Doc No. T10/98-230R2

May 11, 1999

To: T10 Membership
From: R.K. Roberts
    Technical Editor MMC-2
Subject: Comment Resolution – Letter Ballot 98-022R0
Specific resolution and replies are attached to each of the comments received from the membership.
****
Comments attached to Yes ballot from Lawrence J. Lamers of Adaptec, Inc.:
Adaptec Comments on T10 Letter Ballot of MMC-2

Issue 1

The big issue is around the Prevent/Allow Medium Removal command. MMC-2 V7.0c discusses in several sections the use of the Prevent/Allow Medium Removal command and how the persistent bit must be set in order to use Get Event/Status Notification. Section 5.3.3, Table 35, goes as far as pointing to the SPC. However in the SPC, the Prevent/Allow command doesn't have the bit defined.
I Email Ron and he mentioned that he doesn't wish to duplicate efforts to redefine commands that are defined elsewhere. I then Emailed Ralph Weber and he told me that Rob Simms has a proposal in the works to fix the SPC. However, that proposal wasn't excepted by committee for some reason.
I would argue that until the SPC has been updated, that MMC-2 should define how the Prevent/Allow command should look. An implementor who doesn't take the initiative to track down the discrepancies will always get the implementation wrong. Heck, even when things are written clearly, folks still get it wrong.
RESPONSE: The PREVENT/ALLOW Command in SPC-2 will be modified to include a definition of the persistent bit.

Issue 2

The second issue is polling for ATAPI commands. The spec doesn't really explain how to do polling, nor on which commands polling should occur. In our experience, polling needs to occur on Blank, Format Unit, Close Track, Close Session, Flush Cache. I'm not sure how to get the drive vendors to agree on this. And for those manufacturers working DVD Blank, Close Track, and Close Session have no real meaning.
RESPONSE: The BLANK, FORMAT UNIT, and CLOSE TRACK/SESSION commands provide for responses when a polling function is implemented. SYNCHRONIZE CACHE responds in a normal manner to a polling command.

One other thing that bothers me is the Sync Cache command has been renamed in Mt. Fuji to be Flush Cache. Both use the same opcode, however both act quite differently. MMC-2 appears to conform closer to SCSI than Mt. Fuji is even attempting. I'd like to know what the MMC-2 editorial committee position is on this topic.
RESPONSE: There are no operational or technical differences in the two commands.

Other editorial comments:
Format Unit Command definition, Section 6.1.3, second paragraph above table
134, talks about the Format unit parameter list (see table 69), should say
(see table 134).
RESPONSE: Accepted and changed

Paul Lucier
303-684-4713
plucier@btc.adaptec.com

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Comments attached to Yes ballot from Ron Roberts of
Apple Computer:

Annexes need to be completed. Information for them comes from other standards
that may or may not be completed. (RBC & SBP-2) Completed
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Comments attached to No ballot from Robert Elliott of Compaq Computer Corp.:

I am casting a NO vote for this reason:
CPQ 1. Annex C is missing. It should be added, or it and references to it should be removed.
RESPONSE: Accepted - Annex C is an implementation Annex like Annex B. The majority of Annex C will
come from the RBC command set document that is still in review. A version of the Annex C will be distributed for
review when RBC and SBP-2 workin groups have reviewed it.

The rest of the comments are not causing a NO vote. Except for number 20, they are all editorial comments.

CPQ 2. Page ii. Use John Lohmeyer's netcom address. Change other references to "symbios.com" as John directs.
RESPONSE: Accepted -

CPQ 3. Pages ix-xvii. The list of tables and figures shows that both one and two dashes are used after the table/figure
number. They should be consistent. Also, ensure there is always a space after the table number (see table 374).
RESPONSE: Accepted -

CPQ 4. Page xviii. Foreward. The description of Annex D is blank.
RESPONSE: Accepted -

CPQ 5. Page 2. Section 2.2. Standards numbers should line up vertically.
RESPONSE: Accepted -

CPQ 6. Pages 2-3. Section 2.3. Shouldn't ACPI be referenced for the Power Management annex?
RESPONSE: Rejected- ACPI was not referenced or consulted for this standard.

CPQ 7. Page 3. Section 3.1.27. Definition missing for Direct-overwrite.
RESPONSE: **Accepted** – Definition added

CPQ 8. Page 4. Section 3.1.3. Change "that" to "which"
RESPONSE: Accepted -

CPQ 9. Page 5. Sections 3.1.35/36. Change "CD" to "DVD"
RESPONSE: Accepted -

CPQ 10. Page 6. Section 3.1.69. Remove "is"
RESPONSE: Accepted -

CPQ 11. Page 15. Section 4.2.1.2. Missing text after last word "See ".
RESPONSE: Accepted – now reads " See sub-clause 6.1.23 READ SUB-CHANNEL command

CPQ 12. Page 18. Section 4.2.2.4. Make formatting of "Mode-1 Q", "Mode2 Q", and "Mode 3 Q" consistent.
RESPONSE: **Accepted** – will be "Mode-n Q"

CPQ 13. Page 18. Section 4.2.2.4. There are periods instead of spaces around "to" in TNO and INDEX definitions.
RESPONSE: Accepted -

CPQ 14. Page 18. Section 4.2.2.4. Add "The" before this sentence: "Mode-2 Q data format is shown in Figure 8."
RESPONSE: Accepted -

CPQ 15. Page 19. Section 4.2.2.5. Change "is" to "total". "I1 - I12 define the ISRC, and total 60 bits in length."
RESPONSE: Accepted –Changed to "I1-I12 defines the ISRC."

CPQ 16. Page 20. Section 4.2.2.6. After Figure 11, there is an underlined (after "POINT=B0".
RESPONSE: Accepted – removed underline

CPQ 17. Page 24. Table 11. Formatting differs from other tables within byte 2. Grid should still be visible.
RESPONSE: Accepted -

CPQ 18. Pages 25/27. Figure 13. Caption and picture are on separate pages.
RESPONSE: Accepted - corrected

CPQ 19. Page 28. After Table 15, add period after "number of blocks"
RESPONSE: Accepted -

CPQ 20. Page 30. Table 17. Also Table E.3. Refers to CHANGE_DEFINITION which has been removed from SPC-2. Should it remain in this spec? Also, persistent reservation commands are not listed. Should they be mentioned here?
RESPONSE: Accepted – Removed CHANGE_DEFINITION from Table 17

CPQ 21. Page 64. Table 43. Different caption font from other tables in this area.
RESPONSE: Accepted -

CPQ 22. Page 65. Table 44. Extra "r" in "PvntJumprr".
RESPONSE: Accepted -

CPQ 23. Page 72. References to sub-clauses have two periods: e.g. "in sub-clause 5.2.1..". The same problem occurs elsewhere (including text after tables 64, 67, 70, 73, 78, and 81). Sometimes something like "4.1.6., " appears.
RESPONSE: Accepted -

CPQ 24. Page 88-81. Tables 86 and 89. Bytes 2 and 3 are listed multiple times with different meanings.
RESPONSE: Accepted -

CPQ 25. Page 86. Table 99. Missing sub-clause cross references for features 0003-0105h.
RESPONSE: Accepted -

CPQ 26. Page 93. Table 112. Missing space in 2048 row in "Mode2". Missing period in 2352 row after "F8h".
RESPONSE: Accepted -

CPQ 27. Page 113. Byte 17, Bit 4-5 line needs better formatting. "00 32 BCKs 01 16 BCKs" ...
RESPONSE: Accepted – Table added

CPQ 29. Page 120. Table 138 and subsequent text. FmtDATA vs. FmtData. CmpList vs. CmpLIST.
RESPONSE: Accepted -

CPQ 30. Page 123. Table 143. "IP Modifier" header split into 3 lines.

RESPONSE: Accepted -

CPQ 31. Page 127. Table 149. Different fonts or font sizes than other tables in this area.
RESPONSE: Accepted -

CPQ 32. Page 131. Table 156. Should "0 - n" be "4 - n"?
RESPONSE: Accepted -

CPQ 33. Pages 132, 244. Tables 159, 350. In Byte 1 row, "Persistent Prevented" is split into >2 lines.
RESPONSE: Accepted -

CPQ 34. Page 136. Table 170. Formatting of vertical line in Code 0h row is inconsistent.
RESPONSE: Accepted -

CPQ 35. Page 144. Table 186. "Change Mandatory" split into 3 lines.
RESPONSE: Accepted -

CPQ 36. Pages 159, 160, 164, 166. Tables 210, 211, 217, 220. In first column, some tables use ":" instead of "..." used in these tables. Other tables use nothing at all, like table 243.
RESPONSE: Accepted – All tables to use "…"

CPQ 37. Page 213. Section 6.1.24.7, before Table 299. "Error! Reference source not found."
RESPONSE: Accepted – s/b ANNEX Q

CPQ 39. Pages 218, 231, 236. Tables 306, 330 338. Notes should use superscript small font instead of "*4" format, like other tables.
RESPONSE: Accepted - changed

CPQ 40. Pages 218-219. After Table 306, missing periods after "ATS - 7" and "CTS - 7".
RESPONSE: Accepted – periods added

CPQ 41. Page 227. Table 320. Equation missing in Incremental row. Some font size problems in text after table. (I assume this is an editorial/Acrobat conversion problem, not a technical hole)
RESPONSE: Accepted – Equation to be copied from Mt Fuji3

CPQ 42. Page 238. After Table 341. Period missing after "specific error"
RESPONSE: Accepted – period added

CPQ 43. Page 241. Table 346. Caption missing closing ")".
RESPONSE: Accepted – closed caption

CPQ 44. Page 245. Table 354. Some rows are centered, some aren't.
RESPONSE: Accepted – table fixed

CPQ 45. Global. In tables throughout, some references to "Sub-clause A.1" have A.1 in bold; some do not.
RESPONSE: Accepted – all will not be bolded

CPQ 46. Page 258. "ED NOTE: " still in document.
RESPONSE: Accepted – note removed

CPQ 47. Page 260. "Synchronous cache" should be "Synchronize Cache" in 2 places.
RESPONSE: Accepted – spelling changed

CPQ 48. Page 278+. Section labels like "E 1" missing period after E ("E.1").
RESPONSE: Accepted – clause numbering corrected

CPQ 49. Page 278. Section E.1. Change ", to ," in text.
RESPONSE: Accepted – global change incorporated

CPQ 50. Page 280. Extra underscore in "Table E.2_shows transition".
RESPONSE: Accepted – removed underscore

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

Page 18
Note 1, George Penokie, 10/22/98 11:12:52 AM
Forward- the Annex D information is missing.
RESPONSE: Accepted – information added

Page 21
Note 2, George Penokie, 10/22/98 11:16:43 AM
Section 2.1 - The reference to SPI should be to SPI-2 and there should be nor reference to SIP as SPI-2 includes SIP.
RESPONSE: Accepted – Deleted SIP and changed SPI to SPI-2

Note 3, George Penokie, 10/22/98 11:17:56 AM
Section 2.2 - The reference to SPI-2 should be removed or change to SPI-3.
RESPONSE: Accepted – changed to SPI-3

Page 24
Note 4, George Penokie, 10/22/98 11:26:38 AM
3.1.27 - There is no definition specified for direct-overwrite.
RESPONSE: Accepted – definition added

Page 28
Note 5, George Penokie, 10/22/98 11:31:06 AM
Section 4.1.2 - The term 'ad-dres' should be 'address'.
RESPONSE: Accepted - fixed

Note 6, George Penokie, 10/22/98 11:38:22 AM
Section 4.1.2 and probably elsewhere: When stating the error to be reported the following format is recommended:
'CHECK CONDITION status and set the sense key to ABORTED COMMAND and the additional sense code to
MESSAGE ERROR' This sentence currently states 'terminated with CHECK CONDITION, LOGICAL BLOCK
ADDRESS OUT OF RANGE'. With that statement I have no idea what the sense key is supported to be.
RESPONSE: Accepted – paragraph modified as requested

Note 7, George Penokie, 10/22/98 11:40:22 AM
Section 4.1.2 - The term 'will' should not be used in a standard it is either shall, should, or may but not will.
RESPONSE: Accepted – changed to shall

Page 29
Note 8, George Penokie, 10/22/98 11:44:10 AM
Section 4.1.3 It would be a good idea to add in a cross-reference to where the mode sense and flush cache commands are defined.
RESPONSE: Accepted – reference added

Note 9, George Penokie, 10/22/98 11:48:20 AM
Section 4.4 - Most of this section is already defined in the various protocol standards and should not be duplicated in a command standard. Remove it.
RESPONSE: Rejected – this standard will replace MMC1 and this information is not included anywhere else. Also the commands listed in the medium changer set are different than the ones here. The model for CD or DVD changers are different than the ones listed in other standards.

Page 30
Note 10, George Penokie, 10/22/98 11:51:24 AM
Section 4.1.4.4 - This information should be in an annex if anywhere.
RESPONSE: Accepted – An ANNEX will be added for SCSI parallel implementations.

Page 44
Note 11, George Penokie, 10/22/98 11:58:54 AM
General - If this is intended to become an IOS standard then the periods need to be changed to commas in numbers (e.g. 22.05 should be 22,05.
RESPONSE: Rejected – The WG feels the format used is much clearer to the Far East companies that read this standard.

Page 50
Note 12, George Penokie, 10/22/98 12:02:28 PM
Section 4.2.5 It would be a good idea to cross-reference to where the commands are defined.
RESPONSE: Accepted – Where it helps in understanding the text references will be added.

Page 61
Note 13, George Penokie, 10/22/98 05:31:32 PM
Table 19 - There are several bytes in this table with no definition. What are they used for?
RESPONSE: Accepted – definitions added

Note 14, George Penokie, 10/22/98 05:32:23 PM
Table 20 - There are several bytes in this table with no definition. What are they used for?
RESPONSE: Accepted – definitions added

Page 64
Note 15, George Penokie, 10/22/98 12:06:44 PM
Section 4.3.5 - This numbered list should be a lettered list (i.e. a,b,c) numbers imply order, letters do not.
RESPONSE: Accepted – letters added

Page 65
Note 16, George Penokie, 10/22/98 12:08:56 PM
Section 4.3.6.1 - Use the format described in previous comment and the hex values should be removed.
RESPONSE: Accepted -

Page 67
Note 17, George Penokie, 10/22/98 12:10:19 PM
Section 4.3.6.3 Use the format described in previous comment and the hex values should be removed

RESPONSE: Accepted -

Page 68
Note 18, George Penokie, 10/22/98 12:11:15 PM
Section 4.3.6.7 Use the format described in previous comment and the hex values should be removed
RESPONSE: Accepted -

Page 70
Note 19, George Penokie, 10/22/98 12:12:21 PM
Section 4.4 - Loose the hex code and put in cross-references to where the commands are defined.
RESPONSE: Accepted -

Page 71
Note 20, George Penokie, 10/22/98 12:13:20 PM
Section 4.4.1.3 Use the format described in previous comment and the hex values should be removed
RESPONSE: Accepted -

Page 74
Note 21, George Penokie, 10/22/98 12:14:26 PM
Section 4.4.6 Use the format described in previous comment and the hex values should be removed
RESPONSE: Accepted -

Page 79
Note 22, George Penokie, 10/22/98 01:13:34 PM
Section 5.3.1 - 1st paragraph - This '...even if none of the Profiles listed is current.' should be this '...even if none of the Profiles listed are current.'
RESPONSE: Accepted -

Page 81
Note 23, George Penokie, 10/22/98 01:17:25 PM
Section 5.3.2 - What is a queue? Is this something new or is it what is now called the 'task set'?
RESPONSE: This is a new term used it this standard as it is defined here. Text has been re-written for clarification.

