

To: T10 Technical Committee
 From: Kevin Marks (Kevin_Marks@dell.com) Dell, Inc.
 Date: March 9, 2005
 Subject: T10/05-005r2 - SES-2: Audible Alarm Element Addition

Revision History

Revision 0 (12/13/04) – Initial proposal
 Revision 1 (1/14/05) – Added ability to detect disabled elements
 Revision 2 (3/09/05) – Incorporated comments from March CAP WG and updated to SES-2r10

Related Documents

SCSI Enclosure Services – 2 (T10/1559-D - SES-2r10)

Overview

Dell sees a need to mute the audible alarm element, so that new error conditions that occur do not cause the muted state to be cleared as currently defined, in essence disabling the audible alarm element. This proposal accomplishes this action by changing table 50 to allow the DISABLE bit in the common status to apply to the alarm element and allows it to be disabled.

Additionally we would like the ability to detect when an element is disabled. This proposal proposes adding a DISABLED bit to the COMMON STATUS field.

Suggested Changes:

Modify **Table 50 - Element type codes** to change the DISABLE bit Reference for the Audible Alarm to “7.3.8” from “not defined”, as shown below:

Table 50 - Element type codes

Type Code	Type of element	DISABLE bit Reference	Threshold	Reference
....
05h	Door Lock	not defined	none	7.3.7
06h	Audible Alarm	not defined 7.3.8	none	7.3.8
07h	Enclosure Services Controller Electronics	Not defined	None	7.3.9
....

Add the following text in 7.3.8 Audible Alarm element (PAGE 72) to include the DISABLE bit text as indicated in blue text:

 7.3.8 Audible Alarm element

When the DISABLE bit in the COMMON CONTROL field (see 7.2.2) is set to one, the audible alarm shall be disabled and emit no sound regardless of error conditions that exist. When the DISABLE bit is set to zero, the audible alarm is enabled and may emit sound when error conditions exist.

The format of the control field for an Audible Alarm element is defined in table 70.

<Insert Table 70>

The COMMON CONTROL field is specified in 7.2.2.

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Modify **Table 52 - ELEMENT STATUS and OVERALL STATUS fields** to add the DISABLE bit to the COMMON STATUS as shown below:

Table 52 - ELEMENT STATUS and OVERALL STATUS fields

Byte\Bit	7	6	5	4	3	2	1	0
0	COMMON STATUS							
	Rsvd	PRDFAIL	Revd DISABLED	SWAP	ELEMENT STATUS CODE			
1	Element-type-specific status information							
3								

Add the following text in 7.2.3 Format for all status fields (PAGE 60) to include returning the DISABLED bit as part of status as indicated in blue text:

7.2.3 Format for all status fields

The format for the ELEMENT STATUS and OVERALL STATUS fields (i.e., status fields) for all element types is shown in table 52.

<INSERT Table 52 — ELEMENT STATUS and OVERALL STATUS fields as above>

The COMMON STATUS field contains those bits that may be returned by any OVERALL STATUS field or ELEMENT STATUS field. The bits of the COMMON STATUS field (i.e., the PRDFAIL, [DISABLED](#), SWAP, and ELEMENT STATUS CODE fields) are defined below.

A PRDFAIL (predicted failure) bit set to one indicates that this element of the enclosure has the capability of predicting failure and that a failure has been predicted. The predicted failure state indicator may additionally be set by the PRDFAIL bit in the corresponding control field. A PRDFAIL bit set to zero indicates that the predicted failure state is not set or that the predicted failure function is not implemented.

[A DISABLED bit set to one indicates that this element of the enclosure has been disabled because the DISABLED bit was set to one in the control field. A DISABLED bit set to zero indicates that the element has not been disabled or that the disable function is not implemented.](#)

A SWAP bit set to one indicates that an element has been removed and the same or another element has been inserted in the same location since the last time the RST SWAP control bit was set in the corresponding COMMON CONTROL field. The SWAP bit is set to zero when the RST SWAP control bit is set and remains set to zero until a device has been both removed and inserted in the device slot. The SWAP bit provides an indication that an element's properties may have been changed without any change of configuration.

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