To: T10 Technical Committee  
From: Tim Symons, PMC-Sierra (Tim_Symons@pmc-sierra.com)  
Date: 5 July 2007  
Subject: 07-307r1 SAS-2 Zone group valid bit

Revision Information

- Revision 0: First draft.
- Revision 1: Revisions per the working group suggestions.

Referenced Document
sas2r10 Serial Attached SCSI – 2 (SAS-2) revision 10

Overview
Fix for SAS2r10 Editors Note 11

The zone route table of a zoning expander device may contain SAS address entries with the ZONE GROUP VALID bit set to zero. e.g. The zone table entries for SAS addresses of end devices attached to expander devices 4 and 5 shown in figure 51, do not have valid zone groups, because they are not attached to zoning expander devices.

Figure 51 shows an example of one ZPSDS in a SAS domain.

![Diagram of ZPSDS example](image)

The zone group of the phy on the boundary of the ZPSDS shall be asserted as the zone group for SAS addresses with the ZONE GROUP VALID bit set to zero

This proposal adds definition text for the zone group valid bit and the zone route table.

[Suggested additions to SAS-2 existing text (included in black), new additional text shown in red]
### 4.9.3.5 Source zone group and destination zone group determination

Table 32 — Destination zone group determination

<table>
<thead>
<tr>
<th>Routing method of the destination expander phy</th>
<th>Destination zone group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Zone group of the destination expander phy</td>
</tr>
<tr>
<td>Subtractive</td>
<td>Zone group of the destination expander phy (i.e., the subtractive expander phy)</td>
</tr>
<tr>
<td>Table</td>
<td>If the ZONE GROUP VALID bit is set to one, then the zone group stored in the zoning expander route table for the destination SAS address. If the ZONE GROUP VALID bit is set to zero, then the zone group of the destination expander phy.</td>
</tr>
</tbody>
</table>