Page 105
Note 24, George Penokie, 10/22/98 01:43:02 PM
table 99 - It looks like several of the cross-references are missing.
RESPONSE: Accepted – references added

Page 110
Note 25, George Penokie, 10/22/98 02:35:25 PM
Table 108 - There seems to be several cross-references missing in this table.
RESPONSE: Accepted – only those pages used by this standard are referenced.

Page 115
Note 26, George Penokie, 10/22/98 04:18:43 PM
Table 115 - Put horizontal lines between codes to help separate one codes description from the next.
RESPONSE: Accepted -

Page 126
Note 27, George Penokie, 10/22/98 04:23:08 PM

Section 5.5.7 - There is no need to duplicate information that is already in another standard. This can only lead to problems down the road. The page should reference the standard where it is defined in the same way commands that are defined in other standards are.

RESPONSE: Rejected – The information is included here for ease of reading the document by Far East companies.

Page 127
Note 28, George Penokie, 10/22/98 04:24:09 PM
Section 5.5.8 - There is no need to duplicate information that is already in another standard. This can only lead to problems down the road. The page should reference the standard where it is defined in the same way commands that are defined in other standards are.

RESPONSE: Rejected – the information is included here for ease of reading the document by Far East companies.

Page 142
Note 29, George Penokie, 10/22/98 04:29:22 PM
table 143 - The first column should be made wider so the r in Modifier doesn't move to another line.

RESPONSE: Accepted -

Page 146
Note 30, George Penokie, 10/22/98 04:32:16 PM
Section 6.1.4 If this is to be an ISO standard then big number do not have commas but rather spaces (e.g. 65 534).

RESPONSE: Rejected – This standard will be used by Far East companies that use the US versions.

Page 165
Note 31, George Penokie, 10/22/98 04:45:14 PM
Section 6.1 and probably elsewhere: When stating the error to be reported the following format is recommended: 'CHECK CONDITION status and set the sense key to ABORTED COMMAND and the additional sense code to MESSAGE ERROR' This sentence currently states 'terminated with CHECK CONDITION, LOGICAL BLOCK ADDRESS

RESPONSE: Accepted – text changed

Page 232
Note 32, George Penokie, 10/22/98 04:54:24 PM
Section 6.1.24.7 - 3rd paragraph after table 298 - There is an illegal cross-reference

RESPONSE: Accepted – reference added

Page 241
Note 33, George Penokie, 10/22/98 05:01:08 PM
Tables 312 and 313 have thin lines while table 314 has thick lines all should be the same.

RESPONSE: Accepted -

Page 242
Note 34, George Penokie, 10/22/98 05:02:23 PM
Tables 312 and 313 have thin lines while table 314 has thick lines all should be the same.

RESPONSE: Accepted -

Note 35, George Penokie, 10/22/98 05:02:49 PM
Tables 312 and 313 have thin lines while table 314 has thick lines all should be the same.

RESPONSE: Accepted -

Page 243
Note 36, George Penokie, 10/22/98 05:03:38 PM

Tables 312, 315, and 313 have thin lines while table 314 has thick lines all should be the same.
RESPONSE: Accepted -

Page 246
Note 37, George Penokie, 10/22/98 05:05:28 PM
Table 320 - It looks like there is a missing equation in this table.
RESPONSE: Accepted – equation will be added from Mt Fuji3

Page 259
Note 38, George Penokie, 10/22/98 05:08:34 PM
Table 344 - This is the way all those other tables (e.g. 314, 315, 316, etc.) should be made to look like.
RESPONSE: Accepted -

Page 264
Note 39, George Penokie, 10/22/98 05:10:41 PM
Table 354 - This table is really messed up in the pdf file.
RESPONSE: Accepted -

Page 269
Note 40, George Penokie, 10/22/98 05:12:13 PM
Section 6.1.35 - If this command is obsolete then why is it described here.
RESPONSE: Rejected – This is the first standard that lists the command as obsolete. It will be removed in the next version of the standard.

Page 277
Note 41, George Penokie, 10/22/98 05:15:18 PM
Section 6.1.40 - 5th paragraph after table 373 - There should not be any notes from editors in this version of the document.
RESPONSE: Accepted -

Page 281
Note 42, George Penokie, 10/22/98 05:20:45 PM
Annex A - This annex is not needed as it is a duplication of what is in SPC. The odds are it will be outdated before this standard is complete. So there is no point in having it.
RESPONSE: Rejected – It was determined in the prior version that this would provide a reference to codes.

Page 295
Note 43, George Penokie, 10/22/98 05:23:45 PM
Annex C- What's going on here?? If this standard is not complete then what is it doing in letter ballot? If it is complete then this section needs to be removed of filled in. I cannot vote yes for an incomplete standard.
RESPONSE: Accepted – Annex C is coming from RBC and has not been completed. When it is completed and modified for MMC2 it will be inserted.

Page 311
Note 44, George Penokie, 10/22/98 05:29:03 PM
Table N.3 - There are no cross-references in this table.
RESPONSE: Accepted – ref standard will be added.

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Comments attached to No ballot from Gene Milligan of
Seagate Technology:

The editor and other contributors on MMC-2 should be complimented on a draft, which has provided admirable documentation of this application area. While the bulk of the following comments are editorial I decided I should vote NO since the draft identifies additional tasks to be done in the draft including a missing normative annex; two TBDs in Table 227; and a TBD under Table Q.2.

Page numbers are pdf page numbers.

Page 1
Title here is different than in body. Also suggest just plain SCSI as in other new SCSI standards.
RESPONSE:

Page 2
"holder's" quickly identifies patent statement as an obsolete patent statement.
RESPONSE: Accepted – patent statement updated

Page 3
Version 2? This is not the style used in other SCSI follow on standards although it may be a better style.
RESPONSE: Rejected – The Working Group feels this is much clearer for CD & DVD vendors. Especially by Far East companies

Page 18
The Annex D requirements in the foreword are for what? - Definition added

Why was Annex P omitted?
RESPONSE: Annex D title added. Annex P was deleted data included in an earlier annex.

Page 19
In the Introduction change "This MMC-2" to "The MMC-2" (I think this implies there are more MMC-2 command sets).
RESPONSE: Accepted - changed

As commented on the title page " SCSI-3" should be changed to SCSI nearly globally except where it is used to distinguish from "SCSI-2". In that case it should be "SCSI-3 and subsequent SCSI standards" I think Fibre Channel FC-4" should be changed to "Fibre Channel Protocol (FCP)".
RESPONSE: We don't understand this comment. This a "SCSI-3" standard. Rejected

In Introduction's list of transports why is ATA/ATAPI-4 not included? - ATAPI was inserted.

An ancient comment at least to the T10 Chair, why ask for interpretations? – This must be an "inside" comment.
RESPONSE: Accepted

Page 20
Similarly to the Introduction, the Scope's list of mappings should include ATA/ATAPI-4. – ATA?ATAPI inserted.

In Objective (3) "Initiator computers" sounds awkward and redundant to me. I suggest just "computers" or even better "hosts". But just "Initiators" would be OK to SCSI people. Globally it should be noted that "Initiators" is better than "initiators" in the other standards. Better but different.
RESPONSE: Accepted – Globally changed "Initiator computer" to "Initiator". Added ATA/ATAPI-4 to the Scope.

Page 21
The second sentence of the second paragraph of Normative References is not a sentence. - Corrected

In 2.1 "DIS" are not approved and would fall into 2.2. But I suggest it may be more expedient to promote them to 2.1 where they are by deleting the acronym "DIS". (Leave it to the ANSI editor to object if they have not then reached that stage. The ANSI editor routinely checks the catalogs on the normative references.

Response: Removed "DIS"

When MMC-2 is balloted as an ISO/IEC standard there would be a letter ballot to fix all the orphan sub-clauses. This will result in the cross-references being different by .1 in the two publications. I suggest eliminating them now producing the same cross-references in the US domestic and the international standards. Orphan sub-clause are those that can not be cross-referenced without referencing all other sub-clauses in the clause. The first two paragraphs of Clause 2 are an example. An example fix would be to change the Structure to:
2. References
2.1 Normative References
The following ...
2.1.1 Approved References
2.1.2 References under development
2.2 Other References (Or 2.1.3 if these are intended to be Normative)

Response: Changed headings as requested.

Note that with this construction the first two paragraphs of this clause can now be cross-referenced without dragging in Other References if that is intended.

SBC is published and should be moved from 2.2 to 2.1.

In 2.3 first line make "specification" plural.

Secretariat is not enough. Fully state which Secretariat is being referred to.

I think it was also a great horse.

RESPONSE: Accepted – made changes as requested. Added address for NCITS Secretariat.

Page 22
In loose talk I think on some 1394 reflectors I have seen these referred to as the IEC 61883 series of standards. But I have suspected that this may be incorrect and that the IEC series were more likely extracts from the other references. But in any case I presume IEC 61883 series should be accounted for in some of these sub-clauses.
The IEC 61883 series are:
IEC 61883-1 (1998-02) Consumer audio/video equipment - Digital interface -
Part 1: General
IEC 61883-2 (1998-02) Consumer audio/video equipment - Digital interface -
Part 2: SD-DVCR data transmission
IEC 61883-3 (1998-02) Consumer audio/video equipment - Digital interface -
Part 3: HD-DVCR data transmission
IEC 61883-4 (1998-02) Consumer audio/video equipment - Digital interface -
Part 4: MPEG2-TS data Transmission
IEC 61883-5 (1998-02) Consumer audio/video equipment - Digital Interface -
Part 5: SDL-DVCR data transmission
An additional IEC 61883: work in progress is IEC 61883-6 Ed. 1.0 Audio and
music data protocol

RESPONSE: Rejected – these specific specifications were not consulted in the generation of this standard.

Page 23
3.1.4 and 3.1.5 appear to have been crafted long ago before the ATAPI standards project was aborted. Refer to NCITS 317:1998 ATA/ATAPI-4 for a definition of these two terms.
Modified as requested.

In 3.1.8 replace "of that can have" with "with".

Modified as requested.

Replace "a Initiator " with "an Initiator" or with "an initiator" globally.
Modified as requested.

IEC standards in general are now 6XXXX and those without the leading 6 need to have 60000 added to their number to arrive at a number that can be ordered. Do not apply this rule to ISO/IEC standards.
What does this mean to us?

In 3.1.17 why is it Logical Units and not Logical Blocks? Won't this confuse SCSI folks?
RESPONSE: Accepted – term "or Logical Units" has been deleted from definition.

Page 24
In 3.1.26 I think it should be error free data not error free media. Feel free to substitute a word such as recording for data to replace media.
Changed the text to "….providing apparent error free media"

The definition of 3.1.43 is not quite the same as used earlier in the standard, see use of field in 3.0 (orphan).
Added the sentence "Fields containing only one bit are referred to as the "named" bit instead of the "named" field."

I am surprised that Hex is 8 bits since I have always thought it was 4 bits which nicely fit two at a time in an octet. Is Incomplete session really without Lead-in and Lead-out written? I would have thought with Lead-in written and without Lead-out written.
Added the sentence "Indicates a binary value represented in base 16."
RESPONSE: - Changed to 4 bits. Yes Lead-in and Lead-out are not written.

Page 25
Regarding 3.1.61 is it necessary to limit medium to a single disc? Do tapes not have medium or are they not using MMC-2?

In 3.1.76 delete "only".
RESPONSE: - Tapes would not use MMC-2 as this is only for C/DVD document

Page 26
Make 3.1.82 has a singular or has a single. – Modified as requested

3.1.83 should change "structure is that the two transparent" to "structure with the two transparent". Change the last sentence to "A single sided disc has one recording side and one non-recording side." to avoid a two sided disc recorded only on one side being defined as a single sided disc. – Modified as requested

Is contact with the UPC Council only by paper mail? – YES!

The Abbreviations and symbols material appears instead to be conventions, which should be moved to Conventions. But the addition of real abbreviations and acronyms would be nice. - Accepted

In 3.4.3 replace "interpretability" with "interoperability". I suspect the spell checker provided the word. – Modified as requested

In 3.4.5 replace "shall be" with are intended to be".
RESPONSE: Accepted

Page 27

Note 1; Label: Gene Milligan; Date: 10/23/98 12:00:27 PM
In 3.4.7 delete the first instance of "as defined by this standard".
Page 28
Following table 1 the MSF bit is defined. But table one does not have an MSF bit. I assume a cross-reference is needed.

4.1.2 uses the term controller which I believe is not defined for SCSI.

In 4.1.2 address should not be hyphenated.

In 4.1.2 "is terminated" should be "shall be terminated" unless this mandatory requirement is stated outside the model.

In 4.1.2 replace specification with standard. This should be a global change except where referring to a private specification which is not a standard (de facto and standard are two words [well maybe three] not synonyms).

In 4.1.3 change "accessible" to "addressable".

Change "does not have a relationship" to "is not required to have a specific relationship".
RESPONSE: Accepted – Modified as requested

Page 29
Implementations have not really reached the point of being able to wish. Change "may wish to have the blocks" to "may request that the blocks".

In 4.1.4 change "will use the following names" to "are named" and "will be used differently" to "are used differently". But are they really used differently or are they defined differently and used the same?

Referring to 4.1.4.2 which of the clauses are "implementation sections". In addition it seems bad practice for MMC-2 to define Hard Reset detection for ATA/ATAPI. Similarly I think SPI-2 should prevail over MMC-2 regarding Hard Reset detection. "not individual Logical Units" should be changed to "not just individual Logical Units".

Referring to 4.1.4.3 the first portion of the prior comment applies. Is there a less graphic but more technical description of "hung Logical Unit" that translates well in other cultures? – Changed to "non-responding" Logical Unit.
RESPONSE: -Accepted Above comments were accepted and modified as requested.

I think staying in the current Power State with Device Reset is in conflict with ATA/ATAPI-4 but there is some support for this to be changed in ATA/ATAPI-5. In ATA/ATAPI-4 the ATAPI folks insisted this be used to bring an ATAPI device out of Sleep. Referring to 4.1.4.4 the ATAPI reset story seems to have been requested a little differently in the two standards projects.
RESPONSE: - This comment requires that an Annex be inserted that defines SCSI implementation for MMC2 logical units. The working group has placed this on the agenda for their next working group meeting.

