=54 Subtype=Highlight Author=relliott
Comment=
8.5.4
table 18

change "If the DPOFUA bit is set to Ob it indicates" to "A DPOFUA bit set to zero indicates"

HPQ comment number 81
Page=54 Subtype=Highlight Author=relliott

Comment=
8.5.4
table 18

change "If the DPOFUA bit is set to 1b it indicates" to "A DPOFUA bit set to one indicates"

HPQ comment number 82
Page=54 Subtype=Highlight Author=relliott
Comment=
8.5.4
table 18

change "If the WP bit is set to Ob it indicates" to "A WP bit set to zero indicates"

HPQ comment number 83
Page=54 Subtype=Highlight Author=relliott
Comment=
8.5.4
table 18

change "If the WP bit is set to 1b it indicates" to "A WP bit set to one indicates"

HPQ comment number 84
Page=55 Subtype=Highlight Author=relliott
Comment=
8.6.2

Table 18 shows s/b 21

HPQ comment number 85
Page=56 Subtype=Text Author=relliott
Comment=
8.7.1

need a reference to table 22

HPQ comment number 86
Page=57 Subtype=Highlight Author=RElliott
Comment=
8.9.1

"A SATL may implement sense data processing as defined SAM-2 and not support autosense" is incomplete. This is only true if the transport protocol does not support autosense.

HPQ comment number 87
Page=57 Subtype=Highlight Author=RElliott
Comment=
8.8.2

"IDENTIFY DEVICE (ECh) ATA opcode" s/b "IDENTIFY DEVICE command"

HPQ comment number 88
Page=57 Subtype=Highlight Author=RElliott
Comment=
8.8.2

set s/b "set to one"

HPQ comment number 89
Page=57 Subtype=Highlight Author=RElliott
Comment=
8.8.2

"not set" s/b "set to zero"

HPQ comment number 90
Page=57 Subtype=Highlight Author=relliott
Comment=
8.8.2

Change "words 176-205" to "words 205:176"

HPQ comment number 91
Page=57 Subtype=Highlight Author=relliott
Comment=
8.8.2

EX s/b EXT

HPQ comment number 92
Page=57 Subtype=Text Author=relliott
Comment=
8.8.1

need a reference to table 24

HPQ comment number 93
Page=58 Subtype=Highlight Author=relliott
Comment=
8.9.3

"In Progress" s/b lowercase

HPQ comment number 94
Page=58 Subtype=Highlight Author=relliott
Comment=
8.9.4

"Low Power State" s/b lowercase

HPQ comment number 95
Page=58 Subtype=Text Author=RElliott
Comment=
8.9.1
table 25

The first 2 entries are not ATA device conditions

HPQ comment number 96
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.1
table 26
Change "This field specifies the number bytes allocated for the returned sense data. This field shall be implemented as described in SPC-3." to "Unspecified (see 3.4.3)"

HPQ comment number 97
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.1
table 26

Change "A SATL may support returning fixed format sense data, descriptor format sense data, or both. This bit shall be implemented as described in SPC-3." to "Unspecified (see 3.4.3)"

HPQ comment number 98
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.3

MRIE s/b smallcaps

HPQ comment number 99
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.3

device s/b ATA device

HPQ comment number 100
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.4

LOW POWER CONDITION ON

Could STANDBY CONDITION ACTIVATED BY COMMAND be returned?

HPQ comment number 101
Page=58 Subtype=Highlight Author=RElliott
Comment=
8.9.1
table 26

If autosense is supported and no condition from table 25 exists" is incomplete.

If the SATL has established a unit attention condition, that is returned as parameter data for this command with GOOD status

HPQ comment number 102
Page=59 Subtype=Text Author=relliott
Comment=
8.10.1

need a reference to table 27

HPQ comment number 103
Page=62 Subtype=Highlight Author=relliott
Comment=
8.11.2

removable media s/b
Removeable Media

HPQ comment number 104
Page=63 Subtype=Text Author=relliott
Comment=
8.12.1

need a reference to table 31

HPQ comment number 105
Page=65 Subtype=Highlight Author=relliott
Comment=
9

Mapping s/b mapping

HPQ comment number 106
Page=65 Subtype=Highlight Author=relliott
Comment=
9.1

Is the point of this "may not" statement that units of bytes are different from units of words? In that case, "are not" would be correct.

If the point is that the SATL might expose 4096 byte SCSI logical blocks based on 512 byte ATA logical sectors, then I think more discussion is warranted.

HPQ comment number 107
Page=66 Subtype=Highlight Author=RElliott
Comment=
9.1
table 34

change "bit 8 of word 49 in the IDENTIFY DEVICE data" to "IDENTIFY DEVICE data word 49 bit 8"

HPQ comment number 108
Page=66 Subtype=Highlight Author=RElliott
Comment=

9.1
table 34
change "word 63 or word 88 of the IDENTIFY DEVICE data" to "IDENTIFY DEVICE data word 63 or word 88"

HPQ comment number 109
Page=67 Subtype=Text Author=relliott
Comment=
9.2.1

need a reference to table 35

HPQ comment number 110
Page=68 Subtype=Highlight Author=relliott
Comment=
9.2.3
table 37

"read and write commands" s/b "ATA read and ATA write commands"

HPQ comment number 111
Page=70 Subtype=Highlight Author=relliott
Comment=
9.5
table 39

indicates s/b specifies

HPQ comment number 112
Page=70 Subtype=Highlight Author=relliott
Comment=
9.4
table 38

change "specifies to transfer 256 data blocks" to "specifies a transfer of 256 logical blocks"

HPQ comment number 113
Page=70 Subtype=Text Author=relliott
Comment=
9.4

need a reference to table 38

HPQ comment number 114
Page=71 Subtype=Highlight Author=relliott
Comment=
9.6
table 40

indicates s/b specifies

HPQ comment number 115
Page=71 Subtype=Highlight Author=relliott
Comment=

9.7
table 41

indicates s/b specifies

HPQ comment number 116
Page=71 Subtype=Highlight Author=relliott
Comment=
9.7
table 41

READ (10) s/b READ (16)

HPQ comment number 117
Page=71 Subtype=Highlight Author=relliott
Comment=
9.6
table 40

READ (10) s/b READ (12)

HPQ comment number 118
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.1

Change "shall request" to "requests"

HPQ comment number 119
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1

Change "shall request" to "requests"

HPQ comment number 120
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.2
Table 43

For BLOCK LENGTH IN BYTES, change "Unspecified (see 3.4.3)" to "The SATL shall set this field based on IDENTIFY DEVICE words 117-118 (i.e., Logical Sector Size)" perhaps noting how the ATA field is in units of words while the SCSI field is in units of bytes.

HPQ comment number 121
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.2
Table 43

For RETURNED LOGICAL BLOCK ADDRESS, change "Unspecified (see 3.4.3)" to "The SATL shall set this field based on IDENTIFY DEVICE data words 61:60 (i.e., Total number of user addressable sectors) and words 103:100 (i.e.,

Maximum user LBA for 48-bit Address feature set)"

Include a description of what to do if the value is too big to fit in the field.

HPQ comment number 122
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.1
table 42

"not zero" s/b "not set to zero"

HPQ comment number 123
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.2

"READ CAPACITY data" s/b "READ CAPACITY (10) parameter data" in the header, paragraph, and table 33 title

HPQ comment number 124
Page=72 Subtype=Text Author=relliott
Comment=
9.9.1
Table 44

Add row for ALLOCATION LENGTH field, as "Unspecified (see 3.4.3)"

HPQ comment number 125
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1
Table 44

Change "OOOOOOOh" to "OOOOOOOO_OOOOOOOOh" or "zero". Match the style used in table 42 for READ CAPACITY (10) parameter data.

HPQ comment number 126
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1
Table 44

Change "zero" to "OOOOOOOh", if numbers are chosen for table 44 for READ CAPACITY (16) parameter data. If "zero" is chosen there, then leave this as is.

HPQ comment number 127
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1
Table 44
"not zero" s/b "not set to zero"

HPQ comment number 128
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.2

"Table 45 describes" s/b "Table 43 describes"

HPQ comment number 129
Page=72 Subtype=Text Author=relliott
Comment=
9.8.1

Add a reference to table 42

HPQ comment number 130
Page=72 Subtype=Text Author=relliott
Comment=
9.8.1

Add a reference to table 44

HPQ comment number 131
Page=72 Subtype=Highlight Author=relliott
Comment=
9.8.1
table 42

"IDENTIFY DEVICE information" s/b "IDENTIFY DEVICE data"

HPQ comment number 132
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1
table 44

"IDENTIFY DEVICE information" s/b "IDENTIFY DEVICE data"

HPQ comment number 133
Page=72 Subtype=Highlight Author=relliott
Comment=
9.9.1
table 44

OPERATION CODE is actually a combination of two fields for this command:
OPERATION CODE (9Eh) and SERVICE ACTION (10h). Since they are closely
related, put them in the same cell, or leave them in separate rows but
straddle the description so it is shared between them.

HPQ comment number 134
Page=72 Subtype=Highlight Author=RElliott
Comment=
9.8.1

use space or not

HPQ comment number 135
Page=73 Subtype=Highlight Author=relliott
Comment=
9.9.2
table 45

Apply same changes as done to the RETURNED LOGICAL BLOCK ADDRESS row in table 42

HPQ comment number 136
Page=73 Subtype=Highlight Author=relliott
Comment=
9.9.2
table 45

Apply same changes as done to the BLOCK LENGTH IN BYTES row in table 42

HPQ comment number 137
Page=73 Subtype=Highlight Author=relliott
Comment=
9.9.2

"READ CAPACITY data" s/b "READ CAPACITY (16) parameter data" in the header, paragraph, and table 45 title

HPQ comment number 138
Page=73 Subtype=Highlight Author=relliott
Comment=
9.10.2.

"write command" s/b "ATA write command"

HPQ comment number 139
Page=74 Subtype=Highlight Author=RElliott
Comment=
9.11.1
table 47

CONDITIONS s/b CONDITION

HPQ comment number 140
Page=74 Subtype=Highlight Author=RElliott
Comment=
9.11.1

"ignore" is not what SCSI expects from defined fields set to unsupported values. It should return CHECK CONDITION/ILLEGAL REQUEST/INVALID FIELD IN CDB.

HPQ comment number 141
Page=74 Subtype=Highlight Author=RElliott
Comment=
9.11.2.1

, s/b ;

HPQ comment number 142
Page=74 Subtype=Highlight Author=RElliott
Comment=
9.11.2.3

of s/b set to

HPQ comment number 143
Page=74 Subtype=Highlight Author=RElliott
Comment=
9.11.2.3

reword "for specified for the error being reported." using "set to..." phrasing

HPQ comment number 144
Page=74 Subtype=Text Author=RElliott
Comment=
9.11.2.1

This section requires concatenating the section title with the text for the rules to be in context. Make the text stand alone.

HPQ comment number 145
Page=74 Subtype=Text Author=relliott
Comment=
9.11.1

need a reference to table 47

HPQ comment number 146
Page=76 Subtype=StrikeOut Author=relliott
Comment=
9.12.1 SYNCHRONIZE CACHE (10) command overview

Delete this header - no need for an additional layer of hierarchy as there is no 9.12.2

HPQ comment number 147
Page=76 Subtype=Highlight Author=relliott
Comment=
9.12
table 49

"(i.e., synchronize all logical blocks starting with the one specified in the LOGICAL BLOCK ADDRESS field to the last logical block on the ATA device's medium)."

Although that's the correct meaning in SCSI, 2 rows above this entry stated that the logical block address of 0 is always used as the first. So, the meaning in SAT is that the entire medium is synchronized.

HPQ comment number 148
Page=76 Subtype=Text Author=relliott

Comment=
9.12.1

need a reference to table 49

HPQ comment number 149
Page=77 Subtype=StrikeOut Author=relliott
Comment=
9.13.1 SYNCHRONIZE CACHE (16) command overview

Delete this header - no need for an additional layer of hierarchy as there is no 9.13.2

HPQ comment number 150
Page=77 Subtype=Highlight Author=relliott
Comment=
9.13.1
table 50

Remove red and underline from "LOGICAL BLOCK ADDRESS"

HPQ comment number 151
Page=77 Subtype=Text Author=relliott
Comment=
9.13
table 50

Make all these descriptions match those in table 49

HPQ comment number 152
Page=77 Subtype=Text Author=relliott
Comment=
9.13.1

need a reference to table 50

HPQ comment number 153
Page=79 Subtype=Highlight Author=relliott
Comment=
9.18
table 54

change "specifies to transfer 256 data blocks" to "specifies a transfer of 256 logical blocks"

HPQ comment number 154
Page=79 Subtype=Highlight Author=relliott
Comment=
9.19
table 55

indicates s/b specifies

HPQ comment number 155

Page=79 Subtype=Text Author=relliott
Comment=
9.18

need a reference to table 54

HPQ comment number 156
Page=79 Subtype=Text Author=relliott
Comment=
9.19

need a reference to table 55

HPQ comment number 157
Page=80 Subtype=Highlight Author=relliott
Comment=
9.20
table 56

indicates s/b specifies

HPQ comment number 158
Page=80 Subtype=Text Author=relliott
Comment=
9.20

need a reference to table 56

HPQ comment number 159
Page=81 Subtype=Highlight Author=relliott
Comment=
9.21
table 57

indicates s/b specifies

HPQ comment number 160
Page=81 Subtype=Text Author=relliott
Comment=
9.21

need a reference to table 57

HPQ comment number 161
Page=82 Subtype=Highlight Author=relliott
Comment=
9.23
table 58

indicates s/b specifies

HPQ comment number 162
Page=82 Subtype=Highlight Author=relliott
Comment=
9.24

table 59

indicates s/b specifies

HPQ comment number 163
Page=82 Subtype=Text Author=relliott
Comment=
9.23

need a reference to table 58

HPQ comment number 164
Page=82 Subtype=Text Author=relliott
Comment=
9.24

need a reference to table 59

HPQ comment number 165
Page=83 Subtype=Highlight Author=relliott
Comment=
9.25
table 60

indicates s/b specifies

HPQ comment number 166
Page=83 Subtype=Text Author=relliott
Comment=
9.25

need a reference to table 60

HPQ comment number 167
Page=84 Subtype=Highlight Author=relliott
Comment=
9.26.1
table 61

indicates s/b specifies

HPQ comment number 168
Page=84 Subtype=Highlight Author=relliott
Comment=
9.26.2
table 62

"write commands" s/b "ATA write commands"

HPQ comment number 169
Page=85 Subtype=Highlight Author=relliott
Comment=
9.27
table 63

indicates s/b specifies

HPQ comment number 170
Page=86 Subtype=StrikeOut Author=RElliott
Comment=
10.1.1

delete "be used to"

HPQ comment number 171
Page=86 Subtype=Highlight Author=RElliott
Comment=
10.1.1

Add "The" before "MODE SENSE command"

HPQ comment number 172
Page=86 Subtype=Highlight Author=RElliott
Comment=
10.1.1

VPD s/b VPD page

HPQ comment number 173
Page=86 Subtype=Highlight Author=RElliott
Comment=
10.1.1

Mode s/b mode

HPQ comment number 174
Page=86 Subtype=Highlight Author=RElliott
Comment=
10.1.1

"All pages are shared between all logical units in the target" should not be mandated or even discussed by SAT. SAT should just define the behavior of one logical unit.

HPQ comment number 175
Page=86 Subtype=Highlight Author=RElliott
Comment=
10.1.1

Mode Page Policy VPD page

If SAT is going to comment on this page, it should require it, not prohibit it

HPQ comment number 176
Page=87 Subtype=Highlight Author=relliott
Comment=
10.1.4.1
table 65

add . after (see SPC-3)

HPQ comment number 177
Page=87 Subtype=Highlight Author=relliott
Comment=
10.1.4.1
"a control" s/b "the Control"

HPQ comment number 178
Page=88 Subtype=Highlight Author=relliott
Comment=
10.1.41

indent the equation more

HPQ comment number 179
Page=88 Subtype=Highlight Author=relliott
Comment=
10.1.4.2

control s/b Control

HPQ comment number 180
Page=89 Subtype=StrikeOut Author=relliott
Comment=
10.1.8

Delete (08h)

HPQ comment number 181
Page=89 Subtype=Highlight Author=RElliott
Comment=
10.1.6
caching s/ Caching

HPQ comment number 182
Page=89 Subtype=Highlight Author=RElliott
Comment=
10.1.6
caching s/b Caching

HPQ comment number 183
Page=89 Subtype=Highlight Author=RElliott
Comment=
10.1.6
table 67
changeable s/b Changeable

HPQ comment number 184
Page=92 Subtype=Highlight Author=relliott
Comment=
10.2

Pages s/b lowercase

HPQ comment number 185
Page=94 Subtype=Highlight Author=relliott
Comment=
10.2.3.2

Feature Set s/b feature set

HPQ comment number 186
Page=95 Subtype=Text Author=RElliott
Comment=
10.2.4.2
This might be interpreted as requiring the 4 steps be run on each log page access. Really, the IDENTIFY DATA is cached by th SATL.

Remove the 1)4) list and just say:
If the IDENTIFY DEVICE data indicates the 48-bit Address feature set is supported (i.e., word 83 bit 10 is set to 1), the SATL shall use the READ LOG EXT command... . If the IDENTIFY DEVICE data indicates the 48-bit Address feature is not supported (i.e., word 83 bit 10 is set to 0), then the SATL shall use the SMART READ LOG command... .

