

Minutes of Device Statistics teleconference

held Jan. 31, 2008

Technical Editor:

Jim Hatfield
389 Disc Drive
Longmont, CO 80503 USA
720-684-2120
James.C.Hatfield@seagate.com

Agenda:

discuss material to be added to the overview section (prior to details about each statistics page)

- 1) defining some terms and conditions
 - initialization
 - "at the factory "
- 2) discuss interaction with resets
- 3) discuss 'update criteria'
 - Does drive need to exit standby (e.g. spinup) to update statistic ?
 - Do 'timers' keep incrementing during standby ? sleep ? (separately)
 - Reading the log causes the permanent data to be saved (writes before read)
- 4) Should some page (e.g. 0) be defined to list a summary of supported pages ?

Date: Thursday, January 31, 2008
Time: 2:00 pm, Mountain Standard Time (GMT -07:00, Denver)
Duration: 2 hours

WebEx info:
<http://seagate.webex.com>
Meeting Number: 827 990 347
Meeting Password: notsmart

Phone info:
domestic: 877-873-8019
internat'l : 636-651-3183
participant: 8314923#

Meeting host:
Jim Hatfield
james.c.hatfield@seagate.com
720-6842120

Attendees:

Marty Stevens	Dell
Bill Martin	Emulex
Chris Charleson	Emulex
Miller Lin	Genesys Logic
Wayne Bellamy	HP
Steve Livaccari	IBM
John Geldman	Lexar
Dan Meyer	LSI
George Penokie	LSI
Joseph Chen	Samsung
Yoni Shternhell	SanDisk
Jim Hatfield	Seagate (host)
Patrick Hery	Toshiba

Discussion:

- 1) defining some terms and conditions
 - initialization
 - "at the factory "
 - o this is not seen as a point of confusion
 - o preferred: use 'at the time of manufacture' instead

- 2) discuss interaction with resets
 - a. poweron reset
 - i. depends on the particular statistic

 - b. hardware reset
 - i. SSP state is don't care
 - ii. Device statistics shall be preserved across hardware reset
 - iii. do not force flush to non-volatile media (but don't say anything in the spec)

 - c. software reset
 - i. Device statistics shall be preserved across software reset
 - ii. do not force flush to non-volatile media

 - d. device reset
 - i. Device statistics shall be preserved across device reset
 - ii. do not force flush to non-volatile media

 - e. in general
 - i. Device statistics shall be preserved across all resets except poweron reset.

- 3) discuss 'update criteria'
 - Does drive need to exit standby (e.g. spinup) to update statistic ?
 - o "The device shall not exit standby to update the log (e.g., do not spinup)."
 - o (put this in log overview)

 - Do 'timers' keep incrementing during standby ? sleep ? (separately)
 - o Standby – yes
 - o Sleep – no
 - o (put this in log overview)

 - Reading the log causes the permanent data to be saved (writes before read)
 - o What about allowing (some) statistics to NOT update the permanent log, so as to not cause a spinup ?



- o Don't put this in the general section
- o Do it unless otherwise noted ?
- o No. describe this in each statistic (like we're doing now)



4) **Should some page (e.g. 0) be defined to list a summary of supported pages ?**

- a. Page FFFFh ?
- b. Page 0 is already defined in ACS
- c. Page closer to 0 ?
- d. Format? List of supported pages (not an array of all)
- e. Choose 08h or 10h or **01h** ?
- f. How much detail ?
 - i. One page containing a list of 16-bit page numbers
 - ii. Terminate the list with ??? (or) a count of the number of items in the list or a length of the list (in bytes? Or words?)
 - iii. Page would be mandatory if device statistics log is supported
 - iv. Should it have the same header as the other statistics pages ? (yes)



5) Should the header for each page contain the page number ?

- a. This would be a good idea

6) Each individual proposal needs to mark all non-spec'd offsets as 'reserved'

- a. Yes

7) Should a range of offsets in each page be marked 'vendor specific' ?

- a. No. the whole purpose of 'device statistics' is to get away from vendor specific differences

8) If drive is in standby and power is removed, statistics may not be updated.

- a. Put this in the overview section

9) Jim Hatfield will send a draft copy of these minutes to Joseph Chen and Steve Livaccari, and then post an official copy to t13.org

10) Jim Hatfield created a letter ballot comment against ATA8-ACS, rev 4c to change the 'general statistics' page from 00h to 01h

11) Jim Hatfield will post a proposal to update the device statistics log overview and to define the new 'summary' page. (e08106r0).

12) The meeting adjourned at 3:40 pm MST