Page 31
It is confusing to have the first paragraph of Deferred Errors in 4.1.6 defining an error that is not deferred. I suggest moving this paragraph to a new sub-clause titled Current Errors as the case in SPC-2.
RESPONSE: Paragraph removed

In de-witching the second paragraph a problem has been created. I think the "that" should be reinstated as "which" or alternatively replacing "for that" with "that". It is not correct that multiple command buffering must be in use for the deferred error to occur. I suggest removing the phrase beginning with "and". However there may be a reason to add "multiple command buffering to the C/DVD danger list. To aid a search for compliance requirements it would be better to replace "are required to implement" with "shall" globally except in the definition of "shall".
RESPONSE: Done. Modified as requested

In 4.1.6 delete "computer". Perhaps this is a global change.

RESPONSE: Changed to "Initiator."

It appears that considerable material is redundant to the normative SPC requirements. Is the reason to change it or just to encounter the risk of having more room for misinterpretation and unintentional omissions on subsequent revisions?

RESPONSE: This information is provided in the model sub-clauses are here for clarification and ease of understanding this standard.

In 4.1.7 replace "there now exists a MEDIA STATUS NOTIFICATION Feature" with "a MEDIA STATUS NOTIFICATION Feature is defined". Also replace "must ensure" with "shall ensure".

RESPONSE: Modified as requested.

Page 32
In the first sentence of 4.2.1.1 should "frame" be plural? – Modified as requested

Should the first sentence after Figure 1(and subsequently) be "small frames" rather than "small blocks"? In the second sentence why is it "frame(Frame)"?

RESPONSE: Modified as requested

Page 34
There is a missing cross-reference under Figure 4.

RESPONSE: Cross reference has been added "See 6.1.23 READ SUB-CHANNEL sub-clause."

Page 35
In 4.2.2 delete the second sentence. – Sentence deleted

In the second paragraph of 4.2.2 change "must have" two places to "needs" and "insure" to "ensure". – Modified as requested.

I have given up on working the musts. Please globally review must in this standard. If they impose a compliance requirement for this standard use a "shall" construction. If they are not a compliance requirement of this standard (even if they are a compliance requirement of some other standard [e.g. recorded format standard]) use a form of "is", "needs" or the like to avoid triggering the compliance bell.

RESPONSE: Global search completed and modified as requested.

Page 37
Under Figure 7 why are there periods next to some of the "to"s.

RESPONSE: Periods removed

Page 38
Several registration authorities have been mentioned in MMC-2. Since it is presently not clear, to me, which material in MMC-2 is redundant to other normative standards, it is also not clear to me which registration authorities are required by MMC-2 itself. This probably needs to be clear to the implimentor, it should be clear to the T10 Chair, and it definitely needs to be clear to the IR since a list needs to be filled out when the draft is proposed as an international standard.

RESPONSE: No Response?

Page 44
In 4.2.2.8 delete "on that".

RESPONSE: Modified the sentence

Page 58
The "3 Bytes" and "1 Bit" two places labels needs to be moved for readability in Figure 24.

RESPONSE: Figure modified to clear labels

Page 65
The hung comment also applies to Figure 26.
RESPONSE: Modified as noted

Page 67
Should item (3) in 4.3.6.4 have "the same single region" rather than "a same single region"?
RESPONSE: Changed the sentence

Page 71
In 4.4.1 delete "actually" and the temporal "This type does not exist today, although it is possible." and delete the balance of the paragraph since it is idle discussion having no bearing on the standard.

In 4.4.1.1 change "There can exist a Logical Unit that is capable of changing the side of the Disc, but does not have separate Slots from the playing position. This type of Logical Unit reports that it has a Mechanism type that is not a changer, but also reports Side Change Capable." to "A Logical Unit that is capable of changing the side of the Disc, but does not have separate Slots from the playing position reports that it has a Mechanism type that is not a changer, but also reports Side Change Capable." The second paragraph is hard to parse.
RESPONSE: Accepted Sentences modified and paragraph re-written

Page 78
In Table 34 and probably other portions of the standard use the phrase Vendor Unique is used. As I recall SCSI standards use Vendor Specific on the picky point that it may not be unique.
RESPONSE: Modified as requested

Page 84
Table 44 has a different acronym for the Pvnt Jumprr than does the text.
RESPONSE: Changed to match

Page 97
In 5.3.18 the Test Write bit set to one should have the "shall" form rather than the "is" form.
RESPONSE: Modified as requested

Page 100
5.3.22 requires that the commands in Table 90 be implemented but there is only a single command in Table 90.
RESPONSE: Added the READ BUFFER command

Page 101
Table 92 and the associated text also disagree on the number in the table.
RESPONSE: Accepted

Page 110
In Table 108 and elsewhere a column is included called Status. The entries in this case state NOT USED. Does this mean status is not used or the page is not used. I suggest deleting the column and placing "Shall not be implemented" in the Sub-Clause column.
RESPONSE: Accepted - Changed as requested

Page 113
In Table 113 what does "(Optional) Default 0"for the PS bit mean? Is a device that adds the cost of non-volatile memory have to default to not using it?
RESPONSE: Removed "optional"

Page 149
Regarding the note under Table 154 how fast is "immediately"? Is the tolerance infinite?
RESPONSE: Removed the note.

Page 163
There are quite a few tables (e.g. Table 186) in which the columns are too narrow for the items or the font is too large for the columns. This may be due to pdf differences but should be checked.
RESPONSE: Checked all tables for size

Page 196
The structure of some of the tables (e.g. Table 240) with the same byte numbers repeating is confusing. I think this confusion could be cleared up by changing the data length name from the generic DVD structure to the specific (e.g. Copyright Management Information Data Length). Alternatively beginning the information with Byte number 4 and changing the data length to additional data length. The definition of data length implies that the Reserved Bytes are included but I assume some will conclude that it begins with the second Byte 0.
RESPONSE: Sentence modified under table 228 for clarification.

Page 209
Table 261 has a note that the command is not mandatory. Are tables with command information without a note of this type describing mandatory commands?
RESPONSE: Note removed and statement added before the table.

Page 219
T10 was required to report projects that had a potential year 2000 problem. It appears from Table 282 that MMC-2 has such a problem? Was it reported? Should anything be done about it?
RESPONSE: This is a field that is not controlled by MMC standard. The ISRC data is controlled by an international group and only two digits were allocated. The working group does not know how to resolve this problem.

Page 223
Regarding the earlier comment on potential confusion on the repeating Byte numbers. The construction of Tables like Table 287 is not confusing and should be used as the style for the others.
RESPONSE: Changed other tables to match.

Page 230
A third construction for the tables is found in Table 295. The style established by SPC should be used for all cases.
RESPONSE: Change all tables to match 287

Page 238
The note above Table 307 has a normative requirement. Normative requirements need to be moved from the notes to the clause text.
RESPONSE: Remove note format and made it clause text.

Page 264
Something odd happened to Table 354 in the pdf.
RESPONSE: Fixed the table

Page 265
The note under Table 356 should be text due to the normative requirement. A global check is needed.
RESPONSE: Remove note format and made it clause text.

Page 277
Clause 6.1.40 includes an editor's note concerning work yet to be completed.
RESPONSE: Removed note.

Page 281
Where is ++R in Annex A explained?
RESPONSE: Don't know. Removed ++.

Page 292
What value is B.2.1.1? Changed back to "Host". Global change was incorrect.

B.2 should be MMC-2 not MMC.
RESPONSE: Changed as requested

Page 295
When will Annex C be added?
RESPONSE: Annex C will be added when RBC is completed

Page 303
Why does Table L.1 have a column with no entries?
RESPONSE: Column will contain either SBC, SPC, SBC-2, or SPC-2.

Page 312
Table N.3 also has a blank column.
RESPONSE: Table N3 to be eliminated.

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Comments attached to Yes ballot from Robert Snively of
Sun Microsystems Computer Co:

None at present. I reserve the right to make some before the
closing of the ballot.

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2/19/1999
Additional comments to MMC-2 Rev 9 ASC/ASCQ issues.
Below are the comments from Ralph Weber. The MMC-2 working group approve these items and has consulted R.

P29
The last sentence should read:
The sense key is set to NO SENSE, the additional sense code is set to NO ADDITIONAL SENSE DATA (00h) and the audio status (see Table 274) is reported in the additional sense code qualifier field.
RESPONSE: Accepted and modified per request.

Note: SPC-2 already has ASC/ASCQ definitions to fit this wording.

P46
READ OF SCRAMBLED SECTOR WITHOUT AUTHENTICATION is not a defined additional sense code.
Recommend using 30/10.
RESPONSE: Accepted as modified. Error definition added to Table A1 5/6F/01

P48
... sense code set to ILLEGAL REQUEST ... should be: ... sense key set to ILLEGAL REQUEST ...
RESPONSE Accepted and modified as requested

MEDIA REGION CODE IS MISMATCHED TO LOGICAL UNIT REQUEST is not a defined additional sense code
in annex A. 4.3.6.6.1 suggests that the code should be 6F/04. This leaves open the question of what definitions apply
to 6F/00 [must be defined], 6F/01 [may be reserved], 6F/02, and 6F/03.
RESPONSE: Accepted as modified. Error definition added to Table A1 5/6F/04

P49
... sense code set to ILLEGAL REQUEST ...should be: ... sense key set to ILLEGAL REQUEST ...
RESPONSE: Accepted and modified as requested

DRIVE REGION MUST BE PERMANENT/REGION RESET COUNT ERROR is not a defined additional sense code
in annex A. 6.1.34 suggests that the code should be 6F/05. See previous comment for discussion of 6F/00 code
definition.
RESPONSE: Accepted as modified. Error definition added to Table A1 5/6F/05

P55
MECHANICAL POSITIONING OR CHANGER ERROR (3B/16) is not listed in annex A, but several other 3B/xx
codes are.
RESPONSE: Accepted as modified. Error definition added to Table A1 4/3B/16

P99
check condition   should be: CHECK CONDITION
RESPONSE: Completed global change to all caps.

P109

FAILURE PREDICTION THRESHOLD - Predicted Logical Unit Failure is not defined. Recommend 5D/02 which SPC-2 *will* define as LOGICAL UNIT FAILURE PREDICTION THRESHOLD EXCEEDED.
RESPONSE: Accepted. Added error definition to Table 1 as 1/5D/02

FAILURE PREDICTION THRESHOLD EXCEEDED - Predicted Media Failure is not defined. Recommend 5D/01 which SPC-2 *already* defines as MEDIA FAILURE PREDICTION THRESHOLD EXCEEDED.
RESPONSE: Accepted. Added error definition to Table 1 as 1/5D/01

P115
The op code for SEND DVD STRUCTURE should be BFh as ADh belongs to READ DVD STRUCTURE
RESPONSE: Accepted. Changed as requested

P117
Strictly: LOGICAL UNIT NOT READY - OPERATION IN PROGRESS   should be: LOGICAL UNIT NOT READY, OPERATION IN PROGRESS
RESPONSE: Accepted and modified as requested.

P118
If the write parameter page is inconsistent with the PMA, CHECK CONDITION shall be set to ILLEGAL MODE FOR THIS TRACK.
should be: If the write parameter page is inconsistent with the PMA, CHECK CONDITION status shall be returned and the additional sense code shall be set to ILLEGAL MODE FOR THIS TRACK.
RESPONSE: Accepted and modified as requested.
If all tracks in the last session are not complete, generate Check Condition Status.   should be: If all tracks in the last session are not complete, generate CHECK CONDITION status.
RESPONSE: Accepted and modified as requested.

P119
Some description of ASC/ASCQ 71/04 is required. Also, 71/04 is not included in annex A.
Strictly: LOGICAL UNIT NOT READY - OPERATION IN PROGRESS   should be: LOGICAL UNIT NOT READY, OPERATION IN PROGRESS
RESPONSE: Accepted and modified as requested.

P121
Strictly: LOGICAL UNIT NOT READY FORMAT IN PROGRESS
should be: LOGICAL UNIT NOT READY, FORMAT IN PROGRESS
RESPONSE: Accepted and modified as requested.

P122
Strictly: ILLEGAL FIELD IN PARAMETER LIST   should be: INVALID FIELD IN PARAMETER LIST
Strictly: LOGICAL UNIT NOT READY - FORMAT IN PROGRESS   should be: LOGICAL UNIT NOT READY, FORMAT IN PROGRESS
Strictly: ILLEGAL FIELD IN PARAMETER LIST   should be: INVALID FIELD IN PARAMETER LIST
RESPONSE: All accepted and modified as requested.

P124
check condition should be: CHECK CONDITION
RESPONSE: See P99

P125
ZONED FORMATTING FAILED DUE TO SPARE LINKING is not defined. Recommend 31/02.
RESPONSE: Accepted and modified as requested. Error definition added to Table A1, 03/31/02

P130

Regarding: "This command shall not return a Unit Attention check condition." Personally, I'd prefer that this read: This command shall not return CHECK CONDITION status to report a unit attention condition.
RESPONSE: Accepted and sentence inserted.
But, if that's not acceptable, at least fix the capitalization: This command shall not return a unit attention CHECK CONDITION.
RESPONSE: See 1st paragraph.

P140
In 3 instances above: strictly: INVALID FIELD IN COMMAND DESCRIPTOR BLOCK should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested in all instances.

P149
LOGICAL BLOCK OUT OF RANGE should be LOGICAL BLOCK ADDRESS OUT OF RANGE ILLEGAL MODE FOR THIS TRACK OR INCOMPATIBLE MEDIUM should be ILLEGAL MODE FOR THIS TRACK or INCOMPATIBLE MEDIUM INSTALLED.
RESPONSE: Accepted and modified as requested.

P150
Check Condition should be: CHECK CONDITION
RESPONSE: See P99

P155
In 3 instances above: CHECK condition should be: CHECK CONDITION
RESPONSE: See P99

P162
ILLEGAL MODE FOR THIS TRACK OR INCOMPATIBLE MEDIUM should be ILLEGAL MODE FOR THIS TRACK or INCOMPATIBLE MEDIUM INSTALLED
RESPONSE: Accepted and modified as requested.

P176
COPY PROTECTION KEY EXCHANGE FAILURE - KEY NOT PRESENT is not defined. Maybe this is 6F/01
COPY PROTECTION KEY EXCHANGE FAILURE - KEY NOT ESTABLISHED is not defined. Maybe this is 6F/02
INVALID FIELD IN COMMAND PACKET probably should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested. Error definitions added to Table A1 (match Fuji3)
P204
... an INVALID FIELD in COMMAND PACKET should be: ... an additional sense code of INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested.

NOT READY, MEDIA FORMAT NOT COMPATIBLE is not defined. Recommend using INCOMPATIBLE MEDIUM INSTALLED (30/00) or defining 04/09 as LOGICAL UNIT NOT READY, MEDIA FORMAT NOT COMPATIBLE
RESPONSE: Accepted comment and modified as "CANNOT READ MEDIUM – INCOMPATIBLE FORMAT" 30/02.