HPQ comment number 187
Page=97 Subtype=Text Author=RElliott
Comment=
10.3.1
table 77
Add "VPD page" to first 3 two rows

HPQ comment number 188
Page=97 Subtype=Highlight Author=RElliott
Comment=
10.3.2
table 78

the s/b this

HPQ comment number 189
Page=98 Subtype=Highlight Author=relliott
Comment=
10.3.3

Change 10-19 to 19:10

HPQ comment number 190
Page=99 Subtype=Highlight Author=relliott
Comment=
10.3.4.2.1

Change 108-111 to 111:108

HPQ comment number 191
Page=99 Subtype=Highlight Author=relliott
Comment=
10.3.4.2.1

Change 108-111 to 111:108

HPQ comment number 192
Page=100 Subtype=Highlight Author=relliott
Comment=
10.3.4.2.2
table 83

table 7 reference s/b 82

HPQ comment number 193
Page=106 Subtype=Highlight Author=relliott
Comment=
10.3.5

change "10 to 19" to "19:10"

HPQ comment number 194
Page=106 Subtype=Highlight Author=relliott
Comment=
10.3.5

change "23 to 26" to "26:23"

HPQ comment number 195
Page=106 Subtype=Highlight Author=relliott
Comment=
10.3.5
change 27-46 to 46:27

HPQ comment number 196
Page=107 Subtype=Highlight Author=relliott
Comment=
11

Handling and Sense Reporting s/b lower-case

HPQ comment number 197
Page=108 Subtype=Highlight Author=relliott
Comment=
12.1

Extensions Overview s/b lowercase

HPQ comment number 198
Page=108 Subtype=Highlight Author=relliott
Comment=
12.1

After "command" add "(see 12.2.2)"

HPQ comment number 199
Page=108 Subtype=Highlight Author=relliott
Comment=
12.1

After "command" add "(see 12.2.3)"

HPQ comment number 200
Page=108 Subtype=Highlight Author=relliott
Comment=
12.1

After "mode page "add "(see 12.3.2)"

HPQ comment number 201
Page=110 Subtype=Highlight Author=relliott
Comment=
12.2.2

indicates s/b specifies

HPQ comment number 202
Page=110 Subtype=Highlight Author=relliott
Comment=
12.2.2

one s/b zero

HPQ comment number 203
Page=110 Subtype=Highlight Author=relliott
Comment=
12.2.2

Why define the bit, in the brand new command, if the SATL is going to completely ignore it?

HPQ comment number 204
Page=110 Subtype=Highlight Author=relliott
Comment=
12.2.2

"If the ATA host has two devices attached, the
SATL may represent them as two distinct logical units or as two distinct SCSI target devices. The SATL shall
set the DEV bit in the ATA DEVICE register to the value corresponding to the LUN or SCSI target port for each
ATA device." doesn't belong buried in a bit description in a command.

HPQ comment number 205
Page=110 Subtype=Highlight Author=relliott
Comment=
12.2.2

"the DEVICE field," is listed but the previous paragraph hints that at least one bit (bit 4) is ignored

HPQ comment number 206
Page=110 Subtype=Highlight Author=relliott
Comment=

9.2.2

The units for DRQ data blocks are bytes or words, according to ATA8-AAM, not sectors.

HPQ comment number 207
Page=111 Subtype=Highlight Author=relliott
Comment=
12.2.2
table 95

there is no such thing as a "STPSIU field". See the original proposal for an explanation of what this was (STPSIU was an acronym)

HPQ comment number 208
Page=113 Subtype=Highlight Author=relliott
Comment=
12.2.4

Change "the ATA ERR bit and DF bit in the ATA STATUS register or in the STATUS-HI
field and the STATUS-LO field of the SATA Set Device Bits - Device to Host FIS." to use ATA8-AAM and ATA8-ACS terminology. Don't refer to FISes or registers.

Suggestion: "ERR bit or the DF bit in the Status field (see ATA8-ACS)".

HPQ comment number 209
Page=113 Subtype=Highlight Author=relliott
Comment=
12.2.4
table 98

Delete "ATA"
Add a straddled cell above ERR and DF called "Status field"

HPQ comment number 210
Page=113 Subtype=Highlight Author=relliott
Comment=
12.2.4

Global: Use either PASSTHROUGH or PASS-THROUGH consistently.

HPQ comment number 211
Page=115 Subtype=Highlight Author=relliott
Comment=
12.3.2

Mode Page s/b lowercase

HPQ comment number 212
Page=115 Subtype=StrikeOut Author=relliott
Comment=
12.3.2

Delete "(Page 0Ah, Sub Page F1h)"

HPQ comment number 213
Page=115 Subtype=Text Author=relliott
Comment=
12.3.2

Missing a PAGE LENGTH paragraph

HPQ comment number 214
Page=115 Subtype=Text Author=relliott
Comment=
12.3.2

need a reference to table 101

HPQ comment number 215
Page=116 Subtype=Highlight Author=relliott
Comment=
12.3.2

indicates s/b specifies

HPQ comment number 216
Page=116 Subtype=Text Author=relliott
Comment=
12.3.2
table 102

reorder the columns so PIO4 is on the left, to match table 101

HPQ comment number 217
Page=117 Subtype=Highlight Author=relliott
Comment=
12.3.2

indicates s/b specifies

HPQ comment number 218
Page=117 Subtype=Text Author=relliott
Comment=
12.3.2
table 103

reorder the columns so MWD2 is on the left, like in table 101

HPQ comment number 219
Page=118 Subtype=Highlight Author=relliott
Comment=
12.3.2

indicates s/b specifies

HPQ comment number 220
Page=118 Subtype=Text Author=relliott

Comment=
12.3.2
table 104

reorder the columns so the bits are on the left and the DMA mode supported is on the right, then so that bit UDMA6 is on the far left.

HPQ comment number 221
Page=118 Subtype=Highlight Author=relliott
Comment=
12.3.2
table 105

communicating s/b not communicating in UDMA6=0

HP comment number 222
Page=6 Subtype=Text Author=WBellamy
Comment=
Should this hex content be here? I don't believe identification codes are supposed to be here.

HP comment number 223
Page=6 Subtype=Text Author=WBellamy
Comment=
Should this hex content be here? I don't believe identification codes are supposed to be here.

HP comment number 224
Page=8 Subtype=Text Author=WBellamy
Comment=Why only certain pages have this page hex context and not others?

HP comment number 225
Page=8 Subtype=Text Author=WBellamy
Comment=Why only certain pages have this hex content and not others?

HP comment number 226
Page=56 Subtype=Text Author=WBellamy
Comment=
Remove the (02h) here, and add it to the text below identifying this code.

HP comment number 227
Page=56 Subtype=Text Author=WBellamy
Comment=
Remove the (03h) here, and add it to the text below identifying this code.

HP comment number 228
Page=64 Subtype=Text Author=WBellamy
Comment=
Remove the (02h) here, and add it to the text below identifying this code.

HP comment number 229
Page=64 Subtype=Text Author=WBellamy
Comment=
Remove the (05h) here, and add it to the text below identifying this code.

HP comment number 230
Page=73 Subtype=Text Author=WBellamy
Comment=
This is not correct and does not comply with proposal 05-136r2. The command may have more than one LBA to reassign in its parameter list. Thus, this statement as it stands is incorrect. It should probably have something like "if the ATA verify command for each LBA in the parameter list completes successfully, then...."

HP comment number 231
Page=73 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 232
Page=73 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 233
Page=73 Subtype=Text Author=WBellamy
Comment=
This is incorrect. (Similar type of mistake here as for 2) above). This is not following 05-136r2. There could be more than one LBA to be reassigned and this verbiage is incorrect for such a situation. The SATL has to perform this complete routine on the next LBA in the parameter list, i. e., "return GOOD status for the REASSIGN BLOCKS command" is not correct.

HP comment number 234
Page=88 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 235
Page=88 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 236
Page=88 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 237
Page=88 Subtype=Text Author=WBellamy
Comment=
The settings AWRE and ARRE are not per 05-241r2. It appears that the rows for the bit fields got swapped (far L-H column). This must be corrected to comply with the working group agreement.

HP comment number 238
Page=88 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 239
Page=88 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 240
Page=88 Subtype=Text Author=WBellamy

Comment=
I believe it is incorrect to apply reference note "a" here. It should be appropriately applied to each field when the criteria applies.

HP comment number 241
Page=88 Subtype=Text Author=WBellamy
Comment=Note "a" needs to be applied to each appropriate field.

HP comment number 242
Page=89 Subtype=Text Author=WBellamy
Comment=remove the (08h) from here...

HP comment number 243
Page=89 Subtype=Text Author=WBellamy
Comment=
When did we start personalizing device items? I believe the " ' "should be removed. This occurs in several places in this section and the table below. It was not in the proposal 05-239r1.

HP comment number 244
Page=89 Subtype=Text Author=WBellamy
Comment=
Why is it sometimes "zero" and other times "Ob"? When is in appropriate to use the spelling? In this instance a "bit" is being addressed.

HP comment number 245
Page=89 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 246
Page=89 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 247
Page=89 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 248
Page=89 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 249
Page=89 Subtype=Text Author=WBellamy
Comment=remove " ' "

HP comment number 250
Page=93 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 251
Page=94 Subtype=Text Author=WBellamy
Comment=
This verbiage seems incorrect to me as stated. In other words, it seems better stated if statement 2 ends with "or". Statement 3 should end with "otherwise". Statement 4 should start with "The SATL shall set...."

HP comment number 252
Page=94 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 253
Page=94 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 254
Page=107 Subtype=Text Author=WBellamy
Comment=
"AMNF" bit is missing from this table. This bit must be translated because it does in current products still get asserted. T13 participants had not thought this to be true, but this is actually happening now. The bit must be added and translated. Originally it was proposed to be translated to 03/13/00 - MEDIUM ERROR - ADDRESS MARK NOT FOUND FOR DATA FIELD. This is a high priority correction request.

HP comment number 255
Page=107 Subtype=Text Author=WBellamy
Comment=
Not per 05-233r3. This table is missing the "WP" bit and its translation. This must be added to the table.

HP comment number 256
Page=107 Subtype=Highlight Author=WBellamy
Comment=

HP comment number 257
Page=107 Subtype=Text Author=WBellamy
Comment=
This bit is correctly identified as "ICRC", not IDCRC. Proposal 05-233r3 correctly indicates this. Change to "ICRC".

HP comment number 258
Page=107 Subtype=Text Author=WBellamy
Comment=
Add "to be" here. Should read, "ATA device errors are to be translated to the appropriate SCSI errors".

HP comment number 259
Page=107 Subtype=Text Author=WBellamy
Comment=Add "a" here.

****

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

IBM 1
PDF pg 2, pg ii, Points of Contact:

Change to 49C

IBM 2
PDF pg 12, pg xii, Revision Information
Remove all revision information.

IBM 3
PDF pg 12, pg xii, Revision Information
All change bars need to be removed.

IBM 4
PDF pg 18, pg xviii, Foreword
This should be (see SPC for correct formatting): Current INCITS practice is to make Technical Information Bulletins available through: INCITS Online Store
http://www.techstreet.com/incits.html managed by Techstreet Telephone: 1-734-302-7801 or 1327 Jones Drive 1-800-699-9277 Ann Arbor, MI 48105 Facsimile: 1-734-302-7811 or Global Engineering http://global.ihs.com/ 15 Inverness Way East Telephone: 1-303-792-2181 or Englewood, CO 80112-5704 1-800-854-7179 Facsimile: 1-303-792-2192

IBM 5
PDF pg 22, pg 2, 1 Scope, first sentence after figure 1
This statement is obsolete and should be changed to something like << The term SCSI is used wherever it is not necessary to distinguish between the different SCSI standards.>>

IBM 6
PDF pg 23, pg 3, 1 Scope
This blank page should be removed. This can be accomplished by proper setup of the frame book file.

IBM 7
PDF pg 24, pg 4, 2 Normative References
This editors note needs to be removed.

IBM 8
PDF pg 25, pg 5, 2 Normative References
Should be << A FLUSH CACHE command or FLUSH CACHE EXT command >>

IBM 9
PDF pg 25, pg 5, 3.1.9 ATA hard reset:
This <<RESET- signal (Hardware reset) by >> should be << RESET- signal (i.e., Hardware reset) by >>

IBM 10
PDF pg 25, pg 5, 3.1.9 ATA hard reset:
There appears to be a period at the start of this sentence. It needs to be removed.

IBM 11
PDF pg 25, pg 5, 3.1.15 ATA read command:
All the command names need to have the term << command >> after them.

IBM 12
PDF pg 25, pg 5, 3.1.16 ATA Sector Count:
This should be << Sector Count field and Sector Count (ext) field >>

IBM 13
PDF pg 26, pg 6, 3.1.18 ATA write command:
All the command names need to have the term << command >> after them.

IBM 14
PDF pg 26, pg 6, 3.1.19 ATA write FUA command sequence:
All the command names need to have the term << command >> after them.

IBM 15
PDF pg 26, pg 6, 3.1.19 ATA write FUA command sequence:
This is way to much for a glossary entry. It should be moved to a subclause in clause 4.

IBM 16
PDF pg 26, pg 6, 3.1.19 ATA write FUA command sequence:
All the command names need to have the term << command >> after them.

IBM 17
PDF pg 26, pg 6, 3.1.19 ATA write FUA command sequence:
All the command names need to have the term << command >> after them.

IBM 18
PDF pg 28, pg 8, 3.1.19 ATA write FUA command sequence:
All the command names need to have the term << command >> after them.

IBM 19
PDF pg 28, pg 8, 3.1.65 SCSI synchronize cache command:
All the command names need to have the term << command >> after them.

IBM 20
PDF pg 28, pg 8, 3.1.65 SCSI synchronize cache command:
All the command names need to have the term << command >> after them.

IBM 21
PDF pg 28, pg 8, 3.1.67 SCSI verify command:
All the command names need to have the term << command >> after them.

IBM 22
PDF pg 29, pg 9, 3.1.69 SCSI write and verify command:
All the command names need to have the term << command >> after them.

IBM 23
PDF pg 31, pg 11, 3.5.1 Overview, 1st paragraph
This <<defined either in clause 3.1 or in the text where they first >> should be << defined either in 3.1 or in the text where they first >>

IBM 24
PDF pg 32, pg 12, 3.5.2 Bit and byte ordering
You should replace this subclause with the comparable on from the style guide.

IBM 25
PDF pg 33, pg 13, 3.5.4.1 Description, item a
This <<SCSI CDB (the format and byte-position of each field is defined in the SCSI command standard that defines the CDB for that command); >> should be << SCSI CDB (i.e., the format and byte-position of each field is defined in the SCSI command standard that defines the CDB for that command);

IBM 26
PDF pg 33, pg 13, 3.5.4.1 Description, 1st paragraph
This << shown in Table 2 to describe >> should be << shown in table 3 to describe >>

IBM 27
PDF pg 35, pg 15, 4 General
When there is more than one examples listed like this in one subclause they need to be labeled and numbered as shown in the style guide.

IBM 28
PDF pg 35, pg 15, 4 General, paragraph above last a,b list
This <<activity in the ATA domain; this standard >> should be << activity in the ATA domain this standard >>

IBM 29
PDF pg 37, pg 17, 5.1 Overview, Figure 4
This figure has some strange fat lines in it that need to be removed.

IBM 30
PDF pg 37, pg 17, 5.1 Overview, 1st a,b,c list
Item d looks like it belongs as a separate paragraph under the list instead of part of list.

IBM 31
PDF pg 37, pg 17, 5.1 Overview
When there is more than one examples listed like this in one subclause they need to be labeled and numbered as shown in the style guide

IBM 32
PDF pg 38, pg 18, 5.2 Unit attention condition, 2nd paragraph
This << ON, RESET, OR BUS DEVICE RESET >> should be << ON, RESET, or BUS DEVICE RESET >>.

IBM 33
PDF pg 39, pg 19, 6.2.1 Comparison of SCSI and ATA queuing
Global The capitalization of the references to tables in inconsistent. It should only be capitalized when it is the first word of a sentence.

IBM 34
PDF pg 40, pg 20, 6.2.3 Commands the SATL queues internally, 1st paragraph
This << SATL that cannot be queued by the ATA device, the >> should be << SATL that is not able to be queued by the ATA device, the >>

IBM 35
PDF pg 41, pg 21, 6.3.2 ABORT TASK, 1st paragraph
This << service request an any of the following >> should be << service request in any of the following >>

IBM 36
PDF pg 41, pg 21, 6.3.2 ABORT TASK, item a
This item needs to end in a ; not a .

IBM 37
PDF pg 41, pg 21, 6.3.2 ABORT TASK, item b
This item needs to end in a << ; or >>not a << . >>.

IBM 38
PDF pg 41, pg 21, 6.3.2 ABORT TASK, Note 3
This <<the SATL can abort the >> should be << the SATL is able to abort the >>.

IBM 39
PDF pg 41, pg 21, 6.3.3 ABORT TASK SET, Item 1
This needs to end in a ; not a .

IBM 40
PDF pg 41, pg 21, 6.3.3 ABORT TASK SET, item 2
This item needs to end in a << ; and >>not a << . >>.

IBM 41
PDF pg 41, pg 21, 6.3.3 ABORT TASK SET, item a
This item needs to end in a << ; and >>not a << . >>.

IBM 42
PDF pg 42, pg 22, 6.3.5 CLEAR TASK SET, first item 1
This item needs to end in a << ; >>not a << . >>.

IBM 43
PDF pg 42, pg 22, 6.3.5 CLEAR TASK SET, first item 2
This item needs to end in a << ; and >>not a << . >>.

IBM 44
PDF pg 42, pg 22, 6.3.5 CLEAR TASK SET, 2nd item 1
This item needs to end in a << ; and >>not a << . >>.

IBM 45
PDF pg 44, pg 24, 6.3.5 CLEAR TASK SET, 1st paragraph
This << this section and >> should be << this clause and >>

IBM 46
PDF pg 46, pg 26, 8.1.1 INQUIRY command overview, 1st paragraph
This <<as described in subsequent subclauses. >> is not much better that saying below. This reference must be more specific as to which subsequent subclauses are relevant.

