

## T10/06-397r2 SMC-3 Error codes overview

To: T10 Technical Committee  
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 Subject: T10/06-397 SMC-3 Error codes overview

### Revision History

Revision 0 (31 August 2006): initial revision

Revision 1 (4 January 2007): added comments from November SMC-3 WG meeting and removed error codes that do not require description in SMC-3.

Revision 2 (16 January 2007): The error codes listed as vendor specific are remapped as 'remove SMC support' or remapped as 'SMC is silent on'. Removed defines for Magazine and Offline since define for Magazine is approved and define for Offline is moved to another proposal. Included references to the description of already defined error codes.

### Related Documents

SMC-3 r4 - SCSI Media Changer Commands – 3, revision 4

### Overview

The SMC-3 WG requested a list of the media changer specific error codes as defined by SPC-4. Next tables show error codes supported by media changer devices as specified by SPC-4. This proposal does not intend to provide a description of these error codes. Instead it divides the error codes in three tables. One table specifies the error codes that require a description in SMC-3, another specifies the error codes SMC-3 decides to be silent on, and another specifies the error codes which no longer require support for media changer devices.

Next table lists media changer error codes that require a description in SMC-3. The key VS indicates that the description of the error code is likely vendor specific and therefore does not require a description in SMC-3 (i.e., it would appear in the vendors SCSI reference manual for their product).

Error Code	Comment
CLEANING REQUESTED	<a href="#">HP brings in proposal</a>
CLEANING FAILURE	<a href="#">HP brings in proposal</a>
CLEANING REQUEST REJECTED	
LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED	WG: This error code is returned when media changer requires INITIALIZE ELEMENT STATUS command to proceed
LOGICAL UNIT NOT READY, OFFLINE	
NO REFERENCE POSITION FOUND	
RANDOM POSITIONING ERROR	
MECHANICAL POSITIONING ERROR	Another proposal from Rod Wideman is extending usage of this error code
INVALID ELEMENT ADDRESS	Already described in SMC-3 in chapter: 6.3 EXCHANGE MEDIUM, 6.6 MOVE MEDIUM, 6.7 OPEN CLOSE IMPORT EXPORT ELEMENT, 6.8 POSITION TO ELEMENT, 6.11 REQUEST DATA TRANSFER ELEMENT INQUIRY, 7.3.4 Element Address Assignment mode page
NOT READY TO READY CHANGE, MEDIUM MAY HAVE CHANGED	
IMPORT OR EXPORT ELEMENT ACCESSED	Already described in SMC-3 in chapter 5.2.4 Import/export element, 6.7 OPEN CLOSE IMPORT EXPORT ELEMENT
INCOMPATIBLE MEDIUM INSTALLED	
MEDIUM DESTINATION ELEMENT FULL	Already described in SMC-3 in chapter 6.3 EXCHANGE MEDIUM, 6.6 MOVE MEDIUM
MEDIUM SOURCE ELEMENT EMPTY	Already described in SMC-3 in chapter 6.3 EXCHANGE MEDIUM, 6.6 MOVE MEDIUM, 6.9 READ ATTRIBUTE, 6.15 WRITE ATTRIBUTE
MEDIUM MAGAZINE NOT ACCESSIBLE	<a href="#">IBM brings in proposal</a>
MEDIUM MAGAZINE REMOVED	<a href="#">IBM brings in proposal</a>
MEDIUM MAGAZINE INSERTED	<a href="#">IBM brings in proposal</a>
MEDIUM MAGAZINE LOCKED	<a href="#">IBM brings in proposal</a>
MEDIUM MAGAZINE UNLOCKED	<a href="#">IBM brings in proposal</a>
MEDIUM REMOVAL PREVENTED	Already described in SMC-3 in chapter 6.3 EXCHANGE MEDIUM, 6.6 MOVE MEDIUM, 6.7 OPEN CLOSE IMPORT EXPORT ELEMENT
MEDIUM REMOVAL PREVENTED BY DATA TRANSFER ELEMENT	Already described in SMC-3 in chapter 6.3 EXCHANGE MEDIUM, 6.6 MOVE MEDIUM

OPERATOR MEDIUM REMOVAL REQUEST	
LOGICAL UNIT COMMUNICATION FAILURE	
WARNING - ENCLOSURE DEGRADED	

The table below lists error codes this proposal suggests to be silent on in SMC-3 while remaining support for media changer devices in SPC-4.

Error Code
LOGICAL UNIT NOT READY, MANUAL INTERVENTION REQUIRED
MEDIUM NOT PRESENT – TRAY CLOSED
MEDIUM NOT PRESENT – TRAY OPEN
MEDIUM NOT PRESENT – LOADABLE
MEDIA LOAD OR EJECT FAILED
WARNING – SPECIFIED TEMPERATURE EXCEEDED

Next table lists error codes that are according SPC-4 supported by media changers, but this proposal suggest removing media changer support by deleting the 'M' for these error codes in table x in SPC-4.

Error Code
LOGICAL UNIT NOT READY, REBUILD IN PROGRESS
LOGICAL UNIT NOT READY, RECALCULATION IN PROGRESS
LOGICAL UNIT NOT READY, NOTIFY (ENABLE SPINUP) REQUIRED
LOGICAL UNIT COMMUNICATION CRC ERROR (ULTRA-DMA/32)
WARNING - BACKGROUND PRE-SCAN DETECTED MEDIUM ERROR
WRITE ERROR – UNEXPECTED UNSOLICITED DATA
WRITE ERROR - NOT ENOUGH UNSOLICITED DATA
READ ERROR – FAILED RETRANSMISSION REQUEST
LOGICAL BLOCK ADDRESS OUT OF RANGE
CDB DECRYPTION ERROR
DATA DECRYPTION ERROR
NO SEEK COMPLETE
WARNING – BACKGROUND MEDIUM SCAN DETECTED MEDIUM ERROR
OPERATOR REQUEST OR STATE CHANGE INPUT
MEDIUM NOT PRESENT – MEDIUM AUXILIARY MEMORY ACCESSIBLE