P216
Check Condition should be: CHECK CONDITION
RESPONSE: See P99

P222
SYSTEM RESOURCE FAILURE is not listed in annex A
RESPONSE: Accepted and modified as requested. Error definitions added to Table A1

P224
COPY PROTECTION KEY EXCHANGE FAILURE - KEY NOT PRESENT is not defined. Maybe this is 6F/01
RESPONSE: Error definition added to Table A1. 5/6F/01 (match Fuji3)

P225
COPY PROTECTION KEY EXCHANGE FAILURE - KEY NOT PRESENT is not defined. Maybe this is 6F/01
RESPONSE: Error definition added to Table A1 5/6F/01 (match Fuji3)
COPY PROTECTION KEY EXCHANGE FAILURE - KEY NOT ESTABLISHED is not defined. Maybe this is 6F/02
RESPONSE: Error definition added to Table A1 5/6F/02 (match Fuji3)

P228
INVALID FIELD IN COMMAND PACKET   probably should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested.

P229
NO MORE RESERVATION IS ALLOWED is not defined. Recommend defining 55/03 as NO MORE TRACK RESERVATIONS ALLOWED
RESPONSE: Added definition to Table A1 at 72/05 (match Fuji3)

RMA/PMA IS FULL is not defined. Recommend defining 55/04 as RMA/PMA IS FULL
RESPONSE: Added definition to Table A1 at 72/06 (match Fuji3)

P232
INVALID FIELD IN COMMAND DESCRIPTOR BLOCK   should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested.

P241
INVALID FIELD IN COMMAND PACKET   probably should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested.

P248
COPY PROTECTION KEY EXCHANGE FAILURE - AUTHENTICATION FAILURE is not defined.   Maybe this is 6F/03
RESPONSE: Accepted. Added definition to Table A1 as 6F/00 (match Fuji3)

P255
Strictly: ILLEGAL FIELD IN PARAMETER LIST   should be: INVALID FIELD IN PARAMETER LIST
RESPONSE: Accepted and modified as requested.

P260
INVALID ADDRESS FOR WRITE is not defined. Recommend defining 21/02 as INVALID ADDRESS FOR WRITE
RESPONSE: Accepted and modified as requested.

P261
INVALID ADDRESS FOR WRITE is not defined. Recommend defining 21/02 as INVALID ADDRESS FOR WRITE
RESPONSE: Accepted and modified as requested.

P262
Invalid Field in CDB   should be: INVALID FIELD IN CDB
RESPONSE: Accepted and modified as requested.

P264
should also list:

00/12 AUDIO PLAY OPERATION PAUSED
00/13 AUDIO PLAY OPERATION SUCCESSFULLY COMPLETED
00/14 AUDIO PLAY OPERATION STOPPED DUE TO ERROR
00/15 NO CURRENT AUDIO STATUS TO RETURN
RESPONSE: Accepted and modified as requested, error definitions added to Table A1.

P284
Strictly, 29/00 is POWER ON, RESET, OR BUS DEVICE RESET OCCURRED
RESPONSE: Accepted and modified as requested.

P293
MODE SELECT(6), MODE SENSE (10), and MODE SENSE(6) all could be made optional.
RESPONSE: Accepted and modified as requested. Kept MODE SENSE (10) as Mandatory.

****
Pioneer Comments. The majority of the comments were to update the DVD-R information.

No.	MMC2 Page Clause Pos.	MMC2 Rev.9.0D1	Mt.Fuji Page Clause Pos.	Proposal	Comment
1.	through document	Host	-	Initiator	To change **COMPLETED**
2.	through document	drive	-	Logical Unit	To change **COMPLETED**
3.	page 65 5.3.3 9th para. .... page 66 6th para.	Event Class 4 shall be supported.. ...For example, if the user inserts a new medium and the Logical Unit is accessed with a command, the CHECK CONDITION with UNIT ATTENTION shall be reported, but the Logical Unit shall also report the NEW MEDIA Event with the next available GET EVENT STATUS NOTIFICATION (Media Status) command.	-	[Move to page 67 5.3.4 Removable Medium Feature]	To move to other location **Completed Information move to 4.1.7**
4.	page 70 5.3.7 Table 49		page 197 11.5.2.7 2nd para. from last	The READ TOC/PMA/ATIP Command with format codes of 0h, 1h, and 2h shall be supported. If the CD-Text bit is set, code 5h shall be supported.	To add a note into Table 49. **COMPLETED SEE PAGE 70 Table 49**
5.	page 70 5.3.8 Table 51		page 198 11.5.2.8 8th para.	The READ DVD STRUCTURE Command with Format Codes of 00h, 01h, 03h and 04h shall be supported. If the Logical Unit also reports the DVD RAM Profile (5.4.10., "Profile 12h: DVD Re-Writable" on page 93) or supports reading of DVD-RAM media, then Format code of 08h shall be supported if DVD-RAM media is present.	To add a note into Table 51 **ADDED underlined phrase**
6.	page 71 5.3.9		page 199 11.5.2.9	[35h, SYNCHRONIZE CACHE Command, 6.1.40]	To add into Table 53

	Table 53		5th para.	[Note: The Immediate bit shall be supported.]	**ADDED**
7.	page 73 5.3.10 1st para	On CD media, this is known as packet recording.	page 200 11.5.2.10 3rd para.	On CD media, this is known as packet recording. <u>On DVD media, this is known as Incremental recording.</u>	To add **ADDED underlined phrase**
8.	page 73 5.3.10 Table 55		page 201 11.5.2.10 2nd para.	[53h, RESERVE TRACK Command, 6.1.2.9.]	To add into Table 55 **ADDED**
9.	page 73 5.3.10 Table 55	2. Shall be supported if the OPC information is ever returned in the READ DISC INFORMATION return data.	page 201 11.5.2.10 5th para.	2. Shall be supported if the OPC information is ever returned in the READ DISC INFORMATION return data. 3. <u>Shall be supported with Blanking Types of 000b, 001b, and 100b.</u>	To add a note to Table 55 **ADDED underlined phrase to note 1**
10.	page 76 5.3.14 Table 64.	WRITE AND VERIFY	page 203 11.5.2.14 15th para.	WRITE AND VERIFY (10)	To change **Global changed**
11.	page 77 5.3.14 3rd para.	If there is more than one Blocking on the medium possible, the Blocking field shall be set to zero. See the READ TRACK INFORMATION Command for more information.	-	[Delete]	To delete this is for CD-R, not for WORM **REJECTED CHANGE**
12.	page 77 5.3.15 5th para.	CD-R/W	-	CD-RW	To change **Global changed**
13.	page 77 5.3.15 Table 67		page 205 11.5.2.15 3rd - 6th para.	[51h, READ DISC INFORMATION Command, 6.1.18] [52h, READ TRACK INFORMATION Command, 6.1.26] [25h, READ CAPACITY Command, 6.1.17] [35h, SYNCHRONIZE CACHE Command, 6.1.40]	To add into Table **ADDED**
14.	page 78 5.3.16 Table 70		page 206 11.5.2.16 1st para.	[35h, SYNCHRONIZE CACHE Command, 6.1.40]	To add to Table 70 **ADDED**
15.	page 78 5.3.16 Table 70	Notes: 1. Shall be implemented if the Erasable bit, in the READ DISC INFORMATION returned data, is set to one.	page 206 11.5.2.16	Notes: 1. Shall be implemented with Blanking Types of 000b, 001b if the Erasable bit, in the READ DISC INFORMATION returned data, is set to one.	To add **ADDED**
16.	page 81 5.3.18 Table 80		-	[Byte 4, Bit 6, BUFE]	To add BUFE bit in Table 80 **ADDED**
17.	page 81 5.3.18 6th para.	The Additional Length field shall be set to 04h.	-	The Additional Length field shall be set to 04h. <u>The BUFE bit shall indicate that the Logical Unit can perform Buffer Under-run Free recording.</u>	To add description for BUFE bit **ADDED**
18.	page 83 5.3.21 Table 86	[BDh, MECHANISM STATUS, 6.1.8]	-	[Delete]	To delete **REJECTED**
19.	page 84 5.3.23 Table 91		page 213 11.5.2.24 10-11th para.	Sense code "6/2E/00 INSUFFICIENT TIME FOR OPERATION" shall be supported if queuing is not supported. Event Notification Class 6 shall be supported if queuing is supported.	To add a note to Table 91 **ADDED Paragraph**

20.	page 87 5.3.27 2-3rd para.	The READ DVD STRUCTURE Command with a Format Code of 30h shall be supported. If any DCBs are identified as writable, the SEND DVD STRUCTURE Command shall be supported.	-	[These descriptions should be convert to Table format to consistent with other Features]	To change **INSERTED TABLE**
21.	page 97 5.5.3 1st para.	The Read/Write Error Recovery Parameters Page (Table 115) specifies the error recovery parameters the Logical Unit shall use during any command that performs a data read operation from the media (e.g. READ, READ TOC/ PMA/ATIP, etc.).	page 254 11.12.3.1 1st para.	The Read/Write Error Recovery Parameters Page (Table 115) specifies the error recovery parameters the Logical Unit shall use during any command that performs a data read or write operation from the media (e.g. READ, READ TOC/PMA/ATIP, WRITE, etc.).	To add **ADDED** **underlined**
22.	page 100 5.5.3 Table 116 error code 14h	If an data error occurs that is uncorrectable with the ECC information available on the media, or is uncorrectable in time to maintain data transfer, the data is not terminated.	page254 11.12.3.1. Table 181 Code 14h	If an data error occurs that is uncorrectable with the ECC information available on the media, or is uncorrectable in time to maintain data transfer, the data transfer is not termi-nated.	To clarify **ADDED**
23.	page 101 Under Table 116	[There is no Table for DVD]	page255 11.12.3.1 Table 182	[Add Table]	To add to Error Recovery Descriptions for DVD media
24.	page102 5.5.4. 2nd para.	The values in this page do not necessarily reflect the status on a given track. They will be used as applicable when a write operation occurs. If any parameters have values incompatible with the current track, a check condition status shall occur when a write is attempted.	page 265 11.12.3.7. 4th para.	The values in this Page do not necessarily reflect the status on a given medium. They will be used as applicable when a write operation occurs. If any parameters have values incompatible with the current medium, the Logical Unit shall generate a CHECK CONDITION Status, 5/64/00 ILLEGAL MODE FOR THIS TRACK when a write is attempted. NOTE: Fields that are ignored for the current medium may contain 0 for the default mode parameter value.	To change and add **ADDED and CHANGED**
25.	page 102 5.5.4 Table 117	[FP, Track Mode, Data Block Type, Host Application Code, Session Format, Audio Pause Length, Media Catalog Number, International Standard Recording Code, Sub-header Byte 0 - 3]	page 265 11.12.3.7 Table 193	[These fields are ignored when DVD-R medium is present.]	To add footnote or something **ADDED PARAGRAPH and REMOVED Note 1.**
26.	page 103 5.5.4 4th para.	The Test Write bit is valid only for Write Type 1 or 2 (Track at Once or Session at Once). When the Test Write bit is set to one, it indicates that the device performs the write process, but does not write data to the media. When the bit is set to zero the Write laser power is set such that user data is transferred to the CD media.	page 266 11.12.3.7 4th, 5th, 7th para.	On CD-R/RW media, the Test Write bit is valid only for Write Type 1 or 2 (Track at Once or Session at Once). On DVD-R media, the Test Write bit is valid only for Write Type 0 or 2 (Incremental or Disc-at-once). When the Test Write bit is set to one, it indicates that the device performs the write process, but does not write data to the media. When the bit is set to zero the Write laser power is set such that user data is transferred to the media.	To add description for DVD-R media **ADDED Underlined**
27.	page 103 5.5.4	Write Type Field (Table 118) specifies the CD-R/RW stream type to be used	page 266 11.12.3.7	Write Type Field (Table 118) specifies the stream type to be used during	To delete **DELETED**

	5th para.	during writing.	8th para.	writing.	
28.	page 103 Table 118 Value 00h	Packet	page 266 Table 194 Value 00h	Packet/Incremental	To change field name **RENAMED Field**
29.	page 103 Table 118 Value 01h	[Track-at-once, Raw]	page 266 Table 194 Value 01h	[Write Type of Track-at-once and Raw are invalid when DVD-R is present.]	To add footnote or something **ADDED**
30.	page 103 5.5.4 6th para.	Packet - the device shall perform packet writing when WRITE commands are issued.	page 266 11.12.3.7 9th para.	Packet/Incremental - the device shall perform packet/incremental writing when WRITE commands are issued.	To change **ADDED Incremented**
31.	page 103 5.5.4 7th para.	This mode requires that a cue sheet be sent prior to sending write commands.	page 266 11.12.3.7 10th para.	For CD, This mode requires that a cue sheet be sent prior to sending write commands.	To add **ADDED**
32.	page 103 Table 119 2nd col.	[Table 119]	page 267 Table 195 2nd col.	[Table 195]	To replace 2nd column of Table 119 and Table 195 of Mt.Fuji 3 **TO BE DONE**
33.	page 103 5.5.4 last para.	This bit is ignored unless the write type is set to 0 (Packet).	page 267 11.12.3.7 1st para.	This bit is ignored unless the write type is set to 0 (Packet). For DVD-R, this bit shall be set to one and ignored.	To add ***FINDME **ADDED Underlined**
34.	page 104 5.5.4 1st para.	The initial value on the medium is zero.	page 267 11.12.3.7 3rd para.	The initial value on the medium is zero. For DVD-R, this field shall be ignored.	To add **REJECT see previous paragraph**
35.	page 104 5.5.4 2nd para.	Track Mode is the Control nibble in all mode 1 Q Sub- channel in the track.	page 267 11.12.3.7 2nd para.	Track Mode is the Control nibble in all mode 1 Q Sub- channel in the track. This field shall be ignored for DVD-R recording. The default value of this field for DVD-R Logical Units should be 5.	To add **Added Underlined**
36.	page 104 5.5.4 3rd para.	This size is used for writing instead of the block size set in the mode select header.	page 267 11.12.3.7 last para.	This size is used for writing instead of the block size set in the mode select header. For DVD-R, this field shall be ignored. The default value of this field for DVD-R Logical Units should be 8.	To add **Added Underlined**
37.	page 105 5.5.4 2nd para.	An Initiator Application Code of zero is used for a Restricted Use - General Purpose Disc.	page 269 11.12.3.7 2nd para.	An Initiator Application Code of zero is used for a Restricted Use - General Purpose Disc. The Host Application Code field is ignored for DVD-R recording.	To add **Added Underlined**
38.	page 105 5.5.4 9th para.	The Packet Size field specifies the number of User Data Blocks per fixed packet.	page 269 11.12.3.7 4th para.	The Packet Size field, if FP bit is set to 1, specifies the number of User Data Blocks per fixed packet. The Packet Size field, if FP bit is set to 0, shall be ignored. For DVD-R media, the default Packet Size shall be 16. The Packet Size shall be set to 16 to record to DVD-R media.	To add **Added Underlined**
39.	page 119 6.1.1 1st para.	The BLANK command (Table 134) provides the ability to erase any part of a CD-RW disc.	page 169 11.1 2nd para.	The BLANK Command (Table 134) provides the ability to erase any part of a CD-RW disc. The SET STREAMING Command may	To add **REJECTED Moved to SET STREAMING**