IBM 47

PDF pg 46, pg 26, 8.1.1 INQUIRY command overview, table 7 - footnote a
This << defined in subclause 10.3 >> should be << defined in 10.3 >>

IBM 48
PDF pg 47, pg 27, 8.1.1 INQUIRY command overview, table 8 - footnote c
This << There can only be 6 total version descriptors. Normally e) and f) are not together so they fit. A FC to SAS bridge might have both, though. >> should be << There are only 6 total version descriptors. Normally e) and f) are not together so they fit. A FC to SAS bridge may have both. >>

IBM 49
PDF pg 47, pg 27, 8.1.1 INQUIRY command overview, Table 8 - footnote d
This <<The encoding used by T10 for INQUIRY version descriptors (see SPC-3) and T13 for IDENTIFY DEVICE major and minor version numbers (see ATA/ATAPI-7) differ, and the two standards organizations may not define values for the same
revisions. >> should be << The encoding used by the SPC-3 standard for INQUIRY version descriptors and the ATA/ATAPI-7 IDENTIFY DEVICE major and minor version numbers differ, and the two standards may not define values for the same revisions. >>

IBM 50
PDF pg 48, pg 28, 8.1.1 INQUIRY command overview, Table 8 row LINKED
This << shall set this field to 0 to indicate >> should be <<shall set this bit to zero to indicate >>

IBM 51
PDF pg 51, pg 31, 8.3.1 MODE SELECT (6) command overview, 2nd paragraph
This << The MODE PAGE POLICY shall be set to 'Shared', and only one copy of 'current' mode page values shall maintained for all logical units of a target.
>> should be << The MODE PAGE POLICY shall be set to shared, and only one copy
of current mode page values shall maintained for all logical units in a target
device. >>. There are four changes 2 are removing the single quotes as those are defined by your conventions to be ASCII strings.

IBM 52
PDF pg 51, pg 31, 8.3.2 MODE SELECT (6) CDB fields
Global The capitalization of the references to tables in inconsistent. It should only be capitalized when it is the first word of a sentence.

IBM 53
PDF pg 51, pg 31, 8.3.2 MODE SELECT (6) CDB fields, table 12 - PF row
This << The SATL shall not support 0b (indicating modes pages are vendor specific). The SATL shall support 1b (indicating all page formats correspond to SPC-3 and SBC-2 MODE PAGE formats). >> should be << The SATL shall not support 0b (i.e., indicates modes pages are vendor specific). The SATL shall support 1b (i.e., indicates all page formats correspond to SPC-3 and SBC-2 MODE PAGE formats). >>.

IBM 54
PDF pg 51, pg 31, 8.3.3 Mode parameter header, table 13 - last row
The << 8 >> should be << eight >> in two places.

IBM 55
PDF pg 52, pg 32, 8.3.3.1 Mode parameter block descriptor fields, table 14 - last row
The statement << block length for the entire LUN. >> should be << block length for the entire logical unit. >>

IBM 56
PDF pg 52, pg 32, 8.3.3.1 Mode parameter block descriptor fields, table 14 - footnote
This << This is because the ATA device provides no method to modify the capacity >> should be << ATA devices provide no method to modify the capacity >>

IBM 57
PDF pg 52, pg 32, 8.4.2 Mode parameter header (10), 1st paragraph
This << Table 13 shows the fields in >> should be << Table 15 shows the fields in >>

IBM 58
PDF pg 52, pg 32, 8.4.2 Mode parameter header (10), table 15 - LONGLBA row
This << descriptor is 8 bytes long. >> should be << descriptor is eight bytes long. >>

IBM 59
PDF pg 52, pg 32, 8.4.2 Mode parameter header (10), table 15 - last row
The << 8 >> should be << eight >> in two places, The << 0 >> should be << zero >> and the << 1 >> should be << one>>.

IBM 60
PDF pg 53, pg 33, 8.5.2 MODE SENSE (6) CDB fields
Global The capitalization of the references to tables in inconsistent. It should only be capitalized when it is the first word of a sentence.

IBM 61
PDF pg 53, pg 33, 8.5.2 MODE SENSE (6) CDB fields, table 16 - PC row
This << A value 0b indicates that one >> should be << This bit set to zero indicates that one >>

IBM 62
PDF pg 53, pg 33, 8.5.2 MODE SENSE (6) CDB fields, table 16 - SUB PAGE CODE row
This << See section on Mode pages for further details. >> should be << See x.x on Mode pages for further details. >> where x.x is the subclause being referenced.

IBM 63
PDF pg 53, pg 33, 8.5.3 PC (Page Control), table 17 title
The title of this table should be << PC values >>

IBM 64
PDF pg 54, pg 34, 8.5.4 Mode parameter header (6), table 18 3rd row
All the << Ob >> should be << zero >> and all the << 1b >> should be << one >>.

IBM 65
PDF pg 54, pg 34, 8.5.4 Mode parameter header (6), table 18 - last row
All the << 8 >>s should be << eight >>.

IBM 66
PDF pg 54, pg 34, 8.5.6 Mode Sense Block Descriptor (8 byte format), 1st paragraph
This << Please refer SPC-3 >> should be << See SPC-3 >>

IBM 67
PDF pg 55, pg 35, 8.5.6 Mode Sense Block Descriptor (8 byte format), 1st paragraph
This << format of each of these sections. >> needs a valid reference to the correct clause or subclauses.

IBM 68
PDF pg 55, pg 35, 8.6.1 MODE SENSE (10) command overview, 1st paragraph
The << long lba >> term should be in small caps.

IBM 69
PDF pg 55, pg 35, 8.6.2 Mode parameter header (10), 1st paragraph
This << Table 18 shows the fields in the mode >> should be << Table 21 shows the fields in the mode >>

IBM 70
PDF pg 55, pg 35, 8.6.2 Mode parameter header (10), table 21 - 4th row
The << Ob >> should be << zero >> and the << 1b >> should be << one >> and the << 8 >> should be << eight >>.

IBM 71
PDF pg 55, pg 35, 8.6.2 Mode parameter header (10), table 21 - last row
The << 0 >> should be << zero >> and the << 1 >> should be << one >> and the << 8 >> should be << eight >>.

IBM 72
PDF pg 56, pg 36, 8.7.1 READ BUFFER command overview
There is no reference to table 22. This needs to be fixed as all tables have to be referenced.

IBM 73
PDF pg 56, pg 36, 8.7.3 Data Only mode (02h)
This << Note that logical sector buffer in the ATA device is being used to emulate the SCSI READ BUFFER command, so the maximum length of data that can be written is 512 bytes. >> should either made into a real note or changed to << The logical sector buffer in the ATA device is being used to emulate the SCSI READ BUFFER command, so the maximum length of data that is allowed to be written is 512 bytes. >> but in either case the evil << can >> needs to be removed.

IBM 74
PDF pg 56, pg 36, 8.7.3 Data Only mode (02h)
The term << device >> should not stand alone. I believe in this paragraph it should be << target device >>.

IBM 75
PDF pg 56, pg 36, 8.7.3 Data Only mode (02h)
All the field names in this paragraph needs to have the term << field >> placed after them.

IBM 76
PDF pg 56, pg 36, 8.7.4 Descriptor mode (03h)
The << 0 >> should be << zero >> and the << 4 >> should be << four >>.

IBM 77
PDF pg 56, pg 36, 8.7.4 Descriptor mode (03h)
All the field names in this paragraph needs to have the term << field >> placed after them.

IBM 78
PDF pg 57, pg 37, 8.8.1 READ MEDIA SERIAL NUMBER command overview
There is no reference to table 24. This needs to be fixed as all tables have to be referenced.

IBM 79
PDF pg 57, pg 37, 8.8.1 READ MEDIA SERIAL NUMBER command overview
The term << device >> should not stand alone. I believe in this paragraph it should be << target device >>.

IBM 80
PDF pg 57, pg 37, 8.8.2 READ MEDIAL SERIAL NUMBER emulation, item 1
This << shall be treated as an ASCII string, defined in ATA/ATAPI-7 >> should be << shall be an ASCII string as defined in ATA/ATAPI-7; and >>

IBM 81
PDF pg 57, pg 37, 8.8.2 READ MEDIAL SERIAL NUMBER emulation, item 2
This << word 87, bit 2 is not set, the SATL shall >> should be << word 87, bit 2 is not set to one, the SATL shall >>

IBM 82
PDF pg 57, pg 37, 8.8.2 READ MEDIAL SERIAL NUMBER emulation, item 2
I'm not sure what this means << verify presence of the medial. >> What is a medial?

IBM 83
PDF pg 57, pg 37, 8.8.2 READ MEDIAL SERIAL NUMBER emulation, item 2
This << without the NM bit set, the >> should be << without the NM bit set to one, the >>

IBM 84
PDF pg 58, pg 38, 8.9.1 REQUEST SENSE command overview, 2nd paragraph
This << specified in the subclause for that condition specified in table 25. >> should be << specified in the reference indicated in table 25. >>

IBM 85

PDF pg 59, pg 39, 8.10.1 SEND DIAGNOSTIC command overview
There is no reference to table 27. This needs to be fixed as all tables have to be referenced.

IBM 86
PDF pg 59, pg 39, 8.10.2 SELF-TEST CODE field, 1st paragraph
This << if the contents of this field are valid depending on the >> should be << if the contents of the SELF-TEST CODE field are valid depending on the >>

IBM 87
PDF pg 61, pg 41, 8.10.3 SELFTEST bit
Global The capitalization of the references to tables in inconsistent. It should only be capitalized when it is the first word of a sentence.

IBM 88
PDF pg 62, pg 42, 8.11.1 TEST UNIT READY command overview, Table 30 - 1st row
There is an extra period in the subclause reference.

IBM 89
PDF pg 62, pg 42, 8.11.2 TEST UNIT READY OPERATION CODE, Item 5
This << If none of the previous conditions exist, then the SATL shall issue an ATA >> should be << If none of the conditions defined in items 1 through 4 do not exist, then the SATL shall issue an ATA >>

IBM 90
PDF pg 63, pg 43, 8.12.1 WRITE BUFFER command overview
There is no reference to table 31. This needs to be fixed as all tables have to be referenced.

IBM 91
PDF pg 63, pg 43, 8.12.1 WRITE BUFFER command overview, table 31 2nd to last row
This << Refer to individual sections for the meaning of this term. >> should be << See x.x.x, x.x.x, and x.x.x. >>. In other words the actual references need to be listed.

IBM 92
PDF pg 63, pg 43, 8.12.2 MODE field, 1st paragraph
This << If the MODE is 05h, 6h, or 07h, the SATL shall >> should be << If the MODE is 05h, 06h, or 07h, the SATL shall >>

IBM 93
PDF pg 63, pg 43, 8.12.2 MODE field, table 32 footnote
This << This standard does not define other download microcode modes because ATA devices generally support only modes that save the downloaded code image, and because the SATL has no means to determine the size of the microcode image
to support offset modes. >> should be deleted as there is no value or need to justify the actions defined by the standard.

IBM 94
PDF pg 64, pg 44, 8.12.3 Data Only mode (02h), 1st paragraph
This << Note that logical sector buffer in the ATA device is being used to emulate the SCSI WRITE BUFFER command, so the maximum length of data that can

be written is 512 bytes. >> should either made into a real note or changed to << The logical sector buffer in the ATA device is being used to emulate the SCSI WRITE BUFFER command, so the maximum length of data that is allowed to be
written is 512 bytes. >> but in either case the evil << can >> needs to be removed.

IBM 95
PDF pg 64, pg 44, 8.12.4 Download microcode mode (5h), last paragraph - last sentence
This last sentence is missing a period.

IBM 96
PDF pg 66, pg 46, 9.1 Translating LBA and transfer length and ATA command use constraints, Table 34
The center headings should be centered.

IBM 97
PDF pg 67, pg 47, 9.2.1 FORMAT UNIT command overview
There is no reference to table 35. This needs to be fixed as all tables have to be referenced.

IBM 98
PDF pg 67, pg 47, 9.2.1 FORMAT UNIT command overview, table 35 - cmplist row
This << If a cmplist is specified, the FMTDATA bit is set to one, and the CMPLIST bit is set to one, then the SATL >> should be << If a complete list is
specified (i.e., the FMTDATA bit is set to one and the CMPLIST bit is set to one), then the SATL >> or the cmplist term needs to be in small caps.

IBM 99
PDF pg 68, pg 48, 9.2.1 FORMAT UNIT command overview, Table 37
All the << one >>s should be << 1 >> and all the << zero >>s should me << 0 >>.

IBM 100
PDF pg 68, pg 48, 9.2.5 DCRT bit, 1st paragraph
This << defective. The process (verify, write, verify, write,...) shall repeat until >> should be << defective. The process (e.g., verify, write, verify, write, etc.) shall repeat until >>

IBM 101
PDF pg 69, pg 49, 9.3.2 READ commands with FUA, item b
This << b) otherwise, the SATL shall, >> should be << b) IF the attached device does not support NCQ, then the SATL shall, >>

IBM 102
PDF pg 70, pg 50, 9.4 READ (6) command
There is no reference to table 38. This needs to be fixed as all tables have to be referenced.

IBM 103
PDF pg 72, pg 52, 9.8.1 READ CAPACITY command overview
There is no reference to table 42. This needs to be fixed as all tables have to be referenced.

IBM 104
PDF pg 72, pg 52, 9.8.2 READ CAPACITY data, 1st paragraph
This << SBC-2. Table 45 describes the translation of >> should be << SBC-2. Table 43 describes the translation of >>

IBM 105
PDF pg 72, pg 52, 9.9.1 READ CAPACITY (16) command overview
There is no reference to table 44. This needs to be fixed as all tables have to be referenced.

IBM 106
PDF pg 74, pg 54, 9.11.1 START STOP UNIT command overview
There is no reference to table 47. This needs to be fixed as all tables have to be referenced.

IBM 107
PDF pg 76, pg 56, 9.12.1 SYNCHRONIZE CACHE (10) command overview, 1st paragraph
This << Unlike in SCSI, ATA does not provide a way to specify a particular LBA to start flushing the ATA device□s cache. >> should be deleted as there is no value or need to justify the actions defined by the standard.

IBM 108
PDF pg 76, pg 56, 9.12.1 SYNCHRONIZE CACHE (10) command overview
There is no reference to table 49. This needs to be fixed as all tables have to be referenced.

IBM 109
PDF pg 77, pg 57, 9.13.1 SYNCHRONIZE CACHE (16) command overview, 1st paragraph
This << Unlike in SCSI, ATA does not provide a way to specify a particular LBA to start flushing the ATA device□s cache. >> should be deleted as there is no value or need to justify the actions defined by the standard.

IBM 110
PDF pg 77, pg 57, 9.13.1 SYNCHRONIZE CACHE (16) command overview, table 50 2nd to last row
The red cross-out text needs to be removed.

IBM 111
PDF pg 77, pg 57, 9.14 VERIFY (10) command, table 51 - bytchk row
This << If the SATL supports a bytchk value of one and >> should be << If the SATL supports a BYTCHK bit set to one and >>

IBM 112
PDF pg 78, pg 58, 9.15 VERIFY (12) command, table 52 - bytchk row
This << If the SATL supports a bytchk value of one and >> should be << If the SATL supports a BYTCHK bit set to one and >>

IBM 113
PDF pg 78, pg 58, 9.16 VERIFY (16) command, table 53 - bytchk row
This << If the SATL supports a bytchk value of one and >> should be << If the SATL supports a BYTCHK bit set to one and >>

IBM 114
PDF pg 79, pg 59, 9.18 WRITE (6) command
There is no reference to table 54. This needs to be fixed as all tables have to be referenced.

IBM 115
PDF pg 79, pg 59, 9.18 WRITE (6) command
There is no reference to table 55. This needs to be fixed as all tables have to be referenced.

IBM 116
PDF pg 80, pg 60, 9.20 WRITE (12) command
There is no reference to table 56. This needs to be fixed as all tables have to be referenced.

IBM 117
PDF pg 81, pg 61, 9.21 WRITE (16) command
There is no reference to table 57. This needs to be fixed as all tables have to be referenced.

IBM 118
PDF pg 82, pg 62, 9.23 WRITE AND VERIFY (10) command
There is no reference to table 58. This needs to be fixed as all tables have to be referenced.

IBM 119
PDF pg 82, pg 62, 9.24 WRITE AND VERIFY (12) command
There is no reference to table 59. This needs to be fixed as all tables have to be referenced.

IBM 120
PDF pg 83, pg 63, 9.25 WRITE AND VERIFY (16) command
There is no reference to table 60. This needs to be fixed as all tables have to be referenced.

IBM 121
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - row tmf_only
This << Shall be set to 0b >> should be << Shall be set to zero >>. Bits are always zero and one not 0b and 1b. This statement applies to all the comments in this table. If these changes are not accepted then all the other tables need to be changed.

