MMC Working Group Minutes - Tuesday & Wednesday 4 & 5 November 2003
9:00 AM - 5:00 PM

T10 Meeting Week at:
The Driskill Hotel
604 Brazos Street 78701
Austin, Texas

Hosted by: Crossroads

Special Notes:
This meeting has been authorized by INCITS T10 and will be conducted under the INCITS 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.

The minutes of this meeting will be posted to the 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.

MMC4R02E.PDF has been posted to the T10 website.

Draft Agenda:
1.0 Opening Remarks

2.0 Introductions
Present at the meeting:

David Hanes	HP
Hiromichi Oribe	IOMEGA
Bill McFerrin	Philips
Keiji Katata	Pioneer
Masaetsu Takahashi	Ricoh
Greg Fry	Roxio
Norchika Mine	Sony
Tomotaka Kuraoka	Sony

3.0 Document Distribution

4.0 Call for Patents

5.0 Approval of Agenda

6.0 Old Business

Review MMC4R02E with order:

Clause 4, Clause 5, Clause 7, Annex A, Annex B, Annex C, Annex D, Annex E, Clause 6.

Clause 4 – Check accuracy of group 1 and 2 timeout assignment to different commands. Verify is group 2. Fix in model and command description. Write, Write and Verify are incorrect,. Some commands are conditionally group 3. Note in command descriptions.
Proposed to stabilize. No action.

Clause 5

Create feature 0109h to indicate that media serial number is supported. This requires that the READ MEDIA SERIAL NUMBER (ABh/01h) is supported.

Proposed to stabilize. No action.

Clause 7

Table 596 Lu should be capitalized because it means "Logical Unit".

Greg Fry will provide a proposal about the Caching Mode Page.

WCE and RDC bits are the only usable parameters. Length shall be 0Ah.

7.8.5 – correct the description of TMOE. This enables timeout error reporting.

Proposed to stabilize. No action.

Annex A - No comments.

Proposed to stabilize. No action.

Annex B
Check SAM version. In A.1.

Proposed to stabilize. No action.

Annex C
Change MMC-3 to MM.

Proposed to stabilize. No action.

Annex D
Remove detailed web address for document. This is volatile and cannot be trusted for a long period of time. Reader should navigate the usb.org webiste.
Table D.3 change question marks to something else.

Table D.6, row 3 column 4: 8? Should be ??.

Proposed to stabilize. No action.

Annex E
E.2.2 Strongly recommend that software:
1.   The IP bit in the header is zero,
2.   Send the IP structure just prior to the Format descriptor.

Reference above table E.7 is to E.3 – wrong.

Fill in reference column in table E.11.

E.3 spell parameters correctly.

Proposed to stabilize. No action.

Clause 6
6.2 BLANK - No comments
6.3 CLOSE TRACK/SESSION - No comments

6.4 ERASE (10) - No comments
6.5 FORMAT UNIT - No comments
6.6 GET CONFIGURATION - No comments

6.7 GET EVENT STATUS NOTIFICATION
Device Busy
Bill McFerrin (as editor) explained the new information in 2E. Both MMC3 and Fuji5 have never clearly described how Device Busy should work in all situations. This leaves quite a lot to the reader's own interpretation. The content in 2E is simply the editor's interpretation. The purpose of producing the new table was to specify something – anything about how this function should operate. From here, discussion began….

Katata (Pioneer): Providing progress indication in polled case, we promote the use of GESN by applications. This can cause to OS (Device Driver) to lose a timeout event and potentially result in unwanted resets. Consequently, it is preferred that GESN not report progress indication.

Bill McFerrin (Philips) & Greg Fry (Roxio) pointed out that this is an OS problem, not a drive problem. It is a problem for the specific host to solve. It is not a problem that MMC is required to solve.

Katata's proposal for time remaining in progress indication:
Time is in seconds and goes in INFO bytes of sense data. If this is added, Core Feature should get version 1.

When a command timeout occurs, the command should continue executing. GESN reports additional time required. All agree.

Host should set TMOE to 0 when polling Device Busy.
TMOE disables error reporting.
There is no way to disable timeouts.
Clarify in timeout & protect page.

Conclusions:
1. It is possible for the reader of Fuji and MMC3 to envision progress reporting via Device Busy. This is an issue to resolve and describe precisely in MMC4.
2. By following prior descriptions precisely (particularly in Fuji), the command has no value in the ATAPI environment. Given this, Bill McFerrin (Philips) noted that Device Busy has no practical value and should be removed from MMC4.

Final decision: None. Plan to resolve during January meeting. 2F shall be changed to original text.