				affect the speed at which the blanking operation is performed.	
40.	page 119 6.1.1 2nd para.	Note: The erasing action performed in this command is a Logical Erase.	page 169 11.1 3rd para.	Note: The erasing action performed in this command is a Logical Erase, in which data are overwritten with Mode 0 data on CD media.	To add **ADDED**
41.	page 120 6.1.1 Table 135 Value000 b	This is used for clearing a complete disc. After completion of this command the disc is blank.	page 170 11.1 Table 69 Value000b	This is used for clearing a complete disc. The PCA may be excluded. At completion of the operation, the area from the start time of Lead-in through the last possible start time of Lead-out plus 6,750 blocks and the entire PMA shall be blank.	To change **ADDED**
42.	page 119 6.1.1 last para.	b) When Blanking Type is Blank a Track, this field indicates the Track.	page 170 11.1 4th para.	b) When Blanking Type is Blank a Track, this field indicates the Track. Morphing may occur when the BLANK operation is requested (to indicate changing to the NOT READY condition) and when the BLANK operation completes (to indicate the Restricted Overwrite Feature and others becoming Current). ADD- When the Logical Unit changes status (NOT READY, READY) a Class 1 Event shall be generated.	To add **Added Underlined**
43.	page 120 6.1.1 2nd para.	a) In response to all commands except REQUEST SENSE and INQUIRY, the Logical Unit shall return CHECK CONDITION status unless a reservation conflict exists, in that case RESERVATION CONFLICT status shall be returned.	page 170 11.1 6th para.	a) In response to all commands that can return NOT READY status, the Logical Unit shall return CHECK CONDITION status, 2/04/07 LOGICAL UNIT NOT READY, OPERATION IN PROGRESS unless a reservation conflict exists, in that case RESERVATION CONFLICT status shall be returned. INQUIRY, GET CONFIGURATION, GET EVENT/STATUS NOTIFICATION, and REQUEST SENSE are among the commands that shall not return a NOT READY error (Sense Key 2).	To change **Added Underlined**
44.	page 120 6.1.1 3rd para.	b) In response to the INQUIRY command, the Logical Unit shall respond as commanded.	page 170 11.1 7th para.	b) In response to the INQUIRY, GET CONFIGURATION, GET EVENT/STATUS NOTIFICATION command, the Logical Unit shall respond as commanded.	To add **ADDED**
45.	page 121 6.1.2 1st para.	When a Close Session is requested and Write Parameters specify that the disc is to remain open and there is not sufficient space for the next session, the session to be closed shall be closed with the B0 pointer set to FF:FF:FF.	page 174 11.2 last para.	If the Multi Session field in the Write Parameters Mode Page (05h) is set to 11b and there is not sufficient space for the next Session, the Session to be closed shall be closed and next Session shall not be allowed. For CD, the Session is closed without the B0 pointer. For DVD, the Session is closed with Lead-out and the Start PSN of the next Border- in field of Lead-in/Border-in set to 0. Note: In the case of insufficient space for the next Session, legacy CD-R/RW	To change, add **CHANGED To underlined**

				Logical Units may generate an error in the above case. In this case, the Host should change the MultiSession field in the Write Parameters Mode Page (05h) and retry the Command.	
46.	page 121 6.1.2 Table 137	[Byte 4 Reserved] [Byte 5 Track Number]	page 173 11.2 Table 71	[Byte 4 Track Number (MSB)] [Byte 5 Track Number (LSB)]	To change **CHANGED BYTE4**
47.	page 121 6.1.2 2nd para.	If IMMED is one, then status is returned once the close operation has begun.	page 173 11.2 3rd para.	If IMMED is set to 1, then status is returned once the close operation has begun. For DVD, DVD-R Logical Units may write cached RMD into the RMA immediately upon receipt of a CLOSE TRACK/SESSION Command. DVD-R Logical Units may delay the Close operation and writing of cached RMD into RMA to allow multiple CLOSE TRACK/SESSION Commands to be issued quickly. In this case, it is recommended that the Logical Unit not write RMD into the RMA until the last CLOSE TRACK/SESSION Command in a sequence has been received.	To add **REJECTED - Items added to model sections**
48.	page 121 6.1.2 Table 138 3rd row	If this is the incomplete track, Pad only to the minimum length of 4 seconds. No other padding is to be done. If this is the partially recorded or empty reserved track, the Logical Unit shall pad the track. In the case of an empty track, the Logical Unit shall write the track according to the write parameter page. If the write parameter page is inconsistent with the PMA, CHECK CONDITION shall be set to ILLEGAL MODE FOR THIS TRACK.	page 174 11.2 Table 72 3rd row	For CD, if this is the incomplete track, the Logical Unit shall pad with all zero main data to the minimum length of 4 seconds. No other padding is to be done. In the case of an empty reserved track, the Logical Unit shall write the track according to the Write Parameters Mode Page (05h). If the Write Parameters Mode Page (05h) is inconsistent with the PMA or TDB, the Logical Unit shall return CHECK CONDITION Status, 5/64/00 ILLEGAL MODE FOR THIS TRACK. For a partially recorded reserved track, the Logical Unit shall continue writing in the same mode as the data already recorded. For DVD, if this is the Partially Recorded Reserved Track or the Empty Reserved Track, the Logical Unit shall pad the Track with 00h bytes. If the Track status is Invisible, no close operation is to be done. In the case of an Incomplete Track, no padding is to be done and cached RMD shall be written into the RMA.	To add **ADDED underlined**
49.	page 121 6.1.2 Table 138 4th row	Close session. If all tracks in the last session are not complete, generate Check Condition Status.	page 174 11.2 Table 72 4th row	Close Session. If all Tracks in the last Session are not complete, generate CHECK CONDITION Status, 5/72/03 SESSION FIXATION ERROR - INCOMPLETE TRACK IN SESSION or if empty or partially recorded reserved	To add **Added underlined data**

				If Tracks exist in the incomplete Session, generate CHECK CONDITION Status, 5/72/04 EMPTY OR PARTIALLY WRITTEN RESERVED TRACK. Behavior of the closing operation is dependent on the MultiSession field in the Write Parameters Mode Page (05h). Closing an empty Session not produce an error and a write to the media shall not occur.	
50.	page 121 6.1.2 5th para.	If Session is set to zero and Track is set to one, byte 5 of the CDB contains the track number of the track to close. If the track number is FFh, then the incomplete track is to be closed. Byte 5 of the CDB shall be ignored if the Session bit is set.	page 174 11.2 2nd para	If the Session _bit_ is set to zero and Track _bit_ is set to one, the _Track number field_ _indicates the number of the Track to_ _close. Bytes 4 through 5 of the CDB_ shall be ignored if the Session bit is set to 1.	To change, remove **ADDED underlined sentence.**
51.	page 121 6.1.2 6th para.	In order to close the incomplete track, the following steps are required:	page 174 11.2 3rd para.	_For CD,_ in order to close the incomplete track, the following steps are required:	To add **ADDED Phrase**
52.	page 121 6.1.2 7th para.	1) If necessary, the track is padded to the minimum length of 4 seconds.	page 174 11.2 4th para.	1) If necessary, the track is padded _with_ _all zero main data_ to the minimum length of 4 seconds.	To add **ADDED Phrase**
53.	page 121 6.1.2 last para.	3. The bounds of the track are determined and a PMA entry is written for track N+1.dated.	page 174 11.2 7th para.	3. The bounds of the track are determined and a PMA entry is written for track N+1.dated. _Closing a Track shall cause cached_ _information for the specified Track to be_ _committed to the medium prior to_ _closing._	To add **ADDED Sentence**
54.	page 122 6.1.2 1st para.	Closing a Session shall cause the Lead-in and Lead-out to be written for the incomplete Session.	page 174 11.2 8th para.	_For CD,_ closing a Session shall cause the Lead-in and Lead-out to be written for the incomplete Session. _For DVD, closing an incomplete Session_ _shall cause the Lead-in or Border-in and_ _Border-out to be written for the_ _incomplete Session. If the Multi-Session_ _field in the Write Parameters Mode Page_ _(05h) is set to 00b, a Lead-out shall be_ _appended to last Border-out. Once the_ _Lead-out has been written for DVD_ _media, data can not be further appended_ _to the medium._	To add **TO BE DONE ADDED undrline data**
55.	page 122 6.1.2 2nd para.	If partially recorded, empty, or incomplete tracks exist in the incomplete session, the drive shall issue CHECK CONDITION status, ILLEGAL REQUEST, SESSION FIXATION ERROR INCOMPLETE TRACK IN SESSION.	page 174 11.2 last para.	If partially recorded or empty Tracks exist in the incomplete Session, the Logical Unit shall report CHECK CON-DITION Status, 5/72/04 EMPTY OR PARTIALLY WRITTEN RESERVED TRACK. _If an Incomplete Track exists,_ _the Logical Unit shall report CHECK_ _CONDITION Status, 5/72/03 SESSION_ _FIXATION ERROR - INCOMPLETE_ _TRACK IN SESSION._	To change **ADDED Underlined**
56.	page 122 6.1.2 4th para.	a) In response to all commands except REQUEST SENSE and INQUIRY, the Logical Unit shall return CHECK	page 173 11.2 5th para.	a) While a CLOSE TRACK/SESSION operation is in process, the Logical Unit may respond to Commands that can	To change **ADDED as underlined and**

		CONDITION status unless a reservation conflict exists, in that case RESERVATION CONFLICT status shall be returned.		return NOT READY status with CHECK CONDITION Status, 2/04/07 LOGICAL UNIT NOT READY, OPERATION IN PROGRESS unless a reservation conflict exists, in that case RESERVATION CONFLICT status shall be returned.	**modified**
57.	page 122 6.1.2 5th para.	b) In response to the INQUIRY command, the Logical Unit shall respond as commanded.	page 173 11.2 6th para.	b) In response to the INQUIRY, GET CONFIGURATION, and GET EVENT/STATUS NOTIFICATION Commands, the Logical Unit shall respond as commanded.	To add **Commands Added**
58.	page 122 6.1.2 6th para.	c) In response to the REQUEST SENSE command, unless an error has occurred, the Logical Unit shall return a sense key of NOT READY and an additional sense code of LOGICAL UNIT NOT READY - OPERATION IN PROGRESS, with the sense key specific bytes set for progress indication.	page 173 11.2 7th para.	c) In response to the REQUEST SENSE Command, unless an error within the Command itself has occurred, the Logical Unit shall return GOOD Status, 2/04/07 LOGICAL UNIT NOT READY, OPERATION IN PROGRESS or 2/ 04/08 LOGICAL UNIT NOT READY, LONG WRITE IN PROGRESS indicated in the result data and the sense key specific bytes set for progress indication.	To add **Completed Added new text**
59.	page 122 6.1.2 7th para.		page 175 11.2 3rd para.	Closing a Track or Session shall cause a Class 1 Event when the command is issued if the Logical Unit becomes NOT READY. A Class 1 Event shall occur if the medium returns to READY or if the medium becomes unwritable. Other Class 1 Events may occur due to closing a Track or Session.	To add **ADDED underlined**
60.	page 122 6.1.2 7th para.		page 173 11.2 8th para.	Determining the end of a sequence of CLOSE TRACK/ SESSION Commands is vendor specific.	To add **REJECTED**
61.	page 123 6.1.3 2nd para.	There is no guarantee that the medium has not been altered.	page 179 11.4 3rd para.	There is no guarantee that the medium has not been altered. The SET STREAMING Command may affect the speed used to Format the medium.	To add **REJECTED**
62.	page 133 6.1.5	GET EVENT STATUS NOTIFICATION	page 217 11.6	GET EVENT/STATUS NOTIFICATION	"/" is needed **DID GLOBAL CHANGE**
63.	page 135 6.1.5 under Table 161		page 220 11.6.1 Table 129	[Table 129 - Operational Event Format]	To add missing Table after Table 161 **ADDED TABLEE**
64.	page 135 6.1.5 Table 162	0h Ready The Logical Unit is ready for operation	page 220 11.6.1 Table 130	0h Available The Logical Unit is ready for operation	To change **REJECTED**
65.	page 135 6.1.5 Table 162	2h Busy/Reserved The Logical Unit is performing operations that will take an indefinite amount of time to terminate or is reserved by another Initiator.	page 220 11.6.1 Table 130	2h Busy The Logical Unit is performing operations that will take an indefinite amount of time to terminate.	To delete (Moved to Multi-host Event) **REJECTED NEED TO KNOW IF**

					RESERVED TO ANOTHER INITIATOR
66.	page 135 6.1.5 2nd para. from last	An example of an action that shall be reported after the action is taken is termination of a play operation due to an error or end of medium.	page 220 11.6.1 1st para.	An example of an action that must be reported after the action is taken is termination of a <u>format operation due completion of formatting.</u>	To change **ADDED Underlined text**
67.	page 136 6.1.5 Table 163	**6h,** Control Request, Another Initiator has attempted a Persistent Prevent **7h,** Control Release, Another Initiator has performed a Persistent Allow	page 220 11.6.1 Table 131	[Delete]	To delete **DELETED**
68.	page 136 6.1.5 just after Table 163		page 220 11.6.1 last para	<u>Event 0h requires no Host action. The Host should respond to Events 1h through 5h with a GET CONFIGURATION Command to determine the Logical Unit configuration.</u>	To add **ADDED PARAGRAPH**
69.	page 140 6.1.6 4th para.	The Except field, when set to 00b, shall indicate that the nominal performance parameters be returned. When set to 01b, the entire performance exception list shall be returned. When set to 10b, only performance exceptions that cause the performance to fall outside the nominal shall be reported. For example, slipped sectors may not be included in the 10b list, but would be included in the 01b list.	page 229 11.7 3rd para.	The Except field, when set to 00b, shall indicate that the nominal performance parameters be returned. When set to 01b, the entire performance exception list, <u>qualified by the Starting LBA,</u> shall be returned. When set to 10b, only performance exceptions that cause the performance to fall outside the nominal shall be reported. For example, slipped sectors may not be included in the 10b list, but would be included in the 01b list. <u>An Except field of 11b is reserved.</u>	To add **ADDED Underlined Items**
70.	page 141 6.1.6 2nd para.	The Write bit, when set to zero, shall indicate that the result data is for read performance.	page 230 11.7 2nd para.	The Write bit, when set to zero, shall indicate that the result data is for read performance <u>using the nominal read command for the data type.</u>	To add **ADDED Underlined Text**
71.	page 141 6.1.6 3rd para.	All numbers are nominal.	page 230 11.7 3rd para.	All numbers are nominal. <u>On CD media, all sectors shall be reported as 2352 byte sectors.</u>	To add **DONE**
72.	page 141 6.1.6 3rd para.	For example, a 4X-6X CD-ROM drive (CAV/CLV combination) may return two nominal performance descriptors. The first descriptor indicates a Start LBA of 0, Start Performance of 600 KB/s, an end LBA in the middle, and a performance of 900 KB/s. The second descriptor indicates a start LBA, adjacent to the ending LBA, of the previous descriptor, an ending performance of 900 KB/s, and an end LBA at the end of the medium and an ending performance of 900 KB/s.	page 230 11.7 3rd para.	For example, a 4X-6X CD-ROM Logical drive (CAV/CLV combination) with a data disc loaded may return two nominal performance descriptors. The first would indicate a Start LBA of 0, Start Performance of 706 kB/s, and an end LBA in the middle and a performance of 1058 kB/s. The second would indicate a start LBA adjacent to the ending LBA of the previous descriptor, an ending performance of 1058 kB/s, and an end LBA at the end of the medium and an ending performance of 1058 kB/s. The data rate may vary according to the mounted medium, i.e. CD Audio Tracks may have a different spin rate than Data Tracks. 1kB/s is 1000 Bytes per second.	To change **DONE**
73.	page 142 6.1.6	The Start Performance field contains the nominal drive performance at the	page 231 11.7	The Start Performance field contains the nominal drive performance at the Start	To change **DONE**