IBM 122
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - d_sense row
This << A SATL shall support 0b for this field indicating that the emulated SCSI device uses the fixed sense data format. A SATL may support 1b for this field to support the descriptor format sense data. SATL implementations that support 1b shall also support this field as being changeable. >> should be << A SATL shall support zero for this bit indicating that the emulated SCSI device uses the fixed sense data format. A SATL may support one for this bit to support the descriptor format sense data. SATL implementations that support
one shall also support this bit as being changeable. >>

IBM 123
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - row gltsd
This << Shall be set to 1b. >> should be << Shall be set to one.>>

IBM 124
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - rlec
This << Shall be set to 0b >> should be << Shall be set to zero >>

IBM 125
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - queue algorithm modifier
This << Shall be set to 1b if the ATA device supports any form of command queuing, otherwise shall be set to 0b >> should be << Shall be set to one if the ATA device supports any form of command queuing, otherwise shall be set to
zero >>

IBM 126
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - row tas
This << Shall be set to 0b >> should be << Shall be set to zero >>

IBM 127
PDF pg 87, pg 67, 10.1.4.1 General Translation, table 65 - row swp
This << Shall be set to 0b >> should be << Shall be set to zero >>

IBM 128
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row ic
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 129
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row abpf
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 130
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row cap
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 131
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row disc
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 132
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row size
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 133
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - wce
This << shall return 1b for the WCE bit. If the ATA device□s write cache is disabled the SATL shall return 0b for the WCE bit. >> should be << shall return one for the WCE bit. If the ATA device□s write cache is disabled the

SATL shall return zero for the WCE bit. >>

IBM 134
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row mf
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 135
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 67 - row rcd
This << Set to 0b. A value of 1b is not supported in this standard. >> should be << Set to zero. A value of one is not supported in this standard. >>

IBM 136
PDF pg 89, pg 69, 10.1.6 Caching mode page (08h), table 65 - last 7 rows on page 69
This << Set to 0h >> should be << Set to zero >>.

IBM 137
PDF pg 90, pg 70, 10.1.6 Caching mode page (08h), table 67 - row dra
This << If the look-ahead is enabled the SATL shall return 0b for the DRA bit. If the look-ahead is disabled the SATL shall return 1b for the DRA bit. >> should be << If the look-ahead is enabled the SATL shall return zero for the DRA bit. If the look-ahead is disabled the SATL shall return one for the DRA bit. >>

IBM 138
PDF pg 90, pg 70, 10.1.6 Caching mode page (08h), table 65 - last 3 rows
This << Set to 0h >> should be << Set to zero >>.

IBM 139
PDF pg 93, pg 73, 10.2.3.1 Additional sense code and additional sense code qualifier translations, 1st paragraph
This << for the INFORMATIONAL EXCEPTION ADDITIONAL SENSE CODE and INFORMATIONAL EXCEPTION ADDITIONAL SENSE CODE QUALIFIER fields. >> should be << for the INFORMATIONAL EXCEPTION ADDITIONAL SENSE CODE field and INFORMATIONAL EXCEPTION ADDITIONAL SENSE CODE QUALIFIER field. >>

IBM 140
PDF pg 94, pg 74, 10.2.4.1 Self-Test Results log page overview
Global The capitalization of the references to tables in inconsistent. It should only be capitalized when it is the first word of a sentence.

IBM 141
PDF pg 103, pg 83, 10.3.4.3.3 Identification descriptors included by a SATL in a SCSI to ATA protocol bridge, item a
This << ATA IDENTIFY DEVICE data (see table 82 or table 84 in 10.3.4.2; >> should be << ATA IDENTIFY DEVICE data (see table 82 or table 84 in 10.3.4.2); >>

IBM 142
PDF pg 105, pg 85, 10.3.5 ATA Information VPD page, table 89
The title should remove the << (informative) >> term. It has little or no meaning or value.

IBM 143

PDF pg 106, pg 86, 10.3.5 ATA Information VPD page, note 10
This << (see ATA/ATAPI-7 V1). For example, the SERIAL NUMBER field is interpreted as: {word 10 bits 15:8, word 10 bits 7:0, word 11 bits 15:8, word 11 bits 7:0,...}, which corresponds to these bytes in the IDENTIFY DEVICE DATA
field: {byte 21, byte 20, byte 23, byte 22,...}. >> should be << (see ATA/ATAPI-7 V1) (e.g., the SERIAL NUMBER field is interpreted as: {word 10 bits 15:8, word 10 bits 7:0, word 11 bits 15:8, word 11 bits 7:0,...}, which corresponds to these bytes in the IDENTIFY DEVICE DATA field: {byte 21, byte 20, byte 23, byte 22,...}). >>

IBM 144
PDF pg 109, pg 89, 12.2.2 ATA PASS-THROUGH (12) command, 3rd paragraph after table 93
This << defined in subclause 12.2.5. The SATL shall >> should be << defined in 12.2.5. The SATL shall >>.

IBM 145
PDF pg 109, pg 89, 12.2.2 ATA PASS-THROUGH (12) command, 5th paragraph after table 93
This << only the PROTOCOL and OFF_LINE fields are valid. >> should be << only the PROTOCOL field and OFF_LINE field are valid. >>

IBM 146
PDF pg 109, pg 89, 12.2.2 ATA PASS-THROUGH (12) command, 6th paragraph after table 93
This << only the PROTOCOL and OFF_LINE fields are valid. >> should be << only the PROTOCOL field and OFF_LINE field are valid. >>

IBM 147
PDF pg 109, pg 89, 12.2.2 ATA PASS-THROUGH (12) command, 8th paragraph after table 93
This << shall use the FEATURES (7:0), SECTOR_COUNT (7:0), LBA_LOW (7:0), LBA_MID (7:0), LBA_HIGH (7:0), DEVICE and the COMMAND fields to initiate >> should be << shall use the FEATURES (7:0) field, SECTOR_COUNT (7:0) field, LBA_LOW (7:0) field, LBA_MID (7:0) field, LBA_HIGH (7:0) field, DEVICE field, and the COMMAND field to initiate >>

IBM 148
PDF pg 110, pg 90, 12.2.2 ATA PASS-THROUGH (12) command, 1st paragraph after table 94
This << value corresponding to the LUN or SCSI target port for each >> should be << value corresponding to the logical unit or SCSI target port for each >>

IBM 149
PDF pg 113, pg 93, 12.2.3 ATA PASS-THROUGH (16) command, table 97
The << 0b >> should be << 0 >> and << 1b >> should be << 1 >>.

IBM 150
PDF pg 113, pg 93, 12.2.4 ATA PASS-THROUGH status return, table 98
All the terms << zero >>s should be << 0 >> and << one >>s should be << 1 >>.

IBM 151
PDF pg 115, pg 95, 12.3.2 PATA Control Mode Page (Page 0Ah, Sub Page F1h)

There is no reference to table 101. This needs to be fixed as all tables have to be referenced.

IBM 152
PDF pg 115, pg 95, 12.3.2 PATA Control Mode Page (Page 0Ah, Sub Page F1h), table 101 footnote a
This << MWDMA stands for Multi-Word Direct Memory Access and the >> should be << The Multi-Word Direct Memory Access (MWDMA) and the >>

IBM 153
PDF pg 115, pg 95, 12.3.2 PATA Control Mode Page (Page 0Ah, Sub Page F1h), table 101 footnote c
This << UDMA stands for Ultra Direct Memory Access and the >> should be << The Ultra Direct Memory Access (UDMA) and the >>.

****

Comments attached to No ballot from Robert Sheffield of Intel Corp.:

Intel #1
PDF Page: 49
Author: Bob Sheffield
Subject: Highlight
8.1.2 Standard INQUIRY data
Table 8 — Standard INQUIRY data fields
Version Descriptor fields
6 s/b 8
SPC-3 supports eight Version Descriptors.
(Thanks to Doug Gilbert [Torque] for finding this)

Intel #2
PDF Page: 49
Author: Bob Sheffield
Subject: Cross-Out
8.1.2 Standard INQUIRY data
Table 8 — Standard INQUIRY data fields
Table footnote c
With 8 descriptors, there's not a problem regarding whether they "fit".

Intel #3
PDF Page: 49
Author: Bob Sheffield
Subject: Cross-Out
8.1.2 Standard INQUIRY data
Table 8 — Standard INQUIRY data fields
Table footnote c
SPC-3 supports eight Version Descriptors.

Intel #4
PDF Page: 49
Author: Bob Sheffield

Subject: Highlight
8.1.2 Standard INQUIRY data
Table 8 – Standard INQUIRY data fields
Table footnote c
Second sentence
"A" s/b "An"

Intel #5
PDF Page: 77
Author: Bob Sheffield
Subject: Highlight
9.13 SYNCHRONIZE CACHE (16) command
9.13.1 SYNCHRONIZE CACHE (16) command overview
Table 50 – SYNCHRONIZE CACHE(10) command CDB fields
s/b
Table 50 – SYNCHRONIZE CACHE(16) command CDB fields

Intel #6
PDF Page: 84
Author: Bob Sheffield
Subject: Highlight
9.26.2 LBDATA bit and PBDATA bit
Table 62 – LBDATA and PBDATA fields
First row, last sentence.
9.12.2 s/b 9.17.1.
Subclause 9.12.2 does not exist.
This referred to 9.12.2 in SAT-r04 which was the second subclause under the WRITE (6) command. The corresponding
subclause in SAT-r08 is 9.17.1.
Discovered by Sungwon Ha [Avagotech]

Intel #7
PDF Page: 87
Author: Bob Sheffield
Subject: Highlight
10.1.4 Control mode page
10.1.4.1 General Translation
Table 65 – Control mode page fields
PAGE CODE
Description s/b
Set to 0Ah. This field value is specific to the Control mode page.

OR....
See SPC-3 (to avoid this sort of copy/paste error in the future).

Intel #8
PDF Page: 91
Author: Bob Sheffield
Subject: Highlight
10.1.7.1 Informational Exceptions Control mode page overview
Table 68 – Informational Exceptions Control mode page fields
TEST bit:
"Shall be set to zero (see SPC-3)"
s/b
"Unspecified (see 3.4.3)"

Contributed by: Seth Goldberg, Sun Microsystems
"...We have a question regarding the emulation of the IE control page, we noticed
that the TEST bit is currently specified as MUST BE 0. We were wondering, then, how applications could go about simulating IE's (SMART failures) with the specification as it is. We believe it would be better to allow this field to be either 0 OR 1 (depending on the OS's implementation, because clearly the driver would be responsible for "remembering" that it's in test mode, so it can generate the appropriate response to the unsolicited REQUEST SENSE that should be issued when an application wants to poll for IE's)...."

****

Comments attached to No ballot from John Lohmeyer of
LSI Logic Corp.:

LSI comment number 1
Page=2 Subtype=Text Author=John Lohmeyer
Comment=
Global

Consider using the Draft watermark that George Penokie created for SBC-3 on all pages after the cover page.

LSI comment number 2
Page=12 Subtype=StrikeOut Author=John Lohmeyer
Comment=
Revision Information (pages xii - xvii)

Delete the Revision Information section.

LSI comment number 3
Page=19 Subtype=Highlight Author=John Lohmeyer
Comment=
T10 membership list on page xix

Add T10 members list (available on T10 Project Editors Web Page).

LSI comment number 4
Page=24 Subtype=StrikeOut Author=John Lohmeyer
Comment=
2 Normative References

Delete "Editor's Note 1: This list shall be updated as required."

LSI comment number 5
Page=24 Subtype=Highlight Author=John Lohmeyer
Comment=
2.2 Approved references

Replace "[T10/1601-D]" with "[ANSI INCITS 417-2006]"

LSI comment number 6
Page=50 Subtype=StrikeOut Author=Owen Parry
Comment=
8.2.3 PAGE CODE field
Table 11 - PAGE CODE field values

The text in Table 11, for codes 2Fh and 10h is not necessary because of the detailed description already given in table 76 in determining supported pages.

LSI comment number 7
Page=50 Subtype=StrikeOut Author=Owen Parry
Comment=
8.2.3 PAGE CODE field
Table 11 - PAGE CODE field values

The text in Table 11, for codes 2Fh and 10h is not necessary because of the detailed description already given in table 76 in determining supported pages.

LSI comment number 8
Page=51 Subtype=Highlight Author=Owen Parry
Comment=
8.3.1 MODE SELECT (6) command overview

There is a reference to the "Mode Page Policy VPD page (see 10.3)". However, 10.3 does not mention this page.

LSI comment number 9
Page=53 Subtype=Highlight Author=Owen Parry
Comment=
8.5.3 PC (Page Control)
Table 17 - PC values and their descriptions

Support of changeable parameters should be left to the discretion of the SATL vendor.

LSI comment number 10
Page=61 Subtype=Highlight Author=Owen Parry
Comment=
Section 8.10.3 SELFTEST bit
Table 29 - SELFTEST bit
Self-Test bit set to 1, SMART EXECUTE OFF-LINE IMMEDIATE not supported.

The mechanism of issuing ATA Verify commands to the first, last and a middle random LBA seems fickle. A Verify command can fail but it's possible that a block can be reallocated. We could be potentially failing a self test for a condition that is remediable. I read in the Minutes from a previous meeting and there was a statement that Execute Device Diagnostics command may potentially have dire consequences. So my suggestions for this case is to remove the SHALL and make it more of a suggestion, include the option for simply returning GOOD status in this case without performing any activities, or possibly leaving it unspecified such that a vendor may

implement as they wish but put in place some informative text.

LSI comment number 11
Page=62 Subtype=Text Author=Owen Parry
Comment=
8.11.2 TEST UNIT READY operation code
(general)

Following along the lines of item 4, perhaps there should be a general comment that all IO's received after a command completes with the DF bit set in the status register should be failed with CHECK CONDITION / HARDWARE FAILURE / LOGICAL UNIT FAILURE

LSI comment number 12
Page=82 Subtype=Highlight Author=Owen Parry
Comment=
9.23 WRITE AND VERIFY (10) command
Table 58 - WRITE AND VERIFY (10) command CDB fields
(global for 12- and 16-byte versions of these commands)
The VERIFY commands allow BYTCHK support and the WRITE AND VERIFY commands do not. We should be consistent on both sets of commands.

LSI comment number 13
Page=82 Subtype=Highlight Author=John Lohmeyer
Comment=
9.23 WRITE AND VERIFY (10) command

Change "that data" to "that the data".

LSI comment number 14
Page=82 Subtype=Highlight Author=John Lohmeyer
Comment=
9.24 WRITE AND VERIFY (12) command

Change "that data" to "that the data".

LSI comment number 15
Page=83 Subtype=Highlight Author=John Lohmeyer
Comment=
9.25 WRITE AND VERIFY (16) command

Change "that data" to "that the data".

LSI comment number 16
Page=86 Subtype=StrikeOut Author=Owen Parry
Comment=
10.1.2 Changeable parameters

Support of changeable parameters should be left to the discretion of the SATL vendor.

LSI comment number 17
Page=88 Subtype=Highlight Author=Owen Parry
Comment=
10.1.5 Read-Write Error Recovery mode page

Table 66 - Read-write error recovery mode page fields

Change "ARRE set to one" to "... zero".

LSI comment number 18
Page=88 Subtype=Highlight Author=Owen Parry
Comment=
10.1.5 Read-Write Error Recovery mode page
Table 66 - Read-write error recovery mode page fields

Change "AWRE set to zero" to "... one".

LSI comment number 19
Page=92 Subtype=Text Author=Owen Parry
Comment=
10.2.2 Retrieving SMART data from targets

This section states to use the Log Sense command to retrieve SMART Unaltered data from the ATA device.
1) There is no specification of what Page Code should be used for this particular request
2) Perhaps the text should be removed and replaced with something to the effect that the application client should use the ATA PASS-THROUGH command to retrieve unaltered SMART data.

****

Comments attached to No ballot from Mark Evans of
Maxtor Corp.:

Introduction
The following are Maxtor's comments against the letter ballot for the SCSI / ATA Translation standard. The page number listed for each comment is the page
in the SAT-r08.pdf file where the text is located against which the comment was made.
Maxtor's comments
Maxtor 1, page 3
Delete "ANSI (r) NCITS.***:200x" from the upper right corner.
Maxtor 2, page 3
Change the abstract to something like:
This standard specifies a translation layer between SCSI and ATA protocols. This translation layer is used by storage controllers to emulate objects in a
SCSI logical unit using an ATA device, providing capabilities defined by SCSI
standards (e.g., the SCSI Block Commands (SBC-2) and SCSI Primary Commands (SPC-3) standards). For the purposes of this standard, ATA/ATAPI device capabilities are defined by ATA/ATAPI-7.
Maxtor 3, page 18

Foreward: change TIB contact information to be as follows (see the SCSI style
guide for proper formatting):
INCITS Online Store http://www.techstreet.com/INCITS.html
managed by Techstreet Telephone: 1-734-302-7801 or
1327 Jones Drive 1-800-699-9277
Ann Arbor, MI 48105 Facsimile: 1-734-302-7811
or
Global Engineering http://global.ihs.com/
15 Inverness Way East Telephone: 1-303-792-2181 or
Englewood, CO 80112-5 704 1-800-854-7179
Facsimile: 1-303-792-2192
Maxtor 4, page 20
Author: Mark Evans, Maxtor Corporation
Subject: Highlight
Date: 2/6/2006 11:35:53 AM
Introduction, sentence describing clause 4: turn off hypehnization and indent
the wrapped word (i.e., "protocol").
Maxtor 5, page 21
Scope, paragraph 2: delete "various" twice.
Maxtor 6, page 21
Scope, paragraph 2: delete "various" twice.
Maxtor 7, page 21
Scope, paragraph 2: delete "-class".
Maxtor 8, page 21
Scope, paragraph 3: delete "fundamentally".
Maxtor 9, page 21
1 Scope, paragraph 3: change, "...provides no explicit method to disable an ATA device's read cache...", to, "...provides no deterministic method to disable an ATA device's read cache...", because a very explicit method is provided. It's just that the results are indeterminate.
Maxtor 10, page 21
1 Scope, paragraph 3: delete "entirely".
Maxtor 11, page 21
1 Scope, list item a: change "ATA/ATAPI devices that have storage capacity" to
"ATA/ATAPI devices that have user storage capacity".
Maxtor 12, page 21
1 Scope, list item a: change "used to emulate the behavior of SCSI devices" to
"used to emulate the behavior of SCSI target devices".
Maxtor 13, page 21
1 Scope, list item b: delete "normally".
Maxtor 14, page 21
1 Scope, list item c: delete "directly".
Maxtor 15, page 21
1 Scope, list item d: change to something like, "to provide consistent means for discovery and control of optional SCSI features that may or may not be emulated in SCSI/ATA translator implementations. These means are provided by
specifying how transport specific elements are represented in a mixed-domain topology in a manner consistent with management of devices in a SCSI domain."
Maxtor 16, page 23

