

T10/03-216r0: Meeting Minutes: MMC Working Group

Meeting Minutes: MMC Working Group - Wednesday, Thursday 14, 15 May 2003

T10 Meeting Week at:
Philips Semiconductors
Sunnyvale, CA

Hosted by: Philips

Agenda:

1.0 Opening Remarks

Bill McFerrin opened the meeting at 9:00 AM. The following announcements were noted:

1) This meeting has been authorized by INCITS T10 and will be conducted under the NCITS rules. Ad hoc meetings take no final actions, but prepare recommendations for approval by the INCITS task group. The voting rules for the meeting are those of the parent committee, INCITS T10. For the ad hoc, other than straw votes, the voting rules are: one vote per participating company.

2) The minutes of this meeting will be posted to the T10 Reflector and will be included in the next T10 committee mailing. Attendance at a working group meeting does not count toward minimum attendance requirements for T10 membership. Working group meetings are open to any person or company to attend and to express their opinion on the subjects being discussed.

3) MMC4R02.pdf is on the T10 website.

2.0 Introductions

Present at the meeting:

3.0 Document Distribution

Bill McFerrin made MMC-4 Rev 2 available electronically.
Hiromichi Oribe made USB_MMC4_Annex_Rev16 available electronically.

4.0 Call for Patents

None reported.

5.0 Approval of Agenda

6.0 New Business

None

7.0 Old Business

Review of MMC-4 draft revision 2. Most of the two days were taken by this item. Clauses 1 through 5 and a part of clause 6 were reviewed with a large number of comments.

Clause 1

List SATA as a physical interface available to MM devices.
List USB1 and USB2 independently.
List 1394A and 1394B separately.

Clause 2

Approved references:

Add ECMA 337 DVD+RW

Serial ATA - either a T13 document or an Intel private document

Add 1394B.

Standards in development:

Add SBP-3 - in progress

Other standards

DVD book list from fuji 2.2.55

USB 2.0 Spec, USB Implementors Forum

USB-MASS Spec, USB Implementors Forum

Clause 3

3.1.90 MDT - change to MIP.

Packet - expanded to include DVD, where UDF is the source.

UDF 1.5 specifies 64KB size, UDF 2.00 specifies 32KB.

Define Legacy.

Add DBI to abbreviations.

Clause 4

Above table 1 "ant" should be and.

4.2.4 Add reference to "ultra".

Add WRITE BUFFER to table 19. When microcode download is requested, drive may report error: COMMAND SEQUENCE ERROR.

Drive may not report NOT READY when READY. More detail in WRITE BUFFER command description.

4.4 DVD - Zone Type is not correct in several Sector information ID bits figures. Lead-in and data zone are switched.

Table 33 - add high speed DVD-RAM information from fuji (table 24 in fuji)

Table 37 and table 38 - labels may need clarification

Figure 33: Recording Type - change to reserved

DVD+R - Clarify: the minimum number of fragments is 1.

Check accuracy of DVD+R and DVD+RW layout tables.

Change 4.4.5 and 4.4.6 to remove marketing sound.

2 lines above table 49, a reference to table 50. Reference should be table 49.

Table 49 - Clarify defective block handling when no hardware defect management is used (+R/+RW).

Table 49, Footnote 4: Only DVD-RAM defines recording type.

Table 50 - footnote 1: Only DVD-RAM defines recording type.

Table 50 - Clarify defective block handling when no hardware defect management is used (+R/+RW).

Tables 49 & 50: Add a separate discussion of error handling when using Software defect management. Note changes due to software defect management - specifically the EMCDR bit.

When group 2 timeout occurs, a timeout error is not reported. Instead, a SK = 3 or 4 should be reported.

Group 2 timeout is not actually a timeout.

Move write, write and verify to group 1.

In Timeout and protect page, changing Group 1 and group 2 timeout values is vendor specific.

Clarify statement following table 63. No effect to the interface as it applies to other devices. Sleep causes a change relative to the host.

Add a Write Protection sub-clause to models clause.