		1st para.	Start LBA in KB/s.	2nd para.	LBA in kB/s.	
74.	page 142 6.1.6. 3rd para.		The End Performance field contains the nominal drive performance at the End LBA in KB/s.	page 231 11.7 4th para.	The End Performance field contains the nominal drive performance at the End LBA in kB/s.	To change **DONE**
75.	page 142 6.1.6 5th para.			page 231 11.7 6th para.	Note: A block replaced by linear replacement may cause two exceptions to appear in the Exception Descriptor list - one between the non-replaced area and the beginning of the replaced block, and one from the end of the replaced block back to the non-replaced area.	To add **ADDED note**
76.	page 167 6.1.17 1st para.		The READ CAPACITY command (Table 218) provides a means for the Initiator to request information regarding the capacity of the Logical Unit. The returned logical block address is modified to allow returning a possibly inexact value (but one with a known error bound) based on the Table of Contents data.	page 293 11.21 2nd para.	The READ CAPACITY command (Table 218) provides a means for the Initiator to request information regarding the capacity of the Logical Unit. This command may not report the correct capacity of the recorded data for CD-R, CD-RW and DVD-R media that do not have a Lead-out in the last Session or last Border-out. For CD-ROM, The returned logical block address is modified to allow returning a possibly inexact value (but one with a known error bound) based on the Table of Contents data.	To add **ADDED Sentence underlined**
77.	page 167 6.1.17 2nd para. from last		If the resulting address points to a run out block (because the session was recorded with packets or track at once in data mode), the Logical Unit shall subtract 2 from the LBA to point to the actual last user data block.	page 293 11.21. 2nd para. from last	If the resulting address points to a run out block (because the session was recorded with packets or track at once in data mode), the Logical Unit shall subtract 2 from the LBA to point to the actual last user data block. If no complete session exists on the medium, this field *shall* be set to zero.	To add **DONE**
78.	page 168 6.1.18 1st para.		The READ DISC INFORMATION Command (Table 221) provides information about all discs.	page 307 11.24 1st - 2nd para.	The READ DISC INFORMATION Command (Table 221) provides information about all discs: Magnetic, MO, C/ DVD-ROM, C/DVD-R, DVD-RAM, DVD+RW, and CD- RW, including all incomplete C/DVD-R, CD-RW discs. The READ DISC INFORMATION Command requests that the Logical Unit transfer general information about the medium that is mounted to the Initiator. The parameters returned are specific to the media that is currently installed in the Logical Unit. In the case of a DVD-ROM Logical Unit , the disc information returned may be for the last closed Session. In the case of of media that does not have logical tracks, the number of Tracks and Sessions is considered one. If this command is required by an implemented Feature, this command shall always function, even if that	To add **ADDED TEXT As Modified**

				Feature's Current bit becomes zero.	
79.	page 168 6.1.18 1st para.	For some media, it is not possible to completely characterize incomplete discs, with information from the READ TOC/PMA/ATIP command. **Delete this sentence**	page 307 11.24 2nd para.	For some media, it is not possible to completely characterize incomplete discs, with information from the READ TOC/PMA/ATIP command or the READ DVD STRUCTURE information.	To add **DELETED REFERNECED SENTENCE**
80.	page 168 6.1.18 3rd para.	The number of Disc Information Block bytes returned is limited by the Allocation Length parameter of the CDB. An Allocation Length of zero is not an error.	-	[Delete]	To delete due to redundancy **DELETED**
81.	page 169 6.1.18 Table 222	[DID_V, DBC_V, Disc Type, Disc Identification, Last Session Lead-in Start Time MSF, Last Possible Start Time for Start of Lead-out MSF, Disc Bar Code]	page 308 11.24 Table 243 footnote	[These fields are inapplicable field for non-CD media. Shall be set to 0.] ADD- If a field or bit is not applicable to the installed medium, the defaut parameters in the Write Parameters Mode Page shall be returned in the corresponding field.	To add footnote or something **ADDED Sentence**
82.	page 170 6.1.18 1st para		page 308 11.24 1st para.	The invalid field for corresponded media, will return 0.	To add **REJECTED**
83.	page 170 6.1.18 1st para	Data Length is the number of bytes available in both the recording information area and the appended OPC table. Data Length excludes itself.	page 308 11.24 2nd para.	The Disc Information Length is the number of bytes available in both the recording information area and the appended OPC table. Disc Information Length excludes itself.	To clarify **ADDED Phrase**
84.	page 170 6.1.18 2nd para.	Disc Status field indicates the status of the disc and is shown in Table 223.	page 309 11.24 1st para.	The Disc Status field indicates the status of the disc and is shown in Table 223. A device which does not have the ability to write for the inserted medium (ex. C/DVD-ROM device) will return "Complete"(10b) status.	To add **Modified and INSERTED**
85.	page 170 6.1.18 Table 223 4th row	Complete (CD ROM or last session is closed and has no next session pointer)	page 309 11.24 Table 245 4th row	Complete Disc (eg. Not Appendable. C/DVD-ROM, complete CD-R, CD-RW, DVD-R, or write protected Random Writable media)	To change **DONE**
86.	page 170 6.1.18 Table 223 5th row	Reserved	page 309 11.24 Table 245 5th row	Others (non-write protected Random Writable media)	To change **REPLACED with sentence - DONE**
87.	page 170 6.1.18 3rd para.	The State of Last Session field is defined in Table 224. For media that does not use Sessions this field shall be 11h.	page 308 11.24 4th para.	The State of Last Session field is valid only for discs with either empty or incomplete status and given by the following table. For DVD-RAM, this field will return "Complete" (11b). Table 224 shows the definition of the State of Last Session.	To add **REJECTED and modified as indicated**
88.	page 170 6.1.18 4th para	The Erasable bit, when set to one, indicates that CD-RW medium is present. Otherwise, CD-RW medium is not present.	page 308 11.24 3rd para.	The Erasable flag, when set to 1, indicates that DVD- RAM, DVD+RW or CD-RW medium is present. Otherwise, such a medium is not present.	To add **REJECT** changed CD-RW to Overwrittable
89.	page 170 6.1.18 5th para.	The Number of First Track identifies the first track number in the TOC or PMA. Valid track numbers are from	page 309 11.24 2nd para.	The Number of First Track on the disc: For non-CD media, this field shall be set to 1.	To change **ADDED Underlined data**

		01h to 63h. The first track number is not required to be one. A disc may start with any valid track number. The track numbers between the first and last track number shall be in contiguous ascending order, except for Lead-out areas.		For CD media, 1) If Disc Status is set to 00 (Empty Disc), the Number of First Track field shall be 1. 2) If there are no entries in the PMA and the first track is an Incomplete Track, the Number of First Track field shall be equal to 1. 3) If the only session on the disc is an Incomplete Session, the Number of First Track field is from the PMA. 4) Otherwise, the Number of First Track field contains the track number for the first TOC entry in the first Session.	
90.	page 170 6.1.18 7th para.	First Track Number in Last Session (bytes 5 & 10) is the track number of the first track in the last session. This is inclusive of the invisible track.	page 309 11.24 10th para.	First Track Number in Last Session (bytes 5 & 10) is the track number of the first track in the last session. In order that Tracks in a last Session which is open may be scanned for READ TRACK INFORMATION Command, the First Track Number in Last Session is identified. This is inclusive of the invisible track.	To add **ADDED Underlined data**
91.	page 170 6.1.18 8th para.	Last Track Number in Last Session (bytes 6 & 11) is the track number of the last track in the last session. This is inclusive of the invisible track.	page 309 11.24 10th para.	Last Track Number in Last Session (bytes 6 & 11) is the track number of the last track in the last session. In order that Tracks in a last Session which is open may be scanned for READ TRACK INFORMATION Command, the Last Track Number in Last Session is identified. This is inclusive of the invisible track.	To add **ADDED Underlined data**
92.	page 170 6.1.18 11th para	The URU (Unrestricted Use Disc) bit, when set to one, indicates that the mounted CD-R/RW disc is defined for unrestricted use. When the Unrestricted Use Disc bit is set to zero, the mounted CD-R/RW disc is defined for restricted use. To record data to the mounted disc the appropriate Initiator Application code shall be set through the Write Parameters Page. An Initiator Application Code of zero may be used to indicate a restricted use disc - general purpose.	page 309 11.24 13th para.	The URU (Unrestricted Use Disc) bit, when set to one, indicates that the mounted DVD-R, CD-R/RW disc is defined for unrestricted use. When the Unrestricted Use Disc bit is set to zero, the mounted DVD-R, CD-R/RW disc is defined for restricted use. To record data to the mounted disc the appropriate Initiator Application code shall be set through the Write Parameters Page. An Initiator Application Code of zero may be used to indicate a restricted use disc - general purpose. Logical Units that do not read a URU bit from the medium shall set this bit to one.	To add **ADDED Underlined data**
93.	page 170 6.1.18 12th para.	The Disc Type field specifies the type of data on the whole disc.	page 309 11.24 last para.	For CD, the Disc Type field specifies the type of the data on whole disc.	To add **ADDED Underlined data**
94.	page 170 6.1.18 13th para.	For all discs, the disc type shall be determined from the following sequences:	page 310 11.24 1st para.	For CD disc, the Disc type shall be determined from the following sequence:	To change **ADDED Underlined data**
95.	page 171	The Disc Identification number	page 310	For CD, the Disc Identification Number	To add

	6.1.18 3rd para.	recorded in the PMA is returned.	11.24 6th para	recorded in the PMA is returned.	**ADDED** **Underlined data**
96.	page 171 6.1.18 4th para	The Last Session Lead-in Start Time field is an address given in MSF format as defined in sub-clause 4.1.1. This field shall specify the location of the next Lead-in to be recorded.	page 310 11.24 7th para.	The Last Session Lead-in Start Time field is valid only for CD medium. Otherwise, this field shall be set to 0. This field is an address given in MSF format as defined in sub- clause 4.1.1.	To add **ADDED** **Underlined data**
97.	page 171 6.1.18 5th para	The Last Possible Start Time of Lead-out field is an address given in MSF format as specified in sub-clause 4.1.1.	page 310 11.24 8th para.	The Last Possible Start Time for Start of Lead-out field is valid only for CD media. Otherwise this field shall be set to 0. This field is returned as the address encoded in the ATIP and it is an address given in MSF format as specified in sub-clause 4.1.1.	To add **ADDED** **Underlined data**
98.	page 171 6.1.18 7th para	The Number of OPC Table Entries shall always be zero for CD-ROM discs and for CD-R/RW discs that OPC has not yet been determined.	page 310 11.24 last para.	The Number of OPC Table Entries shall always be zero for discs that OPC has not yet been determined. For DVD-R, the use of OPC table entries is vendor-specific.	To add **ADDED** **Underlined data**
99.	page 171 6.1.18 8th para.	Speed is in Kbytes per second.	page 311 11.24 1st para	Speed is in kbytes per second. (1kBytes = 1000Bytes)	To clarify **DONE**
100.	page 173 6.1.19 4th para.	Format field = 0Ch (RMD in last Lead-out) - Address field contains the Field number of RMD block that is recorded in the last Lead-out.	page 313 11.25 11th para.	Format field = 0Ch (RMD in last Border-out) - Address field contains the Field number of RMD block that is recorded in the last Border-out.	To change **DONE**
101.	page 173 6.1.19 11th para.	The Layer Number field specifies the starting layer number for the READ DVD STRUCTURE data that will be returned.	page 313 11.25 3rd	The Layer Number field specifies the layer number for the response data returned by the READ DVD STRUCTURE command.	To delete **DONE**
102.	page 174 6.1.19 1st para.		page 313 11.25 5th para.	Requests for Format FFh shall always be fulfilled, even if no or incompatible media is installed.	To add **ADDED**
103.	page 174 6.1.19 1st para.	When a READ DVD STRUCTURE Command is presented for a CD media, this command shall be terminated with CHECK CONDITION status, sense key set to ILLEGAL REQUEST and the additional sense code set to CANNOT READ MEDIUM- INCOMPATIBLE FORMAT.	page 313 11.25 6th para.	When a READ DVD STRUCTURE Command is presented for a CD media, for format codes 00h - FEh, this command shall be terminated with CHECK CONDITION status, sense key set to ILLEGAL REQUEST and the additional sense code set to CANNOT READ MEDIUM- INCOMPATIBLE FORMAT.	To add **ADDED** **Underlined data**
104.	page 174 6.1.19 2nd para.		page 313 11.25 8th para.	The number of data bytes returned in response to a READ DVD STRUCTURE command is limited by the Allocation Length field of the CDB. An Allocation Length field of zero shall not be considerred an error.	To add There is no description regarding Allocation Length field. **ADDED** **Underlined data**
105.	174 Table 229 3rd col.	Type or Feature column	-	[Delete]	To delete **DONE**
106.	page 174 Table 229	RMD in last Lead-out	page 314 Table 251 2nd col.	RMD in last Border-out	To change **ADDED** **Underlined data**