1 Scope, after figure 3: delete the blank page in the pdf (i.e., page 23).
Maxtor 17, page 24
2.3 References under development: delete "ISO/IEC 14776-152, Serial Attached SCSI - 2 (SAS-2) [T10/1760-D]" as there is no other reference to this document
in this standard.
Maxtor 18, page 24
2.3 References under development: delete "ISO/IEC 14776-414, SCSI Architecture
Model - 4 (SAM-4) [T10/1683-D]" as this is only used in the Abbreviations clause.
Maxtor 19, page 24
2.4 Other references: add the contact information for SATA 2.5.
Maxtor 20, page 25
3.1.1 additional sense code: change the definition to, "a combination of the ADDITIONAL SENSE CODE and ADDITIONAL SENSE CODE QUALIFIER fields in the sense
data (see SPC-3)."
Maxtor 21, page 25
3.1.2 application client: change the definition to, "An object that is the source of SCSI commands (see SAM-3).
Maxtor 22, page 25
3.1.3 AT Attachment (ATA): delete this definition. It is not used in the document (and, as it is, is incorrect).
Maxtor 23, page 25
3.1.4 ATA device: change the definition to, "A device that implements the General feature set and does not implement the PACKET Command feature set (see
ATA/ATAPI-7)." Note: the names of the feature sets are capitalized, and the PACKET Command feature set ["PACKET" capitalized] is the name in A/A-7. It was
changed to the PACKET feature set in ATA8-ACS.
Maxtor 24, page 25
3.1.5 ATA/ATAPI device: change the definition to, "An ATA/ATAPI-7 device (see
3.1.6)."
Maxtor 25, page 25
3.1.7 ATA domain: change the definition to, "An I/O subsystem that is made up
of one host, one or more devices, and a service delivery subsystem (see ATA8-AAM)."
Maxtor 26, page 25
3.1.8 ATA flush command: change the definition to, "A FLUSH CACHE or FLUSH CACHE EXT command (see ATA/ATAPI-7).
Maxtor 27, page 25
3.1.9 ATA hard reset: change the definition to, "An event that causes an ATA device to perform its device specific hardware reset and internal diagnostics
routine. For a SATA device, this event is a COMRESET or power on reset, for a
PATA device, this event is the assertion of the RESET- signal (see ATA/ATAPI-7)."
Maxtor 28, page 25
3.1.10 ATA host: change the definition to, "An object that originates requests

to be processed by an ATA/ATAPI device."
Maxtor 29, page 25
3.1x Definitions and global: The terms "host" and "ATA/ATAPI host" are used in
the draft with no definition. Search and replace these terms with "ATA host".
Maxtor 30, page 25
3.1.11 ATA LBA: change the definition to, "A logical block address (see 3.1.38
[or whatever the cross reference becomes as the result of other changes]) in an ATA device. For a PATA device, the ATA LBA is contained in the set of registers comprised of the LBA High, LBA Mid, and LBA Low registers inclusive
of both previous and current instances of those registers when 48-bit addressing is used. For a SATA device, the ATA LBA is contained in the set of
fields in the SATA Command FIS comprised if the LBA Low, LBA Mid, LBA High, LBA Low (ext), LBA Mid (ext), and LBA High (ext) fields (see ATA/ATAPI-7)."
Maxtor 31, page 25
3.1.12 AT Attachment Packet Interface (ATAPI): change the definition to, "The
elements of the ATA standards that define the PACKET Command feature set, which provides the capability to encapsulate SCSI and other types of commands
and pass them through an ATA transport."
Maxtor 32, page 25
3.1.13 ATAPI device: change, "packet feature set" to "PACKET Command feature set".
Maxtor 33, page 25
3.1.14 ATA queued commands: change to, "3.1.14 ATA queued command: One of the
following commands: READ DMA QUEUED, READ DMA QUEUED EXT, WRITE DMA QUEUED, WRITE DMA QUEUED EXT, or WRITE DMA QUEUED FUA EXT (see ATA/ATAPI-7); or READ FPDMA QUEUED or WRITE FPDMA QUEUED (see SATA 2.5)."
Maxtor 34, page 25
3.1.15 ATA read command: change the definition to, "One of the following commands: READ DMA, READ DMA EXT, READ DMA QUEUED, READ DMA QUEUED EXT, READ MULTIPLE, READ MULTIPLE EXT, READ SECTOR(S), or READ SECTOR(S) EXT (see ATA/ATAPI-7); or READ FPDMA QUEUED (see SATA 2.5)."
Maxtor 35, page 25
3.1.16 ATA Sector Count: change the definition to, "For a PATA device, the ATA
Sector Count is contained in the set of registers comprised of the Sector Count register inclusive of both previous and current instances of that register when 48-bit addressing is used. For a SATA device, the ATA Sector Count is contained in the Sector Count and Sector Count (ext) fields in a SATA
Command FIS (see ATA/ATAPI-7)."
Maxtor 36, page 26
3.1.17 ATA verify command: change, "defined in ATA/ATAPI-7" to "(see ATA/ATAPI-7)".
Maxtor 37, page 26
3.1.18 ATA write command: change the definition to, "One of the following commands: WRITE DMA, WRITE DMA EXT, WRITE DMA FUA EXT, WRITE DMA QUEUED, WRITE

DMA QUEUED EXT, WRITE DMA QUEUED FUA EXT, WRITE MULTIPLE, WRITE MULTIPLE EXT,
WRITE MULTIPLE FUA EXT, WRITE SECTOR(S), or WRITE SECTOR(S) EXT (see ATA/ATAPI-7); or WRITE FPDMA QUEUED (see SATA 2.5)."
Maxtor 38, page 26
3.1.19 ATA write FUA sequence: change the definition to, "A sequence of commands that writes logical blocks to an attached ATA device in a way that forces media access (see 5.3)." Then move all of the other stuff on how it works to 5.3, adding a new subclause, if necessary.
Maxtor 39, page 26
3.1.20 auto-contingent allegiance (ACA): change. "...CONTROL byte. A detailed
definition of ACA may be found in SAM-3." to, "... CONTROL byte (see SAM-3)."
Maxtor 40, page 26
3.1.21 autosense: this term is not found in SAM-3, so this is a new definition
unique to this standard, though the definition here is similar to the definition for "sense data" in SAM (except that the last phrase here is incorrect). However, the definition here does not reflect how the term is used
in this standard. Change the definition to, "The ability for a SCSI target device to return sense data in the same I_T_L_Q nexus transaction as the CHECK
CONDITION status (see SAM-3)."
Maxtor 41, page 27
3.1.36 link reset sequence: change the definition to, "For SATA, a phy reset sequence (see SATA 2.5), or, for PATA, a software reset (see ATA/ATAPI-7)."
Maxtor 42, page 27
3.1.3x Definitions: add a definition for logical block something like, "A set
of user data words accessed and referenced as a unit."
Maxtor 43, page 27
3.1.40 logical unit reset event: change the definition to, "An event that triggers a logical unit reset (see SAM-3)."
Maxtor 44, page 27
3.1.45 native command queuing (NCQ): change the definition to, "A method by which a SATA device may maintain and order the processing of up to 32 outstanding commands (see SATA 2.5)."
Maxtor 45, page 27
3.1.48 PATA bus: change the definition to, "All of the conductors and connectors required to attain signal line continuity between every driver, receiver, and terminator for each signal between one PATA host and one or two
PATA devices (see ATA/ATAPI-7)."
Maxtor 46, page 28
3.1.49 PATA device: change the definition to, "An ATA/ATAPI device that implements the PATA transport (see ATA/ATAPI-7)."
Maxtor 47, page 28
3.1.49 PATA host: change the definition to, "An ATA host that implements the PATA transport (see ATA/ATAPI-7)."
Maxtor 48, page 28
3.1.53 reset event: change the definition to, "A transport protocol specific event that results in a hard reset condition (see SAM-3 and ATA/ATAPI-7)."
Maxtor 49, page 28

3.1.57 SATA device: change the definition to, "An ATA/ATAPI device that implements the Serial ATA transport (see ATA/ATAPI-7)."
Maxtor 50, page 28
3.1.58 SATA host: change the definition to, "An ATA host that implements the Serial ATA transport (see ATA/ATAPI-7)."
Maxtor 51, page 28
3.1.60 SCSI /ATA translation layer (SATL): change the definition to, "The functional layer defined in this standard that uses an ATA device to emulate objects in a SCSI logical unit, including the device server, task manager, and
task set (see SAM-3)."
Maxtor 52, page 28
3.1.62 SCSI hard reset: even though this is the definition in SPC, a bit is omitted, and that's what happens at the transport layer. So, change the definition to, "A condition resulting from a power on condition or a reset event in which the SCSI device performs the hard reset operations described in
SAM-3, SPC-3, and the appropriate command and transport standards."
Maxtor 53, page 28
3.1.63 SCSI initiator port: change the definition to, "A SCSI initiator device
object that acts as the connection between application clients and the service
delivery subsystem through which requests and responses are routed (see SAM-3)."
Maxtor 54, page 28
3.1.64 SCSI read command: change the definition to, "A READ (6), READ (10), READ (12), or READ (16) command (see SBC-2)."
Maxtor 55, page 28
3.1.65 SCSI synchronize cache command: change the definition to, "A SYNCHRONIZE CACHE(10) or SYNCHRONIZE CACHE (16) command (see SBC-2)."
Maxtor 56, page 28
3.1.66 SCSI target port: change, "...routed. See SAM-3 for a detailed definition of a SCSI target port.", to, "...routed (see SAM-3)."
Maxtor 57, page 28
3.1.67 SCSI verify command: change the definition to, "A VERIFY (10), VERIFY (12), or VERIFY (16) command (see SBC-2)."
Maxtor 58, page 28
3.1.68 SCSI write command: change the definition to, "A WRITE (6), WRITE (10),
WRITE (12), or WRITE (16) command (see SBC-2)."
Maxtor 59, page 29
3.1.69 SCSI write and verify command: change the definition to, "A WRITE AND VERIFY (10), WRITE AND VERIFY(12), or WRITE AND VERIFY (16) command (see SBC-2)."
Maxtor 60, page 29
3.1.70 Serial ATA: change the definition to, "A transport protocol defined by
ATA/ATAPI-7."
Maxtor 61, page 29
3.1.71 Serial ATA Tunneled Protocol (STP): change the definition to, "The protocol used by STP initiator ports to communicate with STP target ports in a
SAS domain (see SAS 1.1)."
Maxtor 62, page 29

3.1.73 service delivery subsystem: change the definition to, "That part of a SCSI I/O system that transmits service requests to a logical unit or SCSI target device and returns logical unit or SCSI target device responses to a SCSI initiator device (see SAM-3), or that part of an ATA I/O system that connects an ATA host port and one or more ATA/ATAPI device ports and is a single path for the transfer of requests and responses between a host and one
or more devices (see ATA8-AAM)."
Maxtor 63, page 29
3.1.77 task management function: change, "...one or more tasks.", to, "...one
or more tasks (see SAM-3)."
Maxtor 64, page 29
3.1.78 task set: change, "...allegiance rules. See SAM-3 for a detailed definition of a task set.", to "...allegiance rules (see SAM-3)."
Maxtor 65, page 29
3.1.79 task: change the definition to, "An object within the logical unit representing the work associated with a command or group of linked commands (see SAM-3)." The stuff about "A task consists of one initial connection and zero or more physical or logical reconnections..." is incorrect. A task may be
COMPLETED during one connection, but its consistence is independent of the number of connections.
Maxtor 66, page 29
3.1.80 tagged command queuing (TCQ): change the definition to, "A method that
makes use of the ATA/ATAPI-7 Queued feature set by which an ATA device may maintain and order the processing of up to 32 outstanding commands, identifying the context of each outstanding command with a unique tag (see ATA/ATAPI-7)."
Maxtor 67, page 30
3.2 Symbols and abbreviations: delete the cross reference for AT Attachment ("(see 3.1.3)") to be consistent with the deletion of the definition.
Maxtor 68, page 30
3.3.1 expected: add a space between "A" and "keyword".
Maxtor 69, page 30
3.3.3 mandatory: delete, "...to claim compliance with this standard".
Maxtor 70, page 30
3.3.6 obsolete: this is tricky. First, there are no SAT standards prior to this one. Second, the only two places where this word is used are two bits in
the ATA PASS THROUGH command. Either delete this keyword or change its definition to something like, "A keyword indicating that an item was defined in a previous version of a standard but has been removed from the most recent
version of that standard."
Maxtor 71, page 30
3.4.1 emulated: change the definition to something like, "A term designating that a SATL is required to implement supplemental functionality for a SCSI function when an ATA device does not provide an exact equivalent for that function."
Maxtor 72, page 30
3.4.2 implemented: change the definition to something like, "A term designating that a SATL is required to implement a specified SCSI function by

using a corresponding ATA function implemented in the attached ATA device. Implemented fields shall not be emulated (e.g., the SCSI READ (10) command has
a 32 bit address, and a 16 bit transfer length. This enables the translator, under the right conditions, to issue a single ATA READ DMA EXT command without
providing additional information or capability)."
Maxtor 73, page 30

3.4.3 unspecified: change the definition to something like, "A term designating that this version of this standard does not specify a translation
for a SCSI function. A translation for an unspecific SCSI function may be specified by future extensions to this or other standards. Implementations for
fields marked unspecified shall not conflict with SPC-3 or SBC-2."
Maxtor 74, page 31
3.5.1 [Conventions] Overview: make a new "head2" clause, "Numeric conventions", after the third paragraph.
Maxtor 75, page 32
3.5.1 [Conventions] Overview: make a new clause on lists (see the SCSI style guide for an example), and remove the paragraph, "Lists sequenced by letters (e.g., a-red, b-blue, c-green) show no ordering relationship between the listed items. Numbered lists (e.g., 1-red, 2-blue, 3-green) show a ordering relationship between the listed items."
Maxtor 76, page 32
3.5.1 [Conventions] Overview: move the last paragraph ("If a conflict arises between text, tables, or figures, the order of precedence to resolve the conflicts is text, then tables, and finally figures. Not all tables or figures
are fully described in the text. Tables show data format and values. Notes do
not constitute any requirements for implementors.") above the new numeric conventions clause (i.e., after the paragraph beginning, "The names of fields...".
Maxtor 77, page 32
3.5.2 Bit and byte ordering: make this clause be consistent with the SCSI style guide.
Maxtor 78, page 32
3.5.3 Notation for byte encoded character strings: make this clause be consistent with the SCSI style guide.
Maxtor 79, page 33
Table 2 and global: delete "(see 3.4.3)". This unnecessary cross reference points to the definition for "unspecified" and occurs many, many times in this
standard. It is interesting to note that the other two words defined in clause
3.4 ("emulated" and "implemented") are never cross referenced anywhere in this
standard.
Maxtor 80, page 33
3.5.4.2.1 [Recursive decent] Overview, first paragraph: The whole paragraph is
not clear, beginning with the first sentence. This sentence reads, "Many times

a field may itself either be a summary of a more complex structure of fields or may refer to other structures such as mode pages or log pages." However, a
field is defined in other SCSI standards as, "A group of one or more contiguous bits, a part of a larger structure such as a CDB or sense data." Ignoring the "many times", is this intended to mean "The content of a cell in
the Field column may refer to other structures"? Including this and other changes, make the paragraph be, "The content of a cell in the Field column may
refer to other structures (i.e., mode pages or log pages). A subclause describing one of the other structures may contain a table to describe the emulation or implementation of that structure with references to following subclauses, as required. Table 2 shows an example of a table in a subclause describing one of the other structures. This method of documentation may be applied recursively until all the applicable fields involved in the translation of a SCSI command to ATA protocol elements have been described in
sufficient detail."
Maxtor 81, page 33
Table 3 - Format for summary field expanded descriptions: to be consistent with the previous comment, change the table title to, "Format for other structure descriptions".
Maxtor 82, page 34
3.5.4.2.2 Detailed field description: delete this clause.
Maxtor 83, page 35
4 General, first paragraph: change to, "This standard defines a translation layer (i.e., the SATL) that may be inserted between host driver software and Serial ATA or Parallel ATA devices. The translation layer thus defined maps SCSI commands and SAM-3 behaviors to ATA devices."
Maxtor 84, page 35
4 General, first unordered list: change to be as follows:
This standard defines how the SATL translates the following items:
a) selected SCSI commands for use by ATA devices;
b) responses from ATA devices to SCSI sense data reporting;
c) mode and log page information to and from ATA devices;
d) task management functions to ATA devices;
e) SMART functions;
f) elements to facilitate use of SATA port selectors and SATA port multipliers;
g) elements to provide consistent mapping of ATA/ATAPI devices as SCSI devices; and
h) other capabilities that may fit within the scope of this standard.
Maxtor 85, page 35
4 General, fourth and fifth paragraphs: change to:
This standard provides a set of definitions, conventions, and guidelines for:
a) the consistent reporting by the SATL of capabilities of emulated SCSI devices;
b) the consistent identification of the attached devices by the application clients; and
c) identification of limits for specific levels of SATL capability.
These provisions allow application clients to have consistent behavior whether
or not the application clients comprehend the presence of a SATL in a

system.
Maxtor 86, page 35
4 General, sixth paragraph ["The objective of this standard is to allow a complete set of SCSI functions while minimizing the complexity of the SATL and
preserving compatibility with existing SCSI application clients."]: this should be in the scope (as, I would argue, should be the content of much of this clause).
Maxtor 87, page 35
General, seventh paragraph: change "outlining" to "defining".
Maxtor 88, page 37
5 SCSI Architectural Elements: remove the caps, changing the clause title to,
"SCSI architectural elements".
Maxtor 89, page 37

