To: T10 Technical Committee
From: Tim Symons, PMC-Sierra (Tim_Symons@pmc-sierra.com)
Date: 4 July 2007
Subject: 07-312r1 SAS-2 Zoning route table entries for subtractive ports

Revision Information
- Revision 0: First draft.

Referenced Document

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

Overview

Fixes for SAS2r10 Editors Note: 7

A zoning expander device discovers all devices in the topology during the discovery process. Devices connected through the subtractive port of an expander device are not explicitly required to be included in the zoning expander route table.

Zoning is most effective when permission for an OPEN request can be accepted or rejected at the earliest point in the topology. i.e. the first expander device inside the ZPSDS.

This is a proposal to include zone route table entries for devices attached to the subtractive port of expander and zoning expander devices.

[Suggested additions to SAS-2 existing text (included in black), new additional text shown in red
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4.9.3.4 Zoning expander route table

A zoning expander route table is an expander-based expander route table (see 4.6.7.3) that is able to hold the zone group of ~~each~~ routed SAS address~~es~~.

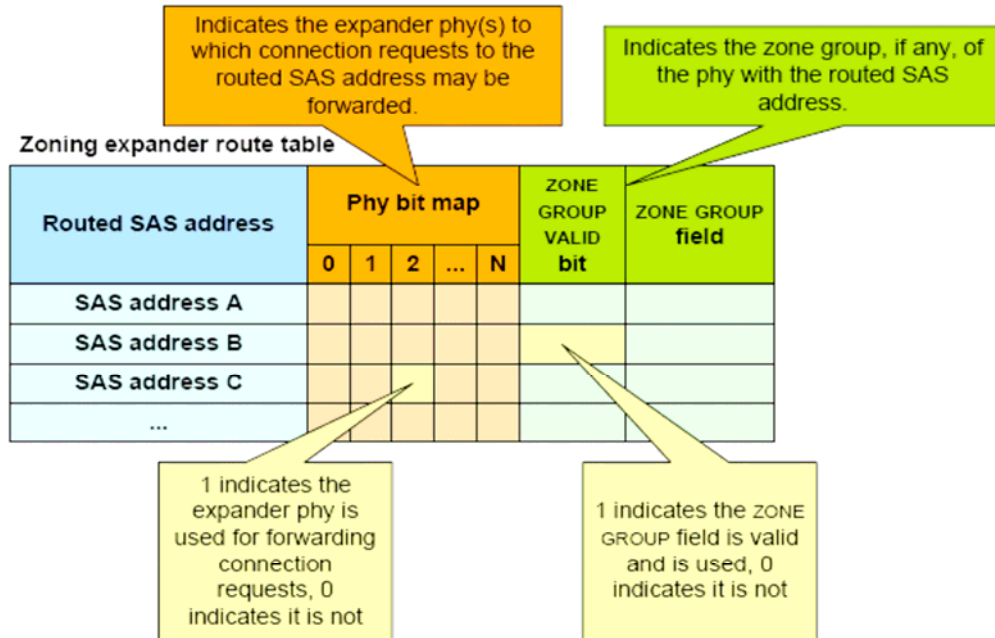Figure 56 shows a representation of the zoning expander route table.

Figure 56 — Zoning expander route table

The zoning expander route table:
1) shall include discovered SAS addresses for all phys with the ROUTING ATTRIBUTE field set to 2h (i.e., table).
2) should include discovered SAS addresses for all phys with the ROUTING ATTRIBUTE field set to 1h (i.e., subtractive).

If the number of routed SAS addresses exceeds the value indicated in the MAXIMUM NUMBER OF ROUTED SAS ADDRESSES field then the zone route table should include SAS addresses for phys with the ROUTING ATTRIBUTE field set to 1h (i.e.., subtractive) until the total number of routed SAS addresses in the zone route table is equal to the value indicated in the MAXIMUM NUMBER OF ROUTED SAS ADDRESSES field. The order for determining which routed SAS address for phys with the ROUTING ATTRIBUTE field set to 1h (i.e.., subtractive) is vendor unique.