



To: T10 Technical Committee  
 From: Kevin Marks - Dell, Inc.  
 Date: March 6, 2006  
 Subject: T10/06-130r1 – SAS2: Sticky Zone Groups

### Revision History

Revision 0 (03/02/06) – Initial proposal

Revision 1 (03/6/06)

- Removed SMP command material, because I'm not allowed to talk about that yet.
- Added sentence, that if ZONE PARTICIPATING is 1 then the ZONE GROUP PERSISTENT is set to 1
- Rename ZONE PERSISTENT bit to ZONE GROUP PERSISTENT bit
- Modified wording to match 06-122r2 wording.

### Related Documents

SAS-2 revision 2 (<http://www.t10.org/ftp/t10/drafts/sas2/sas2r02.pdf> )

SAS-2 Zoning - Phy Features [06-122r1] (<http://www.t10.org/ftp/t10/document.06/06-122r1.pdf> )

SAS-2 Zoning [06-019r5] (<http://www.t10.org/ftp/t10/document.06/06-019r5.pdf> )

[New text to be added](#)

~~Text to be deleted~~

*Editorial Text*

### Overview

The hardware related parts of the SAS-2 zoning proposal are now defined in T10/06-122. The material in T10/06-122 defines the behavior of the value of the zone group for a phy across phy reset events. Dell would like to see an alternate behavior that makes the zone group value persistent across phy resets or any other phy manipulation other than a CONFIGURE PHY ZONE command.

## **Suggested Changes to 06-122r2:**

[New text notated in [blue](#)]

### **4.9.3 Zone Operation**

#### **4.9.3.1 Zone phy information**

Each phy of a zoning expander device shall support the following zone phy information fields:

- a) ZONE PARTICIPATING bit;
- b) ZONE ADDRESS RESOLVED bit; ~~and~~
- c) [ZONE GROUP PERSISTENT bit; and](#)
- ~~ed~~) ZONE GROUP field.

The ZONE PARTICIPATING bit indicates the boundary of the ZPSDS. The ZONE PARTICIPATING bit shall be set to zero when the phy is attached to an end device or an expander device that does not support zoning. The ZONE PARTICIPATING bit shall be set to one when the phy is attached to a zoning expander device. If the ZONE PARTICIPATING bit is set to zero, then zoning information shall not be sent on the phy and any zoning information received on the phy shall be ignored.

The ZONE ADDRESS RESOLVED bit specifies the method used to determine the source zone group for an OPEN request received by a phy at the boundary of the ZPSDS as specified in Table n3.

The ZONE ADDRESS RESOLVED bit may be set to one when:

- a) the phy is contained within a zoning expander device; and
- b) the ZONE PARTICIPATING bit for the phy is set to zero.

The ZONE ADDRESS RESOLVED bit shall be set to zero when:

- a) the phy is contained within a non-zoning expander device; or
- b) the phy is contained within a zoning expander device and the ZONE PARTICIPATING bit for the phy is set to one.

The ZONE GROUP PERSISTENT bit specifies the method of determining the zone group value of the phy after a phy reset event (see 4.9.4). If the ZONE PARTICIPATING bit is set to one, the ZONE GROUP PERSISTENT bit shall be set to one.

The ZONE GROUP field has a value in the range 0 to 127 that indicates the zone group to which the phy belongs.

All phys in an expander port have the same zone phy information (see 4.6.2).

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#### 4.9.4 Phy reset sequence

After a phy reset sequence (e.g., the hot swap of an end device) ~~where the initial conditions shown in table n5 are met~~, the zone group to which the phy belongs shall be maintained as defined in this subclause.~~according to the rules in table n5.~~

If the ZONE GROUP PERSISTENT bit is set to one, then the zone group shall not change across a phy reset sequence. If the ZONE GROUP PERSISTENT bit is set to zero and the initial conditions shown in table n5 are met, then the value of the zone group shall follow the rules in table n5.

<...Insert Table n5 - Phy reset sequence behavior from 06-122r2....>