5.1 [SCSI architectural elements] Overview, first paragraph: change to, "Clause 5 defines SCSI/ATA translation elements that impact the representation
of the storage domains defined in SAM-3 and ATA8-AAM. Figure 4 shows a SATL connecting a SCSI application client to an ATA/ATAPI device.
Maxtor 90, page 37
5.1 [SCSI architectural elements] Overview, second paragraph: delete the first
sentence ("Figure 4 shows a SATL connecting a SCSI application client to an ATA/ATAPI device.") as it is now included in the paragraph before the figure based on the previous comment. Change the remaining sentence to, "The SATL accomplishes this connection by:"
Maxtor 91, page 37

5.1 [SCSI architectural elements] Overview, second paragraph, list item (d): make this be a new paragraph and change to, "This standard defines SCSI/ATA translation using SCSI and ATA command sets. This standard does not define the
mapping of transport capabilities as defined at the SCSI transport protocol layer and the ATA transport protocol layer."
Maxtor 92, page 37
5.1 [SCSI architectural elements] Overview, third paragraph, list item (b): change "...and provides..." to "and providing...".
Maxtor 93, page 37
5.1 [SCSI architectural elements] Overview, last paragraph: this appears to be
a more detailed list of the elements in the first list in clause 4. This is another argument for removing the redundant information in clause 4 and moving
what remains to clause 1.
Maxtor 94, page 39
6.1 [Task Management Model] Overview, first paragraph: change "ATA queued feature set" to "ATA Queued feature set".
Maxtor 95, page 39
Table 4 and global: either change "ATA TCQ" to "TCQ" here and in several other
places, or change the definition and abbreviation in clause 3 from "TCQ" to "ATA TCQ".
Maxtor 96, page 39

Table 4 and global: either change "SATA NCQ" to "NCQ" here and in several other places, or change the definition and abbreviation in clause 3 from "NCQ"
to "SATA NCQ".
Maxtor 97, page 39
Table 4: change: Either add a definition for "TCQ command" and change this to,
"Except for NOP with a non-zero subcommand code or a SERVICE command, receipt
of any command other than a TCQ command is treated as an error." or change this to, "Receipt of any command except NOP with a non-zero subcommand code, SERVICE, READ DMA QUEUED, READ DMA QUEUED EXT, WRITE DMA QUEUED, WRITE DMA QUEUED EXT, or WRITE DMA QUEUED FUA EXT is treated as an error."
Maxtor 98, page 39
Table 4: either add a definition for "NCQ command" and change this to,
"Receipt of any command other than an NCQ command is treated as an error.", or
change this to, "Receipt of any command other than a READ FPDMA QUEUED or WRITE FPDMA QUEUED command is treated as an error."
Maxtor 99, page 40
6.2.2 Mapping of SCSI queued commands to ATA queued commands, second paragraph
and global: This is the first of many instances where the term "queued command" is used ("...the SATL reissues all queued commands aborted by the ATA
device...") where "ATA queued command" as defined in clause 3 is intended. Change this instance to "ATA queued command", and check all other occurrences
of the term and change to "ATA queued command" or otherwise correct as necessary.
Maxtor 100, page 40
6.2.2 Mapping of SCSI queued commands to ATA queued commands, third paragraph:
delete "generally".
Maxtor 101, page 40
6.2.3 Commands the SATL queues internally and global: in addition to several "queued commands" that need to be rectified, the term "non queued commands" is
introduced here. Either add this term to the definitions in clause 3, or replace this term where used in the document with explicit words.
Maxtor 102, page 40
6.2.4 Multi-initiator and multi-port command queuing, first sentence ("If the
SATL is accessed through a SCSI target port the SATL may be accessible by more
than one SCSI initiator port and through more than one SCSI target port."): a
SATL is always accessed by a SCSI initiator device through a SCSI target port,
though the SCSI target port through which the SATL is accessed may be an abstract object in a system with a SATL (i.e., a virtual SCSI target port), and the SATL may contain more than one of the virtual SCSI target ports for more than one virtual SCSI target device. Change this sentence to, "A SATL may
present SCSI target ports for more than one SCSI target device and may be

accessed by more than one SCSI initiator port."
Maxtor 103, page 40
6.2.4 Multi-initiator and multi-port command queuing (and global): change "I_T_nexus" to "I_T nexus" in several places in the draft standard. There are
also several instances of "I_T_Nexus" to change to "I_T nexus".
Maxtor 104, page 40
Note 2: change to, "Due to architectural differences, some task management functions may not translate to ATA commands or control operations."
Maxtor 105, page 41

6.3.2 ABORT TASK: change as follows:
If no commands have yet been issued to the ATA device for the processing of the specified SCSI task tag, then the SATL shall delete the specified task from the SATL internal context and respond to the ABORT TASK request with FUNCTION COMPLETE.
If the only command(s) being processed in the ATA device are related to the SCSI task specified by the ABORT TASK request, then the SATL shall abort the
ATA command(s) and respond with FUNCTION COMPLETE.
If the ATA device is processing commands for SCSI tasks in addition to the task specified by the ABORT TASK request, then the SATL shall abort all outstanding ATA commands, and:
a) respond to the ABORT TASK request with FUNCTION COMPLETE;
b) if outstanding commands for other tasks in the task set were aborted, then the SATL shall complete at least one command for the I_T nexus that originated the ABORT TASK service request with CHECK CONDITION status with the
sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR; and
c) for each other I_T nexus that had a task aborted, the SATL shall complete at least one command for that I_T nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR.
NOTE 3 - It may be that the first time the SATL is able to abort the command without preventing the processing of other commands is when the attached ATA device returns completion status for the ATA command. In this case the SATL does not provide a SCSI response for the aborted command, even though processing completed in the ATA domain, but instead return FUNCTION COMPLETE for the ABORT TASK request.
Maxtor 106, page 41
6.3.3 ABORT TASK SET: change this to:
If the SATL does not provide multiple SCSI initiator devices access to the emulated SCSI target device, then the SATL shall process the service request as follows:
a) If commands have not been issued to the ATA device for tasks in the task set, then the SATL shall delete all tasks in the task set from the SATL internal context and respond to the ABORT TASK SET request with FUNCTION COMPLETE; or
b) The SATL shall abort outstanding ATA command(s) and respond to the ABORT TASK SET request with a FUNCTION COMPLETE.
If the SATL provides multiple SCSI initiator devices access to the emulated SCSI target device, then the SATL shall process the service request as follows:
a) If commands have not been issued to the ATA device for tasks in the

task set, then the SATL shall delete the all tasks in the task set from the SATL internal context and respond to the ABORT TASK SET request with FUNCTION
COMPLETE; or
b) If commands have been issued to the ATA device for tasks in the task set, then:
A) The SATL shall abort outstanding ATA command(s) and respond to the ABORT TASK SET request with a FUNCTION COMPLETE; and
B) For each other I_T nexus that had a task aborted, the SATL shall complete at least one command for that I_T nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR.
Maxtor 107, page 41
6.3.5 CLEAR TASK SET: change the clause to be as specified in the next comment.
Maxtor 108, page 42
6.3.3 CLEAR TASK SET: change this clause to be as follows:
If the SATL does not provide multiple SCSI initiator devices access to the emulated SCSI target device, then the SATL shall process the service request as follows:
a) If commands have not been issued to the ATA device for tasks in the task set, then the SATL shall delete all tasks in the task set from the SATL internal context and respond to the CLEAR TASK SET request with FUNCTION COMPLETE; or
b) The SATL shall abort outstanding ATA command(s) and respond to the CLEAR TASK SET request with a FUNCTION COMPLETE.
If the SATL provides multiple SCSI initiator devices access to the emulated SCSI target device, the SATL shall process the service request as follows:
a) If commands have not been issued to the ATA device for tasks in the task set, then the SATL shall delete the all tasks in the task set as defined
by the TST field in the Control mode page (see SPC-3) from the SATL internal context and respond to the CLEAR TASK SET request with FUNCTION COMPLETE; or
b) If commands have been issued to the ATA device for tasks in the task set, then:
A) The SATL shall abort outstanding ATA command(s) and respond to the CLEAR TASK SET request with a FUNCTION COMPLETE; and
B) For each other I_T nexus that had a task aborted, the SATL shall complete at least one command for that I_T nexus with CHECK CONDITION status with the sense key set to UNIT ATTENTION and additional sense code set to COMMANDS CLEARED BY ANOTHER INITIATOR.
Maxtor 109, page 42
6.3.6 LOGICAL UNIT RESET: either change the "i.e." to an "e.g.", or specify how this is done with SATA devices.
Maxtor 110, page 42
Note 4: there is no such thing as a "BUS RESET" in SCSI. Possible what is meant here is something like: "An application client my initiate a transport specific SCSI reset event. A SATL may translate the SCSI reset event by issuing a protocol specific hardware reset to each device (e.g. SATA COMRESET
or SAS PHY HARD RESET).
Maxtor 111, page 42
Note 5: change "soft reset" to "software reset".
Maxtor 112, page 44
7.1 Translated and emulated commands, third paragraph: change to, "The IMMED

bit (immediate return) shall be ignored unless otherwise noted (e.g., this bit
shall be supported for the FORMAT UNIT command)."
Maxtor 113, page 46
Table 7: change "6.4" to "See 6.4".
Maxtor 114, page 47
Table 8: change, "This field shall be set..." to "The SATL shall set this field...".
Maxtor 115, page 47
Table 8: change, "This field shall be set..." to "The SATL shall set this field...".
Maxtor 116, page 49
Table 8: change "VERSION DESCRIPTOR 1 THROUGH VERSION DESCRIPTOR 6" to "VERSION DESCRIPTOR 1 through VERSION DESCRIPTOR 8".
Maxtor 117, page 49
Table 8, footnote item (c): change this to, "There may be up to eight version
descriptors.".
Maxtor 118, page 49
8.2.1 LOG SENSE command overview, first paragraph: change the first sentence to, "The LOG SENSE command provides a means for the application client to retrieve statistical or other operational information maintained by the SCSI target device about the SCSI target device or its logical units." These are the words in SPC-3.
Maxtor 119, page 49
Table 9 and global: change "8.2.2" to "See 8.2.2". This style was first noted
in table 7 and thought to be an anomaly. It now appears to be a "style" -- an
incorrect one. Change each "x.y" in subsequent tables to "See x.y".
Maxtor 120, page 50
8.2.1 LOG SENSE command overview, last paragraph: change the last sentence to,
"If the value in the PAGE CODE field is not specified as being emulated by this standard (see 8.2.3), then the SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB."
Maxtor 121, page 51
8.3.1 MODE SELECT (6) command overview, first paragraph: change to, "The MODE
SELECT(6) command (see SPC-3) provides a means for an application client to specify medium, logical unit, or peripheral device parameters to a device server in the SATL. Device servers that implement the MODE SELECT (6) command
shall also implement the MODE SENSE (6) command. Application clients should issue MODE SENSE (6) prior to each MODE SELECT (6) to determine supported mode
pages, page lengths, and other parameters." These are the words in SPC-3 with
the addition of "(see SPC-3)" and "in the SATL".
Maxtor 122, page 51
Table 12, description for the PF field: change to, "If this bit is set to zero
(i.e., indicating that mode pages are vendor specific), then the SATL shall terminate the command with CHECK CONDITION status with the sense key set to

ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB. The
SATL shall support this bit being set to one (i.e., specifying that all mode page formats correspond to SPC-3 and SBC-2 mode page formats)."
Maxtor 123, page 51
Table 12: delete the footnote (i.e., "a The SATL shall recognize the differing
PARAMETER LIST LENGTH field size in the MODE SELECT (10)"). The SATL shall also recognize the differing operation code in the MODE SELECT (10) command and the MODE SELECT (6) command, but this standard doesn't need to state that,
either. Deleting this also deletes the capital "A" reference after PARAMETER LIST LENGTH above.
Maxtor 124, page 53
8.5.1 MODE SENSE (6) command overview, first paragraph: change to, "The MODE SENSE (6) command (see SPC-3) provides a means for a device server in a SATL to report parameters to an application client. It is a complementary command to the MODE SELECT(6) command. Device servers that implement the MODE SENSE (6) command shall also implement the MODE SELECT (6) command. See 10.1 for supported mode pages." These are the words in SPC-3 with the addition of "(see
SPC-3)" and "in the SATL".
Maxtor 125, page 53
Table 16, row 1, description: change to, "Some operational parameters in individual pages are gathered by issuing ATA commands (see 10.1)."
Maxtor 126, page 53
Table 16, row 4, description: change, "See section on Mode pages for further details." to "(see x.x)" as part of the previous sentence with the proper cross reference.
Maxtor 127, page 53
Table 16, row 5, description: change, "See section on Mode pages for further details." to "(see x.x)" as part of the previous sentence with the proper cross reference.
Maxtor 128, page 54
8.5.6 Mode Sense Block Descriptor (8 byte format), first paragraph: change, "Please refer SPC-3...[and the rest of the sentence on the following page]" to
"(see SPC-3)", and include it as part of the previous sentence.
Maxtor 129, page 55
8.5.6 Mode Sense Block Descriptor (8 byte format), first paragraph: continuation of the previous comment.
Maxtor 130, page 56
8.7.1 READ BUFFER command overview: change to, "The READ BUFFER command (see SPC-3) is used in conjunction with the WRITE BUFFER command as a diagnostic function for testing memory in the SCSI device and the integrity of the service delivery subsystem. This command shall not alter the medium." These are the words in SPC-3 with the addition of "(see SPC-3)".
Maxtor 131, page 56
Table 22, row 4, description: change to, "The meaning of this field depends on
the contents of the MODE field (see 8.7.2)."
Maxtor 132, page 56
Table 22, row 5, description: "The meaning of this field depends on the contents of the MODE field (see 8.7.2)."
Maxtor 133, page 56

8.7.3 Data only mode: change "can" to "may".
Maxtor 134, page 56
8.7.3 Data only mode: before the last sentence add, "If the value in either the BUFFER OFFSET field or the ALLOCATION LENGTH field is greater than 512, then the SATL shall terminate the command with CHECK CONDITION status with the
sense key set to ILLEGAL REQUEST with the additional sense code set to INVALID
FIELD IN CDB."
Maxtor 135, page 57
8.8.2 READ MEDIAL SERIAL NUMBER emulation: change to, "8.8.2 READ MEDIA SERIAL
NUMBER emulation".
Maxtor 136, page 57
8.8.2 READ MEDIA SERIAL NUMBER emulation, list item 2: in two places change "successfully" to "without error".
Maxtor 137, page 60
Table 28, fifth row, description: change "successfully" to "without error".
Maxtor 138, page 60
Table 28, sixth row, description: change "successfully" to "without error".
Maxtor 139, page 60
Table 28, seventh row, description: change "successfully" to "without error".
Maxtor 140, page 61
Table 29, fourth row, description: change "successfully" to "without error".
Maxtor 141, page 61
Table 29, fifth row, description: change "successfully" to "without error".
Maxtor 142, page 62
8.11.2 TEST UNIT READY OPERATION CODE, list item 1: change, "If the device was
previously stopped through a START STOP UNIT command..." to, "If the device is
in the stopped state as the result of receiving a START STOP UNIT command...".
Maxtor 143, page 62
8.11.2 TEST UNIT READY OPERATION CODE, list item 1: change, "If an ATA command
was previously issued to the ATA device and that command completed with an error with the DF bit in the status register set to one..." to, "If the device
completed the most recent ATA command with the DF bit set to one in the Status
register...".
Maxtor 144, page 63
8.12.1 WRITE BUFFER command overview, first paragraph: change to, "The WRITE BUFFER command (see SPC-3) is used in conjunction with the READ BUFFER command
as a diagnostic function for testing logical unit memory in the SCSI target device and the integrity of the service delivery subsystem. An additional mode
is provided for downloading and saving microcode."
Maxtor 145, page 63
Table 31, row 4, description: change to, "The meaning of this field depends on
the contents of the MODE field (see 8.12.2)."