Clause 5

Table 73 - Add SATA, USB

Error tables: Write Protect errors have sense key 07.

5.3.5 Write Protect: PWP is a generic term. No need to have a new WDCB bit. A statement about reading and writing WDCBs is needed.

Defect Management is now called Hardware defect management

CD Audio Play Feature - version is probably 0. Verify and correct.

5.3.41 Firmware Information has a name and number change.

5.4.3 MO Profile: After some discussion, it was decided that this profile should not be moved to legacy annex.

5.4.4 WORM Profile: After some discussion, it was decided that this profile should not be moved to legacy annex.

5.4.5 AS-MO Profile: After some discussion, it was decided that this profile should not be moved to legacy annex.

Line above Table 189 references table 183. Should reference table 189.

Above table 192, reference to table 190 should be to 192.

Table 193 - row for DCBs has no number nor description.

Table 203 - Mode Select link shows 0 rather than section number.

Clause 6

Tables 202 and 203 - verify ordering and op codes

Table 206 - specify both CD-RW and DDCD-RW

6.2.2 - BLANK and other long execution time commands with IMMEDIATE should report NOT READY to media access commands with some long operation ASC. For TUR BLANK and FORMAT UNIT reports NR. Other types, SYNC CACHE, CTS, etc. report GOOD status.

6.2.2 Suggest using READ DISC INFORMATION in b) for polling for ready.

Note: Response to TUR during IMMEDIATE operation of:

BLANK - CHECK

CLOSE T/S - GOOD

FORMAT UNIT - CHECK

REPAIR TRACK - GOOD

SYNC CACHE - GOOD

START STOP UNIT - CHECK

PLAY AUDIO - GOOD

Close T/S table 211, value 110 must be reserved in CD-R/RW case

6.5 FORMAT UNIT

Last paragraph on page 215: "DCRT ()" - include meaning of DCRT in parentheses.

Page 217: Be consistent with the use of the word "bit".

Page 217: When XX bit is reserved for CD-RW and DVD+RW. Specify that this must be zero and CHECK if not zero.

Page 217: First paragraph - include IMMEDIATE and VS in list covered by FOV = 1. Note: Can't do this - contrary to SBC.

6.5.2.3.2: In order to keep more Spare area, this formatting is used.

6.5.2.3.1 Format type 0 for CD-RW - optional is not allowed. Refer to MMC-3.

For DVD-RAM, the Descriptor Block must exactly match the READ FORMAT CAPACITIES values.

6.5.2.3.11 256000 is the wrong number.

Fix references (see 0)

Page 224 - top and other places:

"When the Logical Unit changes ready state, a Class 1 Event shall be generated." Adds no value and must be changed to be clear.

6.5.2.3.11 and 12 When Restart, number of blocks field has no meaning to the device and shall be ignored by the device.

6.5.3.2 next to last line "may is" should change to shall.

6.5.3.2.3 Add SSU power control to list of controls that are not permitted. Disallow execute diag also. First bullet sentence is unclear

and should be reworded.

Figure 47: Some bubbles do not show BG Status value.

Need to show re-format path.

6.5.3.2.5 Recovery after catastrophic shut-down can cause loss of user data.

6.9 INQUIRY must list version numbers in order to specify a list of compliance (bytes 56 +). Some interfaces must have numbers assigned.

Table 245: RESET event is reported after POR.

GESN, Device busy - Add warning: Group 2 timeout command when not polling will not terminate.

Table 305:

1. Permit the use of other mode pages shown in other documents.
2. List mode page 2A and show Annex as reference.

Page 267 paragraph (marked b), wrong error is specified. Should be SAVING PARAMETERS NOT SUPPORTED.

8.0 Action Items

Bill McFerrin will post version 2a to the reflector prior to mid-June. As additional e-mail comments arrive, 2b will be produced...prior to the July meetings.

9.0 Future Meeting Schedule

The MMC WG will meet during t10 week in Colorado Springs during Tuesday and Wednesday July 8 and 9. See the t10 website for location details.

10.0 Adjournment

The meeting was adjourned at 5:30 PM. Thursday 15 May.