

To: T10 Technical Committee  
 From: Tim Symons, PMC-Sierra (Tim\_Symons@pmc-sierra.com)  
 Date: 7 April 2007  
 Subject: 07-233r0 SAS-2 Function result for 256 zone support

**Revision Information**

- Revision 0: First draft.

**Referenced Document**

sas2r09 Serial Attached SCSI – 2 (SAS-2) revision 9  
 07-017r1 SAS-2 More Zone Groups [Steve Johnson, LSI]

**Overview**

Now that there are two zone group sizes defined in SAS-2, there is a possibility that a ZPSDS may contain some zoning expander devices that support 128 zones and others that support 256 zones.

Proposal 07-017 describes that any ZPSDS that contains at least one zoning expander device that supports 128 zones, then zone groups 128 to 255 shall be set to zero.

There should be an error code for when an application management client attempts to configure more ones groups than a zoning expander device supports i.e. request to configure zones 128 to 255 for a zoning expander device that only supports 128 zones.

This proposal defines a function result field to indicate that the CONFIGURE ZONE PERMISSION function has requested to configure zones that are not supported by the device.

If a zoning expander device receives a request to configure zone groups that it does not support then the function shall return a function result of 25h UNKNOWN ZONE PHY INFORMATION VALUE see table 222.

**10.4.3.2 SMP function response frame format**

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**Table 221** — FUNCTION RESULT field (part 4 of 4)

| Code | Name                               | SMP function (s)               | Description   |
|------|------------------------------------|--------------------------------|---|
| ...  | ...                                | ...                            | ...   |
| 25h  | UNKNOWN ZONE PHY INFORMATION VALUE | CONFIGURE ZONE PHY INFORMATION | A specified zone phy information value is not supported. The ADDITIONAL RESPONSE BYTES field may be present but shall be ignored. |
| ...  | ...                                | ...                            | ...   |

...

Table 222 defines the priority of the SMP function results defined in table 221.

**Table 222 — Function result priority** (part 3 of 3)

| <b>SMP function</b>                          | <b>SMP function result priority</b>  |
|--|--|
| CONFIGURE ZONE PERMISSION<br>(see 10.4.3.22) | 1) INVALID REQUEST FRAME LENGTH;<br>2) ZONE LOCK VIOLATION;<br>3) INVALID EXPANDER CHANGE COUNT;<br>4) UNKNOWN ZONE PHY INFORMATION VALUE<br>5) SMP FUNCTION FAILED; and<br>6) SMP FUNCTION ACCEPTED |
|  |  |