Maxtor 146, page 63
Table 31, row 5, description: change to, "The meaning of this field depends on
the contents of the MODE field (see 8.12.2)."
Maxtor 147, page 63
Table 32, footnote: change "...generally support only..." to "...may only support...".
Maxtor 148, page 64
8.12.3 Data only mode: change "can" to "may".
Maxtor 149, page 69
9.3.2 READ commands with FUA: change the second paragraph to:
The SATL shall process a SCSI read command with the FUA bit set to one as follows:
a) If the attached ATA device supports NCQ (i.e., bit 8 in word 77 of ATA
IDENTIFY DEVICE data is set to one) the SATL shall issue a READ FPDMA QUEUED command (see SATA 2.5) with the FUA bit in the Device field set to one;
b) If the attached ATA device supports the Overlapped feature set and there are outstanding ATA queued commands, then the SATL shall:
1) wait until all ATA queued commands have completed;
2) if the ATA device's write cache is enabled (see ATA/ATAPI-7), issue an
ATA verify command (see 3.1.17); and,
3) issue an ATA read command as specified in 9.3.1;
or
c) If the attached ATA device does not support the Overlapped feature set
or there are no outstanding ATA queued commands, then the SATL shall:
1) if the ATA device's write cache is enabled (see ATA/ATAPI-7), issue an
ATA verify command (see 3.1.17); and,
2) issue an ATA read command as specified in 9.3.1.
Maxtor 150, page 70
READ (6) command, first paragraph: delete the comma between "medium or" and "data may".
Maxtor 151, page 72
9.8.1 READ CAPACITY (10) command overview: change to, "The READ CAPACITY (10)
command (see SBC-2) requests that the device server transfer 8 bytes of parameter data describing the capacity and medium format of the direct-access
block device to the data-in buffer."
Maxtor 152, page 72
9.9.1 READ CAPACITY (16) command overview: change to, "The READ CAPACITY (16)
command (see SBC-2) requests that the device server transfer parameter data describing the capacity and medium format of the direct-access block device to
the data-in buffer."
Maxtor 153, page 73
9.10.2 REASSIGN BLOCKS operation code, list item 2: change "successfully" to "without error".
Maxtor 154, page 73
9.10.2 REASSIGN BLOCKS operation code, list item 3: change "if the ATA verify

command does not complete successfully..." to "if the ATA verify command completes with an error...".
Maxtor 155, page 73
9.10.2 REASSIGN BLOCKS operation code, list item 5: change "successfully" to "without error".
Maxtor 156, page 73
9.10.2 REASSIGN BLOCKS operation code, list item 6: change "successfully" to "without error".
Maxtor 157, page 73
9.10.2 REASSIGN BLOCKS operation code, list item 7: change "if the second ATA
verify command does not complete successfully..." to "if the second ATA verify
command completes with an error...".
Maxtor 158, page 74
9.11.2 IMMED bit processing for the START STOP UNIT command: much has been changed in this and the following table from the accepted proposal (05-226r3).
It appears this has been done to make the table smaller. This is a laudable goal. Make the following changes to do this better. First, replace 9.11.2 and
its subclauses with the following:
9.11.2 Processing ending status if an error occurs
If an error occurs during the processing of the START STOP UNIT command and the IMMED bit is set to zero, then the SATL shall terminate the command with CHECK CONDITION status with a sense key of ABORTED COMMAND, and the additional
sense code specified for the error being reported (see table 48).
If an error occurs during the processing of the START STOP UNIT command and the IMMED bit is set to one, then the SATL shall terminate the command and return CHECK CONDITION status as a deferred error (see SPC-3) with a sense key
of ABORTED COMMAND, and the additional sense code set to the value specified for the error being reported (see table 48).
Maxtor 159, page 75
Table 48, row 1, definition: to make consistent with the changes to 9.11.2, change as follows:
The SATL shall:
1) If the IMMED bit is set to one, then return GOOD status;
2) Issue a FLUSH CACHE or FLUSH CACHE EXT command to the attached ATA device;
3) If the FLUSH CACHE or FLUSH CACHE EXTENDED command completes with any error, then process ending status as specified in 9.11.2 with the additional sense code set to COMMAND SEQUENCE ERROR;
4) If the FLUSH CACHE or FLUSH CACHE EXT command completes with no error,
then issue a STANDBY command to the attached ATA device with zero in Sector Count;
5) If the STANDBY command completes with any error, then process ending status as specified in 9.11.2 with the additional sense code set to COMMAND SEQUENCE ERROR; and
6) If the STANDBY command completes with no error <superscript a>, and the
IMMED bit is set to zero, then return GOOD status <superscript b>.
Maxtor 160, page 75

Table 48, row 2, definition: to make consistent with the changes to 9.11.2, change as follows:
The SATL shall:
1) If the IMMED bit is set to one, then return GOOD status;
2) Issue an ATA verify command (see 3.1.17) to the attached ATA device with one in Sector Count and a value in LBA from zero to the maximum LBA supported by the ATA device in its current configuration <superscript d>; and
3) If the IMMED bit is set to zero, return GOOD status when command completion is received for the ATA verify command (see 3.1.17)<superscript c>.
Maxtor 161, page 75
Table 48, row 1, definition: to make consistent with the changes to 9.11.2, change as follows:
If the attached ATA device supports the Removable Media feature set, then the
SATL shall:
1) If the IMMED bit is set to one, then return GOOD status
2) Issue a MEDIA EJECT command to the attached ATA device;
3) If the MEDIA EJECT command completes with any error, then process ending status as specified in 9.11.2 with the additional sense code set to MEDIA LOAD OR EJECT FAILED; and
4) If the MEDIA EJECT command completes with no error, and the IMMED bit is set to zero, then return GOOD status.
If the attached ATA device does not support the Removable Media feature set, then the SATL shall return CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB.
Maxtor 162, page 77
Table 50, row 6, description: change the "i.e." to be, "(i.e., synchronize all
logical blocks starting with the one specified in the LOGICAL BLOCK ADDRESS field to the last logical block on the ATA device's medium)"
Maxtor 163, page 82
9.23 WRITE AND VERIFY (10) command, first paragraph: change to, "The WRITE AND
VERIFY (10) command requests that the SATL transfer the specified logical block(s) to the ATA device, and then verify that the data was written correctly to the ATA device's medium."

Maxtor 164, page 82
9.24 WRITE AND VERIFY (12) command, first paragraph: change to, "The WRITE AND
VERIFY (12) command requests that the SATL transfer the specified logical block(s) to the ATA device, and then verify that the data was written correctly to the ATA device's medium."
Maxtor 165, page 83
9.25 WRITE AND VERIFY (16) command, first paragraph: change to, "The WRITE AND
VERIFY (16) command requests that the SATL transfer the specified logical block(s) to the ATA device, and then verify that the data was written correctly to the ATA device's medium."
Maxtor 166, page 86
10.1.4.1 [Control mode page] General Translation: change to "General translation".
Maxtor 167, page 86

10.1.4.1 [Control mode page] General translation, first paragraph: change "control mode page..." to "...Control mode page...".
Maxtor 168, page 87
10.1.4.1 [Control mode page] General translation, first paragraph: change "control mode page..." to "...Control mode page...".
Maxtor 169, page 87
Table 65, QERR row, description: change "...to the drive..." to "...to the ATA
device...".
Maxtor 170, page 89
10.1.6 Caching mode page (08), first paragraph: change "...caching mode page..." to "...Caching mode page...".
Maxtor 171, page 89
10.1.6 Caching mode page (08), second paragraph: change "...caching mode page..." to "...Caching mode page...".
Maxtor 172, page 92
10.2.2 Retrieving SMART data from targets: change, "...512 byte unaltered SMART data..." to "...the 512-byte Device SMART data structure...".
Maxtor 173, page 96
Table 76, SUPPORTED page LIST row, list item 1: change, "If the device supports the ATA SMART feature set the SATL shall..." to "If the device supports the ATA SMART feature set, then the SATL shall..."
Maxtor 174, page 96
Table 76, SUPPORTED page LIST row, list item 1: change, "If the device does not support the ATA SMART feature set the SATL shall..." to "If the device does not support the ATA SMART feature set, then the SATL shall not..."
Maxtor 175, page 96
Table 76, SUPPORTED page LIST row, list item 2: change, "If the device supports the ATA SMART feature set, the SATL shall..." to "If the device supports the ATA SMART feature set, then the SATL shall..."
Maxtor 176, page 96
Table 76, SUPPORTED page LIST row, list item 2: change, "If the device supports the ATA SMART self-test the SATL shall..." to "If the device supports
the ATA SMART self-test, then the SATL shall..."
Maxtor 177, page 104
Table 87 and global: find all instances of "IDENTIFY DEVICE OR IDENTIFY PACKET
DEVICE DATA", and, where ever it is used as a field name, make sure it is all
in small caps.
Maxtor 178, page 104
10.3.5 ATA Information VPD page, ninth paragraph: change "It shall follow the
format..." to "The SIGNATURE field shall follow the format...".
Maxtor 179, page 105
10.3.5 ATA Information VPD page, twelfth paragraph: change to:
The COMMAND CODE field contains the command code used to retrieve the data in
the IDENTIFY DEVICE or IDENTIFY PACKET DEVICE DATA field. The possible command
codes are:
a) Each for an IDENTIFY DEVICE command (i.e., for an ATA device);
b) A1h for an IDENTIFY PACKET DEVICE command (i.e., for an ATAPI device);

or
c) 00h for other device types.
Maxtor 180, page 105
10.3.5 ATA Information VPD page, thirteenth paragraph: change to be as follows:
If the command was an IDENTIFY DEVICE command, and the command was successful,
then the IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field shall contain the IDENTIFY DEVICE data (see ATA/ATAPI-7 V1).
If the command was an IDENTIFY PACKET DEVICE command, and the command was successful, then the IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field shall contain the IDENTIFY PACKET DEVICE data (see ATA/ATAPI-7 V1).
The IDENTIFY DEVICE OR IDENTIFY PACKET DEVICE DATA field shall contains 512 bytes of 00h if:
a) the command was an IDENTIFY DEVICE command or an IDENTIFY PACKET DEVICE
command and the command failed; or
b) the command code was 00h (i.e., some other device type).
Maxtor 181, page 107
11 Error Handling and Sense Reporting: change to, "Error handling and sense reporting" (i.e., remove the extra caps).
Maxtor 182, page 107
11.1 Error Translation - ATA device error to SCSI error map: change to, "Error
translation - ATA device error to SCSI error map" (i.e., remove the extra cap).
Maxtor 183, page 107
11.1 Error translation - ATA device error to SCSI error map, first paragraph:
define "ATA non-packed device errors".
Maxtor 184, page 108
12 SAT-Specific SCSI Extensions and 12.1 SAT-Specific SCSI Extensions Overview: change to "SAT-specific SCSI extensions" and "SAT-specific SCSI extensions overview" (i.e., remove the extra caps).
Maxtor 185, page 108
12.2.1 ATA PASS-THROUGH commands overview, first paragraph: change to:
"ATA PASS-THROUGH commands provide a method for:
a) an application client to transmit an ATA command to an ATA device;
b) optionally, data transfer between an application client and an ATA device; and
c) for an ATA device to transfer completion status through the SATL."
Maxtor 186, page 109
12.2.2 ATA PASS-THROUGH (12) command, second paragraph: change "If the SATL receives an ATA PASS-THROUGH (12) command it shall check the PROTOCOL field..." to "If the SATL receives an ATA PASS-THROUGH (12) command, then the
SATL shall check the PROTOCOL field...".
Maxtor 187, page 109
12.2.2 ATA PASS-THROUGH (12) command, fifth paragraph: change the first sentence to, "If the PROTOCOL field contains 15 (i.e., Return Response Information), then the SATL shall not access the ATA device, but the SATL shall return the ATA Status Return Descriptor as defined in 12.2.5."
Maxtor 188, page 109
12.2.2 ATA PASS-THROUGH (12) command, sixth paragraph: change to," If the value in the PROTOCOL field is inappropriate for the command specified in

the
COMMAND field (see ATA/ATAPI-7 and SATA 2.5), then the SATL may lose communication with the ATA device. This standard does not specify the SATL behavior if this occurs."
Maxtor 189, page 109
12.2.2 ATA PASS-THROUGH (12) command, seventh paragraph: change "...then the SATL shall issue a pin 1 reset to the PATA device..." to "...then the SATL shall cause RST- to be asserted...".
Maxtor 190, page 109
12.2.2 ATA PASS-THROUGH (12) command, eighth paragraph: change "If the PROTOCOL field is set to one the SATL shall issue a soft reset to the attached
ATA device..." to "If the PROTOCOL field is set to one, then the SATL shall issue a software reset to the attached ATA device...".

Maxtor 191, page 110
12.2.2 ATA PASS-THROUGH (12) command, twelfth paragraph: change the first sentence to, "The SATL shall configure the ATA host and device for the PIO, DMA, and UDMA transfer rates that both the SATL and the ATA device support. The SATL should set the transfer rates to the maximum supported by both the SATL and the ATA device."
Maxtor 192, page 110
12.2.2 ATA PASS-THROUGH (12) command, thirteenth paragraph: change "If the value in the BYTE_BLOCK bit is set to zero the SATL shall transfer..." to "If
the value in the BYTE_BLOCK bit is set to zero, then the SATL shall transfer...".
Maxtor 193, page 110
12.2.2 ATA PASS-THROUGH (12) command, fourteenth paragraph: change to, "If the
CK_COND bit is set to one, then the SATL shall return a status of CHECK CONDITION when the ATA command completes, even if the command completes without error. If the command completes without error, the SATL shall set the
sense key to NO SENSE and the additional sense code to NO ADDITIONAL SENSE INFORMATION. The SATL shall return the ATA registers and related information in the sense data using the ATA Status Return Descriptor (see table 12.2.5)."
Maxtor 194, page 110
12.2.2 ATA PASS-THROUGH (12) command, fifteenth paragraph: change "If the CK_COND bit is set to one and the command completes successfully the SATL shall return..." to "If the CK_COND bit is set to one and the command completes without error, then the SATL shall return...".
Maxtor 195, page 111
12.2.2 ATA PASS-THROUGH (12) command, twenty-third paragraph: change "If T_DIR
is set to zero the SATL shall transfer..." to "If T_DIR is set to zero, then the SATL shall transfer...".
Maxtor 196, page 113
Table 98, header: capitalize "sense".
Maxtor 197, page 113
Table 98, row 2, sense data: change"...otherwise failed to complete successfully." to "...completed with an error."
Maxtor 198, page 113
12.2.4 ATA PASS-THROUGH status return, second paragraph: change "ATA

PASSTHROUGH" to "ATA PASS-THROUGH".
Maxtor 199, page 113
12.2.4 ATA PASS-THROUGH status return, second paragraph: change "ATA PASS-THROUGH INFORMATION AVAILABLE" to "ATA PASS-THROUGH INFORMATION AVAILABLE".
Maxtor 200, page 114
12.2.5 ATA Status Return Descriptor, third paragraph: change to, "If the EXTEND bit is set to one, then the SECTOR_COUNT (7:0) field and SECTOR_COUNT (15:8) field specify the ATA Sector Count. If the EXTEND bit is set to zero, then the SECTOR_COUNT (7:0) field specifies the ATA Sector Count, and the SECTOR_COUNT (15:8) field shall be ignored."
Maxtor 201, page 114
12.2.5 ATA Status Return Descriptor, fourth paragraph: change to, "If the EXTEND bit is set to one, then the LBA_LOW (7:0) field, LBA_MID (7:0) field, LBA_HIGH (7:0) field, LBA_LOW (15:8) field, LBA_MID (15:8) field, and LBA_HIGH
(15:8) field specify the ATA LBA. If the EXTEND bit is set to zero, then the LBA_LOW (7:0) field, LBA_MID (7:0) field, and LBA_HIGH (7:0) field specify the
ATA LBA, and the LBA_LOW (15:8) field, LBA_MID (15:8) field, and LBA_HIGH (15:8) field shall be ignored."
Maxtor 202, page 116

12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), eleventh paragraph: change, "The application client shall not request a PIO mode setting that the
ATA device is unable to support." to "The application client shall not request
a PIO mode setting that the ATA device does not support."
Maxtor 203, page 116
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), eleventh paragraph: change, "If the application client requests a PIO setting that the ATA device
is unable to support the SATL shall return..." to, "If the application client
requests a PIO setting that the ATA device does not support, then the SATL shall return...".
Maxtor 204, page 116
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), twelfth paragraph: change, "If the ATA host in the SATL is currently configured to use multi word
DMA (MWDMA) the MWDMA field is used..." to, "If the ATA host in the SATL is currently configured to use multiword DMA (MWDMA), then the MWDMA field is used..."
Maxtor 205, page 116
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), paragraph following Table 103 - MWDMA modes reported by MODE SENSE: change the paragraph to:
If the SATL receives a MODE SELECT command and the MWDMA field indicates a change from the current settings, then the SATL shall:
1) issue a SET FEATURES, subcommand 03h (Set Transfer Mode) to the ATA device to set the MWDMA mode on the device to the requested state;
2) if the SET FEATURES command completes with an error, then the SATL shall:
A) not change any host transfer modes;

B) complete the MODE SELECT command with a CHECK CONDITION status with the
sense key set to ABORTED COMMAND with the additional sense code set to ATA DEVICE FAILED SET FEATURES; and
C) take no further action regarding this request to change the MWDMA transfer rate;
and
3) if the SET FEATURES command completes without error, then the SATL shall:
A) configure the ATA host to communicate with the device at the requested
MWDMA transfer rate; and
B) complete the MODE SELECT command with GOOD status.
Maxtor 206, page 117
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), paragraph following Table 105 - UDMA for current MODE SENSE settings: change the paragraph to:
When the SATL receives a MODE SELECT command and the UDMA field requests a change in the UDMA transfer rate, then the SATL shall:
1) issue a SET FEATURES subcommand 03h to set the UDMA transfer mode on the device to the requested rate;
2) if the SET FEATURES command completes with an error, then the SATL shall:
A) not change any host transfer modes;
B) complete the MODE SELECT command with a CHECK CONDITION status with the
sense key set to ABORTED COMMAND with the additional sense code set to ATA DEVICE FAILED SET FEATURES; and
C) take no further action regarding this request to change the UDMA transfer rate;
and
3)) if the SET FEATURES command completes without error, then the SATL shall:
A) configure the ATA host to communicate with the device at the requested
UDMA transfer rate; and
B) complete the MODE SELECT command with GOOD status.
Maxtor 207, page 117
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), fourth paragraph following Table 105 - UDMA for current MODE SENSE settings: change "...Ultra DMA (UDMA) timings on the ATA host and device." to "...Ultra DMA (UDMA) transfer rates on the ATA host and device."
Maxtor 208, page 118
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), paragraph following Table 105 - UDMA for current MODE SENSE settings: delete the portion on this page as it is replaced by the comment on the previous page.
Maxtor 209, page 118
12.3.2 PATA Control Mode page (Page 0Ah, Subpage F1h), last paragraph: change
to, "If the application client attempts to set a transfer mode that the underlying host or device does not support, then the SATL shall return a CHECK
CONDITION status with the sense key set to ILLEGAL REQUEST with the additional
sense code set to INVALID FIELD IN PARAMETER LIST."
Maxtor 210, page 120

13.2.1.1 INQUIRY command overview, second paragraph: change to, "If the SATL does not support the ATA Information VPD page, then the SATL shall use the PACKET Command feature set to pass all INQUIRY commands and parameter data to
an ATAPI device without altering the INQUIRY commands or the parameter data.
Maxtor 211, page 120

13.2.1.1 INQUIRY command overview, third paragraph: change to:
If the SATL supports the ATA Information VPD page, then the SATL shall:
a) use the PACKET Command feature set to pass all INQUIRY commands requesting standard INQUIRY data to an ATAPI device without altering the INQUIRY commands;
b) use the PACKET Command feature set to pass all INQUIRY commands requesting VPD pages, other than the Supported VPD Pages VPD page and the ATA
Information VPD page, to an ATAPI device without altering the INQUIRY commands;
c) process INQUIRY commands requesting the Supported VPD Pages VPD page (see SPC-3) as described in 13.2.1.2; and
d) process INQUIRY commands requesting the ATA Information VPD page (see 10.3.5) as described in 13.2.1.3.
Maxtor 212, page 120
13.2.1.2 Supported VPD Pages VPD page, first paragraph: change to, "If the SATL supports the ATA Information VPD page, then the SATL shall use the PACKET
Command feature set to pass all INQUIRY commands requesting the Supported VPD
Pages VPD page (see SPC-3) to the ATAPI device without altering the INQUIRY commands."
Maxtor 213, page 120
13.2.1.3 ATA Information VPD page, first paragraph: change to, "If the SATL supports the ATA Information VPD page (see 10.3.5), and the SATL receives an INQUIRY command requesting the ATA Information VPD page, then the SATL shall process the command (i.e., return parameter data and status) itself and shall
not pass the INQUIRY command through to the ATAPI device."