6.8 GET PERFORMANCE - No comments.
6.9 INQUIRY - No comments
6.10 LOAD/UNLOAD MEDIUM - No comments
6.11 MECHANISM STATUS - No comments
6.12 MODE SELECT (10) - No comments
6.13 MODE SENSE (10) - No comments
6.14 PAUSE/RESUME - No comments
6.15 PLAY AUDIO (10) - No comments
6.16 PLAY AUDIO (12) - No comments
6.17 PLAY AUDIO MSF - No comments

6.18 PREVENT ALLOW MEDIUM REMOVAL
When Persistent = 1, persistent state is set by prevent bit.
When Persistent = 0, prevent state is set by prevent bit.

A fix is required. Need changes to tables.

6.19 READ (10) - No comments
6.20 READ (12) - No comments
6.21 READ BUFFER - No comments
6.22 READ BUFFER CAPACITY - No comments
6.23 READ CAPACITY - No comments
6.24 READ CD - No comments
6.25 READ CD MSF - No comments
6.26 READ DISC INFORMATION - No comments

6.27 READ DVD STRUCTURE
In order to clarify the session number handling for DVD+R, we like to have a description like;
"If Session Number does not exist, the drive shall terminate the command with CHECK
CONDITION status and set sense codes shall be set to ILLEGAL REQUEST/INVALID
PARAMETER IN CDB".

To fix in 2F.

6.28 READ FORMAT CAPACITIES - No comments
6.29 READ SUB-CHANNEL - No comments

6.30 READ TOC/PMA/ATIP
Track Mode of 07h shall be applied only to DVD+R and DVD+MRW. Those tables which describe
track mode need correction; Tables 443, 445 and 459.

To fix in 2F.

6.30.2.3.2 DVD-ROM, DVD-RAM, DVD+RW, and DVD-R/-RW
6.30.2.3.2 DVD-ROM, DVD-RAM, DVD+RW, and DVD-R/-RW
"DVD+R" should be added to the clause header.

To fix in 2F.

6.31 READ TRACK INFORMATION
Track Mode of 07h shall be applied only to DVD+R and DVD+MRW. Those tables that describe
track mode need correction; Tables 443, 445 and 459.

To fix in 2F.

In table 457 a description of Session is needed.

6.32 REPAIR TRACK - No comments
6.33 REPORT KEY - No comments
6.34 REQUEST SENSE
Several changes to page 399. Notes in PDF.

6.35 RESERVE TRACK - No comments

6.36 SCAN - No comments

6.37 SEEK (10)
Change statement about "immediate" command. The word immediate may be confusing. A
change of the description is needed.

6.38 SEND CUE SHEET - No comments

6.39 SEND DVD STRUCTURE
We need clarification for the drive action when the password is set as all "FF" in WDCB password field. Format document says "If the WDCB Password field is set to all (FF), then the disc is permanetly wirte protected and further recording on the disc shall not be allowed."
We assume that this protection includes re-formatting, so a description clarifying this should help people understanding this protection action.

To fix in 2F.

We also need error code for the write attempt when the disc is permanently protected. Suggested error codes would be 7/27/04 (PERSISTENT WRITE PROTECT) or 7/27/05 (PERMANENT WRITE PROTECT).

To fix in 2F.

6.40 SEND KEY - No comments
6.41 SEND OPC INFORMATION - No comments
6.42 SET CD SPEED - No comments
6.43 SET READ AHEAD - No comments
6.44 SET STREAMING - No comments
6.45 START STOP UNIT
Table 567: Case for LoEj=1 and Start=1 and no media. Note that this is not an error.

6.46 STOP PLAY/SCAN - No comments
6.47 SYNCHRONIZE CACHE - No comments
6.48 TEST UNIT READY - No comments
6.49 VERIFY (10) - No comments
6.50 WRITE (10) - No comments
6.51 WRITE (12) - No comments
6.52 WRITE AND VERIFY (10) - No comments
6.53 WRITE BUFFER   - No comments

Annex F
4.1.6.3 Unable to Write Errors
The bottom row in Table 2. says "ILLEGAL REQUEST/CANNOT WRITE MEDIUM - INCOMPATIBLE FORMAT or ILLEGAL REQUEST/CANNOT WRITE MEDIUM - UNSUPPORTED MEDIUM VERSION", suggesting SK/ASC/ASCQ of 5/30/05 or 5/30/11, however, Annex F still lists those errors as 2/30/05 or 2/30/11.
Needs consistency.

Get broad opinion on time-based progress reporting via reflectors.

7.0 New Business

 MMC-5 Proposal was discussed. Initial proposals may appear in January.

9.0 Future Meeting Schedule

January 13,14, 2004 Chandler, Arizona sponsored by Intel

10.0 Adjournment

Meeting was adjourned at 5:10PM, 5 November 2003.

Bill McFerrin, (CD Edge, Inc) for Philips Electronics, NA