T10/08-432r0 SMC-3 Use of element descriptor sense codes
To: T10 Technical Committee
From: Noud Snelder, BDT (noud.snelder@bdt.de)
Date: 10 September 2009
Subject: T10/08-432 SMC-3 Use of element descriptor sense codes

Revision History
Revision 0 (30 October 2008): initial revision
Revision 1 (10 September 2009): incorporated comments from august SMC3 WG telephone conference

Related Documents
SMC3r13 - SCSI Media Changer Commands - 3
08-272r2 – SMC-3 New additional sense codes tracking document

Overview
The SMC3 working group is attempting to define commonly used sense codes in the standard to increase level of standardization. The document 08-272 list all new SMC-3 error codes. Some of these error codes are sense codes used in element descriptors of the READ ELEMENT STATUS data. This document describes these error element descriptor sense codes.

Suggested Changes to SMC-3

Proposed new text is shown in blue. Proposed deletions are shown in red strikeout.

 [Add definition]

3.xx element descriptor sense code: a combination of the ELEMENT STATE ADDITIONAL SENSE CODE field and the ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field to report additional element information. See 5.xx

[Add paragraph:]

5.xx Additional element information
Additional element information is reported using element descriptor sense code (see 3.xx) codes in the element descriptor of the element status data (see 6.12.4) and in the element state data descriptor (see 6.13.5). During exceptions the element descriptor sense code as indicated by the ELEMENT STATE ADDITIONAL SENSE CODE field and the ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field in the element descriptor provide information about the exception. Table x describes the element descriptor sense code codes.

Table X – Element descriptor sense code codes

Sense code	Description
DUPLICATE VOLUME IDENTIFIER	The medium residing in this element reports a volume identifier that is identical to a volume identifier of another medium inside the media changer.
ELEMENT STATUS UNKNOWN	This element has not been scanned by an inventory scan. Element status is unknown.
VOLUME IDENTIFIER INVALID	The volume identifier of the medium residing in this element cannot be determined due to failing integrity check
VOLUME IDENTIFIER MISSING	The medium residing in this element does not report volume tag information.

[Modify paragraph:]

6.11.4 Medium transport element descriptor

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The ELEMENT STATE ADDITIONAL SENSE CODE field may provide specific information on an abnormal element state. The values in this field are as defined for the ADDITIONAL SENSE CODE field of REQUEST SENSE command response data (see SPC-3). Together with the ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field, this field specifies the element descriptor sense code. For a list of possible element descriptor sense codes see 5.xx. This field is valid only if the EXCEPT bit is set to one.

The ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field may provide more detailed information on an abnormal element state. The values in this field are as defined for the ADDITIONAL SENSE CODE QUALIFIER field of REQUEST SENSE command response data (see SPC-3). Together with the ELEMENT STATE ADDITIONAL SENSE CODE field, this field specifies the element descriptor sense code. For a list of possible element descriptor sense codes see 5.xx. This field is valid only if the EXCEPT bit is set to one.

6.13.5 Element State Data information page

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A sense data valid (SDV) bit set to one indicates that the ELEMENT STATE ADDITIONAL SENSE CODE field and ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field is valid and contain an additional element information (see 5.xx) sense code associated with the specified element. For a list of possible element descriptor sense codes see 5.xx. A SDV bit set to zero indicates that the content of the ELEMENT STATE ADDITIONAL SENSE CODE field and the ELEMENT STATE ADDITIONAL SENSE CODE QUALIFIER field is not valid.