	2nd col. 11th row		11th row		
107.	page 174 Table 229 4th col. 4th row	Reserved	page 314 Table 251 3rd col. 4th row	Layer Number	To change **DONE**
108.	page 174 Table 229 5th col. 11th row	Start Field number of Blocks	page 314 Table 251 4th col. 11th row	Start Field number of <u>RMD</u> block	To change **ADDED** **Underlined data**
109.	page 174 Table 229 6th col. 11th row	Returns the Field of RMD in the last Lead-out	page 314 Table 251 5th col. 11th row	Returns the Field of RMD in the last <u>Border</u>-out	To change **DONE**
110.	page 175 Table 230 1st col.	0-n	page 315 Table 252 1st col.	0-2047	To change **CHANGED**
111.	page 175 6.1.19.1 last para.	The information for the starting layer specified by the Layer Number field in the Command Packet and information for all higher layer numbers is returned.	page 315 11.25.1 2nd para.	The information for the layer specified by the Layer Number field in the Command Packet is returned.	To delete **DELETED**
112.	page 176 6.1.19.1 6th para.	When PTP is used each layer is independent and has its own Lead-in and Leadoff areas on the media.	page 316 11.25.1 5th para.	When PTP is used each layer is independent and has its own Lead-in and <u>Lead-out</u> areas on the media.	To change **DONE**
113.	page 176 6.1.19.1 6th para.	There is only one Lead-in and Leadoff.	page 316 11.25.1 5th para.	There is only one Lead-in and <u>Lead-out</u>.	To change **DONE**
114.	page 177 Table 237 caption	Starting Physical Sector Number Field	page 317 Table 259 caption	Starting Physical Sector Number <u>of</u> <u>Main Data</u> Field	To add **DONE**
115.	page 177 6.1.19.1 last para.	If the disc has no Lead-in, the Logical Unit shall send default Lead-in Control Area data from the cache memory. If the Lead-in is already written on disc, the Logical Unit shall read Lead-in data from the disc and shall update the cache memory.	page 313 11.25 7th para.	If the disc has no Lead-in <u>and there are</u> <u>no DVD Control Data is in the cache,</u> <u>the</u> <u>Logical Unit shall generate CHECK</u> <u>CONDITION Status, 5/24/00 INVALID</u> <u>FIELD IN CDB. If the Lead-in is already</u> <u>written or there are DVD structures in</u> <u>the cache, the Logical Unit shall return</u> <u>the requested structure.</u>	To add **DONE**
116.	page 177 6.1.19.1 last para.		page 317 11.25.1 5th para.	<u>The Media Specific field may be filled</u> <u>with all zero data or information as</u> <u>specified in the associated DVD</u> <u>specification.</u>	To add **DONE**
117.	page 178 6.1.19.2 4th para.	The Region Management Information field describes the regions in that the disc can be played. Each bit represents one of six regions.o	page 318 11.25.2 3rd para.	The Region Management Information field describes the regions in that the disc can be played. Each bit represents one of <u>eight</u> regions. There are currently 6 regions defined. See the DVD Book for more information. **Sentence not included**	To change **Added** **Underlined**
118.	page 178 6.1.19.3 7th para.	DISC KEY Value field returns the DISC KEY that is obfuscated by a Bus Key.	page 318 11.25.3 6th para.	The DISC KEY Data field returns the DISC KEY that is obfuscated by a Bus Key.	To change **DONE**
119.	page 180	In the case of DVD-R multi session	page 320	In the case of DVD-R multi session disc,	To change

	6.1.19.5 2nd para.	disc, this information is taken from the last Lead-in.	11.25.5 2nd para.	this information is taken from the last Border-in.	**DONE**
120.	page 181 6.1.19.8 caption	RMD in the last Lead-out	page 321 11.25.8 caption	RMD in the last Border-out	To change **DONE**
121.	page 181 6.1.19.8 4th para.	The RMD field recorded in the Last-out is defined in Table 244.	-	The RMD field recorded in the last Border-out is defined in Table 244.	To change **DONE**
122.	page 181 Table 244	RMD in last Lead-out	page 321 Table 267	RMD in the last Border-out	To change **DONE**
123.	page 181 6.1.19.8 6th para	The RMD Bytes field returns the RMD that is written in the last recorded Lead-out.	page 321 11.2.5.8 4th para	The RMD Bytes field returns the RMD that is written in the last recorded Border-out.	To change **DONE**
124.	page 182 6.1.19.9 2nd para.	The DVD STRUCTURE Data Length specifies the length in bytes of the following DVD STRUCTURE data that is available to be transferred to the Initiator.	page 322 11.25.9 1st para.	This format is available only for DVD-R media. For other media, this format is reserved. The DVD STRUCTURE Data Length specifies the length in bytes of the following DVD STRUCTURE data that is available to be transferred to the Initiator.	To add **REJECTED**
125.	page 187 Table 252 21st row	M*4 + 40	page 326 Table 275 21st row	M*4 + 41	To change to correct number **DONE**
126.	page 187 Table 252 22nd row	M*4 + 40	page 326 Table 275 22st row	M*4 + 42	To change to correct number **DONE**
127.	page 187 Table 252 23rd row	M*4 + 40	page 326 Table 275 23st row	M*4 + 43	To change to correct number **DONE**
128.	page 188 Table 252 Byte M*4+44 - M*4+47	Readable DCB M-1	page 327 Table 275 Byte M*4+44 - M*4+47	Recordable DCB 0	To change **DONE**
129.	page 188 Table 252 Byte (M+N)*4 +40 - (M+N)*4 +43	Readable DCB N-1	page 327 Table 275 Byte (M+N)*4 +40 - (M+N)*4 +43	Recordable DCB N-1	To change **DONE**
130.	page191 6.1.20. Table 260	Formatted Media. The reported value is the current media's capacity. In the case of sequential writable media, the num-ber of blocks field indicates the number of blocks between the first Lead-in and the Lead-out. When the media has no closed session it shall be reported as "No Media Present" with Descriptor Type = 11b.	page 330 11.26. Table 283	Formatted Media. The reported value is the current media's capacity. In the case of sequential writable media, the number of blocks field indicates the number of blocks between the first Lead-in and the last Lead-out or Border-out. When the media has no complete session it shall be reported as "No Media Present" with Descriptor Type = 11b.	To add **ADDED Underlined**

131.	page 194 6.1.20. under Table 263		page 333 11.26 1st para.	This command is not mandatory for all drive types shown in Table 263; the table indicates the values returned if the command is implemented.	To add ADDED
132.	page 206 6.1.24. 1st para.	The READ TOC/PMA/ATIP Command (Table 287) requests that the Logical Unit transfer data from the Table of Contents, the Program Memory Area (PMA), and the Absolute Time in Pre-Grove (ATIP).	page 345 11.29. 1 - 2nd para.	The READ TOC/PMA/ATIP Command (Table 287) requests that the CD Logical Unit transfer data from the Table of Contents, the Program Memory Area (PMA), or the Absolute Time in Pre-Grove (ATIP) from CD media. For media that does not support a TOC, this command will return fabricated information that is similar to that of CD media for some formats. This fabrication is required for some legacy Initiator environments.	To add ADDED Underlined
133.	page 210 6.1.24.4. 1st para.	The response data returned for Format 0010b is specified in Table 292.	page 348 11.29.3. last para.	None of the fields in the result data of Format 2h are affected by the MSF bit in the CDB. The response data returned for Format 0010b is specified in Table 292.	To add at previous ADDED Underlined
134.	page 210 6.1.24.4. 2nd para	Multiple TOC Track Descriptors may be returned.	page 349 11.29.3. 1st para.	Multiple TOC Track Descriptors may be returned, but only one of each entry is reported.	To add DONE
135.	page 210 6.1.24.4. 3rd para.	For Format field of 1000b,	-	For Format field of 0010b,	To change DONE
136.	page 210 6.1.24.4. last para.	Entries in bytes 2 through 10 of the descriptors (TNO, POINT, MIN, SEC, FRAME, PMIN, PSEC, PFRAME, Zero) shall be converted to binary by the Logical Unit if the media contains a value between 0 and 99bcd. (See 4.2.2.6.)	page 349 11.29.3. 3rd para. from last	Entries in bytes 2 through 10 of the descriptors (TNO, POINT, MIN, SEC, FRAME, PMIN, PSEC, PFRAME, Zero) shall be converted to hex by the Logical Unit if the media contains a value between 0 and 99bcd. (See 4.2.2.6.)	To change DONE
137.	page 211 6.1.24.4. 1st para.	The TOC data within a session is arranged in the order of Q Sub-channel POINT field value of A0h, A1h, A2h, Track Numbers, B0h, B1h, B2h, B3h, B4h, C0h, and C1h.	page 349 11.29.3. 2nd para. from last	The TOC data within a session is arranged in the order of Q Sub-channel Point field value of A0h-AFh, Track Numbers, B0h-FFh. Only recorded Points shall be returned.	To change DONE
138.	page 212 6.1.24.5. 1st para.	The response data returned for Format 0011b is specified in Table 296.	page 350 11.29.4. 1st para.	None of the response data fields of Format 0011b are affected by the MSF bit in the CDB. The response data returned for Format 0011b is specified in Table 296.	To add ADDED Underlined
139.	page 212 6.1.24.5. last para.	Entries in bytes 2 through 10 of the descriptors (TNO, POINT, MIN, SEC, FRAME, Zero) shall be converted to binary by the Logical Unit if the media contains a value between 0 and 99bcd. (See 4.2.2.8.2.)	page 351 11.29.4. last para.	Entries in bytes 2 through 10 of the descriptors (TNO, POINT, MIN, SEC, FRAME, Zero) shall be converted to hex by the Logical Unit if the media contains a value between 0 and 99bcd. (See 4.2.2.8.2.)	To change DONE
140.	page 212 6.1.25. 1st para.	The response data returned for Format 0100b is specified in Table 297.	page 351 11.29.5. 1st para.	None of the response data fields of Format 0011b are affected by the MSF bit in the CDB. The response data returned for Format 0100b is specified in Table 297.	To add at previous ADDED Underlined

141.	page214 6.1.25 6th para.	ATIP Start time of Lead-in (min, sec, frame) - the start time of the Lead-in. The value is read from ATIP and returned in binary format. Legal values for the M field are 50h through 63h.	page352 11.29.5 4th para. from last	ATIP Start time of Lead-in (min, sec, frame) - the start time of the Lead-in. The value is read from ATIP and returned in <u>hex</u> format. Legal values for the M field are 50h through 63h.	To change **DONE**
142.	page214 6.1.25 7th para.	ATIP Last Possible Start Time of Lead-out (min, sec, frame) - the last possible start time of Lead-out. The value is read from ATIP and returned in binary format. Valid values for the M field are 0 through 4Fh.	page352 11.29.5 3rd para. from last	ATIP Last Possible Start Time of Lead-out (min, sec, frame) - the last possible start time of Lead-out. The value is read from ATIP and returned in <u>hex</u> format. Valid values for the M field are 0 through 4Fh.	To change **DONE**
143.	page215. 6.1.25.1 1st para.	The response data returned for Format 0101b is specified in Table 300.	page 353. 11.29.6. 12th para.	<u>None of the response data fields of Format 0011b are affected by the MSF bit in the CDB.</u> The response data returned for Format 0101b is specified in Table 300.	To add **ADDED Underlined**
144.	page 216 6.1.26 1st para.		page 359 11.30 1st para.	In case of media that does not support logical tracks, the number of track and session is considered one. If this command is required by an implemented Feature, this command shall function if any media is present. For CD, if the PMA/TOC is unreadable, the command shall be terminated with CHECK CONDITION Status, 3/57/00 UNABLE TO RECOVER TABLE-OF-CONTENTS. For DVD, if the RMA/RMD in Border-out is unreadable, the command shall be terminated with CHECK CONDITION Status, 3/11/05 L-EC UNCORRECTABLE ERROR.	To add **ADDED**
145.	page 216 Table 302 Byte 1 Bit 0	Track	page 359 Table 323 Byte 1 Bit 0-1	Address/Number Type	To change the field name and extend 1bit **DONE**
146.	page 216 Table 302 Byte 2-5	Logical Block Address/Track (Track) Number	page 359 Table 323 Byte 2-5	Logical Block Address/Track/Session Number	To change the field name **DONE**
147.	page 216 6.1.26 2nd para.	The Track bit in byte 1 is used to specify the contents of bytes 2 through 5 of the CDB.	page 359 11.30 4th para.	The Address/Number Type field in byte 1 is used to specify the contents of the bytes 2 through 5 of the CDB.	To change **DONE**
148.	page 216 6.1.26 2nd para.	If the Track bit is set to zero, then bytes 2 through 5 contain a Logical Block Address. If the Track is set to one, then bytes 2 through 5 contain a Track number.	-	[Delete]	To delete **DONE**
149.	page 216 6.1.26 3ed para.	The Logical Block Address/Track Number field, Bytes 2 through 5 are defined in Table 303.	page 359 11.30 5th para.	The Logical Block Address/Track/Session Number field, Bytes 2 through 5 are defined in Table 303.	To change **Changed as Modified**
150.	page 216 Table 303	LBA/Track Number field definition	page 359 Table 324 caption	Logical Block Address/Track/Session field definition	To change **Changed as Modified**

	caption				
151.	page 216 Table 303 1st col. 1st row	Track Bit	page 359 Table 324 1st col. 1st row	Address/Number Type Value	To change **DONE**
152.	page 216 Table 303 2nd col. 1st row	Logical Block Address/Track Number	page 359 Table 324 2nd col. 1st row	Logical Block Address/Track/Session Number field	To change **Changed as Modified**
153.	page 216 Table 303 3rd col. 1st row	Track Number Used for Track Information	page 359 Table 324 3rd col. 1st row	Description	To change **DONE**
154.	page 216 Table 303 3rd col. 5th row	T_{INV}, where T_{INV} is the Track number of the invisible Track	page 359 Table 324 3rd col. 5th row	T_{INV}, where T_{INV} is the Track number of the invisible <u>or incomplete</u> Track	To add **ADDED Underlined**
155.	page 216 Table 303		page 359 Table 324 1st col. 6th row	2	To add **DONE**
156.	page 216 Table 303		page 359 Table 324 2nd col. 6th row	Session Number	To add **DONE**
157.	page 216 Table 303		page 359 Table 324 3rd col. 6th row	$T_{session}$, where $T_{session}$ is the number of the first Track which is in the Session Number.	To add **DONE**
158.	page 216 Table 303		page 359 Table 324 1st col. 7th row	3	To add **DONE**
159.	page 216 Table 303		page 359 Table 324 2-3rd col. 7th row	Reserved	To add **DONE**
160.	page 216 6.1.26 last para.		page 359 11.30 last para.	Note: The Address/Number Type 2 is easy way to recognize UDF-Bridge file system that specified by DVD-ROM Book Part2.	To add **REJECTED – Not required in a standard**
161.	page 216 6.1.26 last para.		page 360 11.30 1st para.	Fields not used with the loaded media shall return 0.	To add **DONE**
162.	page 217 Table 304 Byte 2	Track Number	page 360 Table 325 Byte 2	Track Number (LSB)	To add **REJECTED**
163.	page 217 Table 304 Byte 3	Session Number	page 360 Table 325 Byte 3	Session Number (LSB)	To add **DONE**
164.	page 217 Table 304 Byte 6 Bit 5	Packet	page 360 Table 325 Byte 6 Bit 5	Packet/Inc	To add **DONE**