****

Comments attached to Abs ballot from Emily Hill of
Microsoft Corp.:

We are still studying the ramifications of this standard and do not wish to vote yes or no at this time.

****

Comments attached to No ballot from Mark Overby of
Nvidia Corp.:

Comments to follow on Monday.

****

Comments attached to Yes ballot from Paul Suhler of
Quantum Corp.:

Company
Number
Page
Reference
E/T
Comment
Suggestion

Quantum
1
57
8.8.2
E
"READ MEDIAL SERIAL NUMBER emulation"
s/b "READ MEDIA SERIAL NUMBER emulation"

Quantum
2
71
9.6 Table 40
E
Description of TRANSFER LENGTH field: "...specified by the READ (10)
command."
s/b "specified by the READ (12) command."

Quantum
3
71
9.7 Table 41
E
Description of TRANSFER LENGTH field: "...specified by the READ (10)
command."
s/b "specified by the READ (16) command."

Quantum
4
77
9.14
E
Table 50 caption.
Numerals 5 and 0 are in different font sizes.

Quantum
5
77
9.14
E
Second sentence begins "Table 51 describes..."
Numerals 5 and 1 are in different font sizes. Same for table caption.

Quantum
6
78
9.15
E
First sentence begins "Table 52 describes..."
Numerals 5 and 2 are in different font sizes. Same for table caption.

Quantum
7
78
9.16
E
First sentence begins "Table 53 describes..."
Numerals 5 and 3 are in different font sizes. Same for table caption. This applies to later tables, as well.

Quantum
8
Various
Various
E
Third-level heading numbers have numerals in different sizes. Examples: 9.17.1 and 9.17.2 have the "7" smaller.

Quantum
9
92
10.2.2
E/T
"The page header shall not be appended to SMART data." This seems to violate the usual LOG SENSE operation.
Give further explanation or change behavior.

****

Comments attached to Yes ballot from Gerald Houlder of
Seagate Technology:

Seagate #1
PDF page 21
section 1, paragraph 3
Choose a different example for a SCSI function that is not present in ATA:
The quoted example is incorrect. There is a SET FEATURES command to do this.
"(e.g., ATA/ATAPI-7 provides no explicit method to disable an ATA device's read cache)"

Seagate #2
PDF page 24
section 2.3
Provide the correct ISO document number for
   ISO/IEC 14776-xxx, AT Attachment-8 Serial Transport

Seagate #3
PDF page 24
section 2.3
Provide the correct document number for
   ISO/IEC 14776-xxx, Smart Command Transfer (SCT) [T13/1701DT]

Seagate #4
PDF page 24
section 2.3
ISO/IEC 14776-xxx, Smart Command Transfer (SCT) [T13/1701DT]
Correct the document title
  should be: SMART Command Transport

Seagate #5
PDF page 24
section 2.4
Provide an 'indicated organzation' for where to obtain the
SATA 2.5 specification

Seagate #6
PDF page 25
section 3.1.9
delete the phrase "or power-on reset"

Seagate #7
PDF page 25 and 28
sections 3.1.11, 3.1.65, 3.1.67,3.1.68
Remove the period that preceeds the text
".If the ..."

Seagate #8
PDF page 39
Table 4, 'Feature' column
Change "Handling of Non-Queued Commands" to
"Handling of Non-Queued Commands While a Queued Command is
in Process'

Seagate #9
PDF page 42
Section 6.3.6: "(i.e set the SRST bit to one in the Device Control
register, then set the bit to zero)"
This is what a PATA device would do. SATA does it differently.

Seagate #10
PDF page 57
section 8.8.2, bullet 2: "... verify presence of the medial."
change 'medial' to 'media'

Seagate #11
PDF page 57
section 8.8.2, bullet 2
If the Removeable Media Status Notification feature set is not
supported, why not return the DRIVE's serial number from
IDENTIFY DEVICE ?

Seagate #12
PDF page 59
section 8.9.2, last sentence
How should/shall the device report the progress indicator to the SATL ?

Seagate #13
PDF page 72
section 9.8.2, sentence 2
change 'Table 45' to 'Table 43'

Seagate #14
PDF page 74
table 48
Remove "IMMED," from the table title, as it is not one of the columns

Seagate #15
PDF page 74
table 48, start=0/leoj=0, bullet 3
Change "FLUSH CACHE EXTENDED" to "FLUSH CACHE EXT'

Seagate #16
PDF page 74
table 48, start=0/leoj=0, bullet 4
Why use STANDBY instead of STANDBY IMMEDIATE ?

Seagate #17
PDF page 76
table 50, NUMBER OF BLOCKS description field
When printed, "LOGICAL BLOCK ADDRESS" has a strike-through

Seagate #18
PDF page 76, table 51, BYTCHK description field
PDF page 77, table 52, BYTCHK description field
PDF page 77, table 53, BYTCHK description field
"If the SATA supports a bytchk value..."
Should 'bytchk' be in small-caps ?

Seagate #19
PDF page 79, table 55, FUA description field
PDF page 80, table 56, FUA description field
PDF page 81, table 57, FUA description field
"The SATL may support..." should be changed to
"The SATL shall support..." because section 9.17.2
contains 'shall' language.

Seagate #20
PDF page 104
section 10.3.5: "The SIGNATURE field..."
Table 88
a) Why does the SIGNATURE field (bytes 0 and 1) have to
   contain this FIS header info even for a PATA device ?
b) The reference to "ATA/ATAPI-7 V3" is not necessary
   if the FIS construction is removed.
   (before and after table 88)

seagate #21
PDF page 105
Table 89
The DEVICE register is not part of the signature (per ATA/ATAPI-7)

seagate #22
PDF page 105
Table 89
For the device types listed, the signature is normative
(not informative). For other device types, say 'unspecified'

Seagate #23
PDF page 120
That this is the final page is not easily determined.
Please either put in a section that says 'this is the end'
or make the page footer say 'page xxx of yyy' so that
it is easy to determine if some pages are missing.

****

Comments attached to Yes ballot from William Martin of
Sierra Logic, Inc.:

Sierra_Logic-01
Page 5, 3.1.1
change last sentence to "SPC-3 contains a detailed definition of sense
data."

Sierra_Logic-02
Page 6, 3.1.20
change last sentence to "SAM-3 contains a detailed definition of ACA."

Sierra_Logic-03
Page 20, 6.2.2 paragraph after first a-b list
All commands except the one in error shall be reissued.

Sierra_Logic-04
Page 21, 6.3.2, first paragraph
an s.b. in

Sierra_Logic-05
Page 21, 6.3.2, item b
If it doesn't do this, what SHALL it do?

Sierra_Logic-06
Page 21, 6.3.2, list item B
add item C shall re-issue all commands to the drive for SCSI tasks other than
for the task specified.

Sierra_Logic-07
Page 21, 6.3.2, Note 3
"can" s.b. "may"

Sierra_Logic-08
Page 21, 6.3.3, list items 1 2 and 3
add "associated with the I_T_Nexus"

Sierra_Logic-09
Page 21, 6.3.3, 1-3 list
why is this a numbered list?

Sierra_Logic-10
Page 21, 6.3.3, a-b list
Why are the ATA commands not aborted as in list above? Also needs to do the same as suggested in 6.3.2

Sierra_Logic-11
Page 22, 6.3.6 Paragraph 1
If a device is in the middle of IO, generating a soft reset may be problematic - make it possible to issue soft or hard reset. This is also consistent with Note 4.

Sierra_Logic-12
Page 24, 7.1 third paragraph
Why is the FORMAT UNIT command specifically called out here? There are other commands where it is supported. Remove this sentence.

Sierra_Logic-13
Page 27, Table 8
There is no reason that a SATL cannot support protection data. This should be changed to "Unspecified (see 3.4.3)"

Sierra_Logic-14
Page 27, Table 8 footnote c
What does "Normally e) and f) are not together so they fit." mean?

Sierra_Logic-15
Page 27, Table 8 footnote c
"can only be" s.b. "are only"

Sierra-Logic-16
Page 32, Table 14
NUMBER OF BLOCKS - While the ATA device cannot modify the capacity, there is no reason that the SATL cannot modify what is reachable on the medium , and it
should be allowed for this parameter to be used to set this value.

Sierra_Logic-17
Page 33, Table 17
Why are 01b, 10b, and 11b not supported? SPC requires that 10b be supported, and that this shall be returnable even if the LU is not ready. Change these to
supported and support as specified in SPC.

Sierra_Logic-18
Page 35, 8.5.6, below table 20
Why is persistent saving of parameters not allowed? This should be optional.

The SATL can persistently save parameters.

Sierra_Logic-19
Page 36, 8.7.1
READ Buffer and WRITE Buffer can also be used to read and write to the SATL buffers. SPC allows for the vendor to map the BUFFER ID to a specific buffer in the device. This could be a buffer in the SATL in addition to a buffer on the device. Loosen up this definition to allow a buffer to reside in the SATL.

Sierra_Logic-20
Page 36, 8.7.3, second sentence
"can" s.b. "may"

Sierra_Logic-20
Page 36, 8.7.3, last sentence
"may sent" s.b. "may be sent"

Sierra_Logic-21
Page 39, Table 27
PF bit - why is the standard SEND Diagnostic defined in SPC with the PF bit set to one not supported. This should be supported. The PF bit is optional in SPC, and should not be prohibited in SAT.

Sierra_Logic-22
Page 44, 8.12.3, first paragraph last sentence
"can" s.b. "may"

Sierra_Logic-23
Page 45, NOTE 6
ATA/ATAPI-7 has a different definition for logical sector size. "number of logical sectors in a physical sector or if the logical sector is larger than a
physical sector .."
re-phrase to "NOTE 6 - The Logical Sector Size indicated by an ATA device is represented in words; therefore, the number of bytes in an ATA device logical sector is twice the value indicated in the Logical Sector Size."

Sierra_Logic-24
Page 54, 9.11.1, after table 47
This should be "If a SATL receives any medium access command ..."

Sierra_Logic-26
Page 55, Table 48
We have experienced problems with devices going into the STANDBY state and would prefer to see the SLEEP state specified, or specify either state as allowed.

Sierra_Logic-27
Page 5, Table 48
When starting a device, any command that causes a medium access will start the device. We would prefer that this operation specify ATA verify or ATA read
command (with the appropriate references)

Sierra_Logic-28
Page 62, Table 58
Why are we choosing not to do bytchk here?

Sierra_Logic-29
Page 66, 10.1.1, paragraph 2
The save parameters operation should be optional. NOTE - in the PATA Control Mode page it is allowed to save the parameters.

Sierra_Logic-30
Page 67, Table 65
Page Code is a cut and paste error should be OAh, and the text needs to change.

****

Comments attached to Abs ballot from Gregory Tabor of
Vitesse Semiconductor:

Our organization has not completed a thorough review and will defer to the informed opinions of those who have.

****

Comments attached to No ballot from Curtis Stevens of
Western Digital:

WD comment number 1
Page=4 Subtype=StrikeOut Author=stevens_c
Comment=

WD comment number 2
Page=4 Subtype=Caret Author=stevens_c
Comment=S/B 2006?

WD comment number 3
Page=25 Subtype=StrikeOut Author=stevens_c
Comment=
packet

S/B PACKET feature set

WD comment number 4
Page=25 Subtype=StrikeOut Author=stevens_c
Comment=
packet feature

S/B PACKET feature set

WD comment number 5
Page=25 Subtype=StrikeOut Author=stevens_c
Comment=

WD comment number 6
Page=25 Subtype=Caret Author=stevens_c
Comment=S/B an ATA host...

WD comment number 7
Page=25 Subtype=Text Author=stevens_c
Comment=Remove artifact

WD comment number 8
Page=31 Subtype=StrikeOut Author=stevens_c
Comment=

WD comment number 9
Page=31 Subtype=Caret Author=stevens_c
Comment=
Since we removed the recommendations, this subclause should be nuked

WD comment number 10
Page=34 Subtype=Highlight Author=stevens_c
Comment=
This document does not have signaling, these items should be removed.

WD comment number 11
Page=34 Subtype=Highlight Author=stevens_c
Comment=This document does not use primitives, this should be removed.

WD comment number 12
Page=37 Subtype=Text Author=stevens_c
Comment=Remove artifacts...

WD comment number 13
Page=38 Subtype=Highlight Author=stevens_c
Comment=
Global: We are not documenting ATAPI. References to PACKET should be removed.

WD comment number 14
Page=39 Subtype=Highlight Author=stevens_c
Comment=and aborts the entire queue

WD comment number 15
Page=39 Subtype=Highlight Author=stevens_c
Comment=and aborts the entire queue

WD comment number 16
Page=40 Subtype=Highlight Author=stevens_c
Comment=
What is an inactive tag? This is the only use of the term inactive tag...

WD comment number 17
Page=41 Subtype=Highlight Author=stevens_c
Comment=
Why should this standard prevent a SATL from implementing ACA? What is the harm?

WD comment number 18
Page=48 Subtype=Highlight Author=stevens_c
Comment=What is this??

WD comment number 19
Page=56 Subtype=Highlight Author=stevens_c
Comment=
Since an ATA device only has one buffer and a full 512 bytes shall be written, if the buffer offset is non-zero, doesn't an illegal request result.

WD comment number 20
Page=56 Subtype=Highlight Author=stevens_c
Comment=command may be sent.

WD comment number 21
Page=63 Subtype=Highlight Author=stevens_c
Comment=Limits are implied here due to the 512 byte size of ATA buffers.

WD comment number 22
Page=66 Subtype=Highlight Author=stevens_c
Comment=
I am not sure what this table is trying to communicate... If I have 48-Bit enabled, it may still be more efficient for me to use 28-Bit commands.

WD comment number 23
Page=66 Subtype=Highlight Author=stevens_c
Comment=
Most of my readers do not see N/A as Yes or No, They see it as Not Applicable; meaning that the commands in the allowed ATA column do not apply if the 48-bit address feature set is supported. I do not think this is the intention of the table, but I believe that the statement is ambiguous.

WD comment number 24
Page=77 Subtype=Highlight Author=stevens_c
Comment=What field?

WD comment number 25
Page=77 Subtype=Highlight Author=stevens_c
Comment=
This is a very strong statement. If the SATL was caching, couldn't it honor this field correctly? This should be a should.

WD comment number 26
Page=79 Subtype=Highlight Author=stevens_c
Comment=
ATA devices use a transfer length of 0 to be a maximum transfer. If this statement is a note relative to SBC-2, then the footnote should be in the field column.

WD comment number 27
Page=79 Subtype=Highlight Author=stevens_c
Comment=

I am just guessing here, but I think the footnote is talking about a SCSI field definition. Shouldn't the footnote be attached to the field column?

WD comment number 28
Page=80 Subtype=Text Author=stevens_c
Comment=This should be attached to TRANSFER LENGTH.

WD comment number 29
Page=81 Subtype=Text Author=stevens_c
Comment=Should this be attached to TRANSFER LENGTH?

WD comment number 30
Page=82 Subtype=Text Author=stevens_c
Comment=This should be attached to TRANSFER LENGTH.

WD comment number 31
Page=83 Subtype=Text Author=stevens_c
Comment=This should be attached to TRANSFER LENGTH.

WD comment number 32
Page=84 Subtype=Highlight Author=stevens_c
Comment=
ATA8-ACS now documents SCT. The name of the command has been changed to WRITE SAME. Since this document is wrapping up for letter ballot, it might be reasonable to reference the draft instead of a technical report.

WD comment number 33
Page=100 Subtype=Highlight Author=stevens_c
Comment=What is this? It appears in the doc a couple of times...

WD comment number 34
Page=100 Subtype=Highlight Author=stevens_c
Comment=What is this?

WD comment number 35
Page=101 Subtype=Text Author=stevens_c
Comment=
I do not believe that an ATA host includes the SCSI application client. This is a SCSI host with an ATA host port.

WD comment number 36
Page=105 Subtype=Highlight Author=stevens_c
Comment=or ATA8-ACS.

WD comment number 37
Page=120 Subtype=StrikeOut Author=stevens_c
Comment=

WD comment number 38
Page=120 Subtype=Caret Author=stevens_c
Comment=
This makes it look like we have spec'ed how to do ATAPI, but we really have not. There is a major piece of work missing. I would suggest that this clause be removed, or just limit it to the overview and state that this subclause will be developed in a future version of SAT. If you leave this

in, you will be limiting SAT-2's ability to define ATAPI.

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