165.	page 217 Table 304 Byte 7 Bit 1	Reserved	page 360 Table 325 Byte 7 Bit 1	LRA_V	To change **DONE**
166.	page 217 Table 304 Byte 20-23	Fixed Packet Size	page 360 Table 325 Byte 20- 23	Fixed Packet Size / Blocking Factor	To add **DONE**
167.	page 217 Table 304 Byte 28-31		page 360 Table 325 Byte 28- 31	Last Recorded Address	To add **DONE**
168.	page 217 Table 304 Byte 32		page 360 Table 325 Byte 32	Track Number (MSB)	To add **DONE**
169.	page 217 Table 304 Byte 33		page 360 Table 325 Byte 33	Session Number (MSB)	To add **DONE**
170.	page 217 Table 304 Byte 34-35		page 360 Table 325 Byte 34- 35	Reserved	To add **DONE**
171.	page 217 6.1.26 3rd para.	Track Number is the track number for all of the information in this structure.	page 361 11.30 2nd para.	Track Number is the track number for all of the information in this structure, or 1 for media not containing logical tracks.	To add **DONE**
172.	page 217 6.1.26 4th para.	Session Number is the number of the session containing this track.	page 361 11.30 3rd para.	Session Number is the number of the session containing this track, or 1 for media not containing sessions that contains this track.	To add **DONE**
173.	page 217 6.1.26 5th para.		page 361 11.30 4th para.	For media that does not support CGMS, this bit shall be set to zero.	To add to Copy bit description **DONE**
174.	page 218 6.1.26 1st para.	The Damage bit, when set to one, and the NWA_V is set to zero, the track shall be considered "not closed due to an incomplete write." An automatic repair may be attempted by the drive when the CLOSE TRACK/SESSION command is issued.	page 361 11.30 5th para.	The Damage bit, when set to one, and the NWA_V is set to zero, the track shall be considered "not closed due to an incomplete write." An automatic repair may be attempted by the Logical Unit when the CLOSE TRACK/SESSION command is issued. Further incremental writing in this track is not possible.	To add **DONE**
175.	page 218 6.1.26 1st para.	The Damage bit, when set to one, and the NWA_V is set to one, an automatic repair may be attempted by the drive when the next command that requires writing to the track is issued. If the repair is successful, the Damage bit shall be set to zero.	page 361 11.30 6th para.	The Damage bit, when set to one, and the NWA_V is set to one, indicates a Track that may be recorded further in an incremental manner. An automatic repair shall be attempted by the device when the next command that requires writing to the Track is issued. If the repair is successful, the Damage bit shall be set to zero. Prior to the start of the repair, the NWA field shall contain the address of the Next Writable Sector assuming a successful repair.	To add **DONE**

176.	page 218 6.1.26 2nd para.		page 361 11.30 7th para.	For non-CD media, this field shall be set to 4.	To add to Track Mode field description **ADDED**
177.	page 218 6.1.26 3rd para.	If the RT bit is zero, then the track is not reserved, otherwise the track is reserved. Reserved indicates that a PMA entry indicating the track's start and end addresses exists.	page 361 11.30 8th para	For CD, if the RT bit is zero, then the Track is not reserved, otherwise the Track is reserved. The RT bit indicates that a PMA entry indicating the track's start and end addresses exists. For DVD, the RT bit of zero indicates that the Track is Complete, Invisible, or Incomplete status. The RT bit of one indicates that the Track is Empty Reserved or Partially Recorded Reserved status. If the Logical Unit is not capable of reading the PMA or RMA, this field shall be set to zero.	To add **ADDED Underlined**
178.	page 218 6.1.26 4th para.	The Blank bit, when set to one, indicates that the track contains no written data. Tracks with the Track Descriptor Block recorded shall not be considered blank.	page 361 11.30 11th para.	The Blank bit, when set to one, indicates that the Track contains no written data and Last Recorded Address field is invalid. For CD, tracks with the Track Descriptor Block recorded shall not be considered blank. For other media, this bit *shall* be set to zero.	To add **ADDED Underlined**
179.	page 218 6.1.26 5th para.	The Packet bit is valid only when the RT bit is set to one or the track indicated is the incomplete track. The Packet bit, when set to one, indicates that this track is to be written only with packets.	page 361 11.30 12th para.	For CD, the Packet/Inc bit is valid only when the RT bit is set to one or the track indicated is the incomplete track. The Packet/Inc bit, when set to one, indicates that this Track is to be written only with packets (CD) or incremental recording (DVD).	To add **ADDED Underlined**
180.	page 218 6.1.26 6th para.	The FP (Fixed Packet) bit is valid only when the Packet bit is set to one. When the Packet bit is set to one and the FP bit is also set to one, then the track is to be written only with fixed packets. When the Packet bit is set to one and the FP bit is set to zero, then the track is to be written only with variable packets.	page 361 11.30 13th para.	For CD media, the FP (Fixed Packet) bit is valid only when the Packet/Inc bit is set to one. When the Packet/Inc bit is set to one and the FP bit is also set to one, then the track is to be written only with fixed packets. When the Packet/Inc bit is set to one and the FP bit is set to zero, then the track is to be written only with variable packets. Except for C/DVD-R/RW media, this field should be zero.	To add **ADDED Underlined**
181.	page 218 Table 305 5th col.	[Table 305]	page 362 Table 326 4th col.	[Table 326]	To replace 4th column of Table **Done**
182.	page 218 6.1.26 last para.	When RT, Blank and Packet bits are set to one, FP bit of a READ TRACK Information result data is set to zero.	page 362 11.30 1st para.	For CD, when RT, Blank and Packet bits are set to one, FP bit of a READ TRACK Information result data is set to zero.	**ADDED Underlined**
183.	page 219 6.1.26. Table 306	[Table 306]	page 363 11.30. Table 327	[Table 327]	To replace whole Table 306 with Table 327 of Mt.Fuji3 **Done**
184.	page 219	NWA_V shall be set to zero if the	page 363	NWA_V shall be set to zero if the Track	To add LRA_V

	6.1.26. 2nd para. from last	Track is not writable for any reason.	11.30. 3rd para. from last	is not writable for any reason. If LRA_V is zero, then the Last Recorded Address field is not valid. Otherwise, the Last Recorded Address field is valid. The LRA_V bit shall be set to zero if the Track has damage for any reason and is repaired automatically.	description **ADDED Underlined**
185.	page 220 6.1.26. 1st para.	The Next Writable Address, if valid, is the LBA of the next writable user block in the Track specified by the LBA/ Track Number field in the CDB. Next Writable Address shall be associated with the RT, Blank, Packet and FP bits as defined in Table 308.	page 363 11.30. 1st para. from last	The Next Writable Address, if valid, is the LBA of the next writable user block in the Track specified by the LBA/ Track Number field in the CDB. For CD media, Next Writable Address shall be associated with the RT, Blank, Packet and FP bits as defined in Table 308.	To add **ADDED Underlined**
186.	page 221 6.1.26. 1st para.	The Free Blocks field represents the maximum number of user data blocks available for recording in the track. This field shall be computed as follows:	page 364 11.30. 2nd para.	The Free Blocks field represents the maximum number of user data blocks available for recording in the track. For CD media, this field shall be computed as follows:	To add **ADDED Underlined**
187.	page 221 6.1.26. 5th para.	The Fixed Packet Size is valid only when the Packet and the FP bits are both set to one.	page 365 11.30. 1st para.	For CD, the Fixed Packet Size is valid only when the Packet and the FP bits are both set to one. For DVD-R, if the FP bit is set to 0, the Fixed Packet Size field specifies the number of sectors that is actual disc access unit. In case of DVD, this field is 16. FP bit 1 is undefined yet.	To add **ADDED Underlined**
188.	page 221 6.1.26. 7th para.	Track Size is the number of user data blocks in the track. The track size shall be computed as follows: First, compute the Complete Track Size (CTS).	page 365 11.30. 3rd and 4th para.	Track Size is the number of user data blocks in the track. For CD, the track size shall be computed as follows: First, compute the Complete Track Size (CTS).	To add **ADDED Underlined**
189.	page 221 6.1.26. 4th para. from last	READ TRACK INFORMATION shall provide certain valid fields for a disc with the Unrecordable status: Track Number, Session Number, Track Mode, Data Mode, Track Start Address.	page 365 11.30. 7 - 6th para. from last	The Last Recorded Address is the address of last written user data sector of the specified Track. Note: READ TRACK INFORMATION shall provide certain valid fields for a disc with the Unrecordable status: Track Number, Session Number, Track Mode, Data Mode, Track Start Address.	To add **Rejected. Comment is not necessary for this text.**
190.	page 221 6.1.26. 3rd para. from last	The Track Size number may not be exact for the tracks that do not have a PMA entry. The track size, of tracks that do not have PMA entries, is calculated as follows:	page 365 11.30. 5th para. from last	For CD media, the Track Size number may not be exact for the tracks that do not have a PMA entry. The track size, of tracks that do not have PMA entries, is calculated as follows:	To add **Added**
191.	page 229 6.1.29. 1st para- graph	For DVD, when the Write type is Session-at-Once, this command is also used to specify the size of user data.	-	For DVD, track reservation size shall be determined by the settings of the Write Parameters mode page. Table 325 specifies the Track sizing.	To modify **Modified as Requested**
192.	page 230 6.1.29. Table 325	[Table 325]	page 381 11.34. Table 355	[Table 355]	To replace whole Table 325 with Table 355 of Mt.Fuji3 **Done**
193.	page 230 6.1.29.	If the last track, defined in the PMA, is N, then the invisible track is assigned	-	If the last track, defined in the PMA/RMA, is N, then the invisible track	To add **Done**

		1st para.	track number N+1.		is assigned track number N+1.	
194.	page 230 6.1.29. 4th para. from last	For DVD, maximum reserved Tracks that can be reserved are limited to two at the same time. Attempting to reserve Track when two Tracks are already reserved,	-	For DVD, maximum reserved Tracks that can be reserved are limited to two at the same time. Attempting to reserve Track when two empty/partially recorded reserved tracks are already reserved,	To add **Done**
195.	page 230 6.1.29. 2nd para-graph from last	Reserving a track when the Write Type is set to packet (See Table 118) shall cause the TDB to be written.	-	For CD, reserving a track when the Write Type is set to packet (See Table 118) shall cause the TDB to be written.	To add **Done**
196.	page 243 6.1.32.1. Caption	Author's Information	page 398 11.38.1. Caption	User Specific Data	To modify **Done**
197.	page 243 6.1.32.1. 1st para	The Author's Information field (Format code 04h, Table 349) contains user specific data. This data shall be stored in the RMD Field-2 and when attempting to write the Lead-in, the contents of this field shall be written in the Disc manufacturing information field of Lead-in.	-	Table 349 describes the response data format for User specific Data, format code 04h.	To change **Done**
198.	page 243 6.1.32.1. 2nd para	The DVD STRUCTURE Data Length field specifies the length in bytes of the Author's Information data to follow. A DVD Structure Data Length field of zero indicates that no Author's Information data shall be transferred. This condition shall not be considered an error.	-	The DVD STRUCTURE Data Length field specifies the length in bytes of the User Specific Data to follow. A DVD Structure Data Length field of zero indicates that no User Specific Data shall be transferred. This condition shall not be considered an error.	To modify **Done**
199.	page 244 6.1.32.3 1st para.	The time should be current GMT 24 hour clock.	page 399 11.3.8.3 5th para.	The time should be current UTC (Universal Coordinated Time) 24 hour clock.	To modify **Done**
200.	page 245 6.1.32.3 1st para.	Table 352 defines data format code 30h.	-	6.1.32.4. Disc Control Block Table 352 defines data format code 30h.	To add section **Done**
201.	page 260 6.1.40. 1st para.	This command assures all remaining data in the data buffer has been written to the media.	page 177 11.3 1st para.	This command assures all remaining data in the data buffer has been written to the media. Logical blocks are not necessarily removed from the cache memory as a result of the cache flush operation.	To add at next **Done**
202.	page 261 6.1.41. 2nd para.	A DPO (Disable Page Out) bit, set to one, indicates that the Logical Unit shall assign the logical blocks accessed by this command the lowest priority for being fetched into or retained by the cache. A DPO bit, of one, overrides any retention priority specified in the cache page. A DPO bit of zero indicates the priority shall be determined by the retention priority fields in the cache page. All other aspects of the algorithm implementing the cache replacement	page 425 11.48. 5th para.	The Disable Page Out (DPO) bit is not used by C/DVD Logical Units and shall be set to zero. A DPO bit of zero indicates the priority shall be determined by the retention priority fields in the cache page if supported. All other aspects of the algorithm implementing the cache memory replacement strategy are vender specific.	To change **Done**

		strategy are not defined by this International Standard. The drive may ignore this bit. **NOTE**: The DPO bit is used to control replacement of logical blocks in the cache memory when the Initiator has information on the future usage of the logical blocks. If the DPO bit is set to one, the Initiator knows the logical blocks accessed by the commandeer not likely to be accessed again in the near future and should not be put in the cache memory nor retained by the cache memory. If the DPO bit is zero, the Initiator expects that logical blocks accessed by this command are likely to be accessed again in the near future.			
203.	page261 6.1.41. 2nd para. from last	If, during streaming, a WRITE command is issued for packet writing with an LBA = NWA+7 the drive shall begin a new packet.	-	For CD-R/RW media, if, during streaming, a WRITE command is issued for packet writing with an LBA = NWA+7 the drive shall begin a new packet.	To add **Done**
204.	page 262 6.1.41. 2nd para	The block size shall be determined by the write parameters mode page (if in track at once, packet, or raw mode) or by the cue sheet (session at once mode).	-	For CD-R/RW media, the block size shall be determined by the write parameters mode page (if in track at once, packet, or raw mode) or by the cue sheet (session at once mode).	To add **Done**
205.	page 262 6.1.41. 3rd para	3) Variable Packet: If insufficient space exists for another variable packet within a reserved track, the Logical Unit shall pad the packet such that it fills the track. Otherwise, the Logical Unit shall write run-out and link blocks.	page 426 11.48. 1st para	3) Variable Packet: The Logical Unit shall perform linking. (DVD) If insufficient space exists for another variable packet within a reserved track, the Logical Unit shall pad the packet such that it fills the track. Otherwise, the Logical Unit shall write run-out and link blocks.(CD)	To add **Done**
206.	page 262 6.1.41. 3rd para.	5) Raw mode: The Logical Unit shall write run-out and link blocks. The Logical Unit shall read the TOC and track information from the session just written and update the PMA. It is assumed that the Initiator has written the Lead- out.	page 426 11.48 8th para.	5) Raw mode: The Logical Unit shall write run-out and link blocks. The Logical Unit shall read the TOC and track information from the session just written and update the PMA. It is assumed that the Initiator has written the Lead- out.(CD)	To add **No Change**
207.	page 263 6.1.41. 2nd para.	6) WRITE with the NWA in the current track.	427 11.48 8th para.	6) WRITE with the NWA in the current track. 7) GET CONFIGURATION 8) GET EVENT/STATUS NOTIFICATION	To add **Done**
208.	page 263 6.1.41. 2nd para. from last	All other commands shall execute normally, but may force a SYNCHRONIZE CACHE.	page 427 11.48. 2nd para. from last	All other commands shall execute normally, but may force a SYNCHRONIZE CACHE before executing. The process of writing from the Logical Unit's cache to the medium shall not cause a NOT READY condition for any command. CHECK CONDITION Status, 2/04/08 LOGICAL	To add **Done**

| | | | UNIT NOT READY, LONG WRITE IN PROGRESS may exist when the Logical Unit is padding a reserved track or writing Lead-in and Lead-out. | |