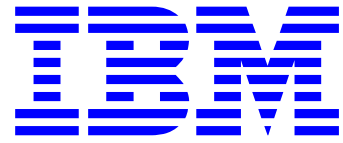


To: INCITS Technical Committee T10

From: Kevin Butt

Date: October 1, 2008

Document: T10/07-372r3 — SMC-3 - Medium Magazine Error Codes



1 Revisions

07-372r0. (August 24, 2007) Initial revision

07-372r1. (February 12, 2008) Expanded to include model section for media magazine.

07-372r2. (September 08, 2008) Edits from Sept. SMC Working Group.

07-372r3. (October 01, 2008) Edits from 01 Oct phone conference.

4 Introduction

The SMC-3 working group is attempting to clarify what additional sense codes are used in SMC devices and when they are presented. I have been given the assignment to propose those codes for Medium Magazines.

NOTE 1 - Sept WG: I need to create the full proposal for when used and where inserted into SMC-3. Perhaps there should be a model clause for these sense codes. Should be linked to Move Medium and exchange media command. Open/Close Import/Export Element.

5 Proposal

Editor's Note 1: Editor is instructed to sweep SMC-3 for medium magazine and change to media magazine.

Editor's Note 2: Editor is instructed to sweep SMC-3 for magazine (i.e., with no qualifier) and change to media magazine.

3.1.9 media magazine: A structure consisting of one or more import/export elements and/or storage elements that is used to contain a set of volumes within the media changer (see 5.3). Some media changer devices allow an operator to remove ~~the~~ media magazine(s) from the media changer. ~~See 5.3 for a more complete definition.~~

5.3 Media magazine

A media changer may organize import/export elements or storage elements into physical groupings that may be accessed as one entity using a structure called a media magazine. A media magazine consists of:

- a) one or more import/export elements;**
- b) one or more storage elements; or**
- c) one or more elements where the elements are a mixture of import/export elements and storage elements.**

Table 1 describes when additional sense codes related to media magazines are used.

Table 1 — Media magazine additional sense codes

Additional Sense Code	Sense Key	When used
MEDIUM MAGAZINE REMOVED	UNIT ATTENTION	A unit attention condition <u>is</u> established when a media magazine has been removed from the media changer
	NOT READY [±] ILLEGAL REQUEST	This CHECK CONDITION is returned in the response to a command that the device server is unable to process because a media magazine is not present in the media changer
	<u>ILLEGAL REQUEST</u>	
MEDIUM MAGAZINE INSERTED	UNIT ATTENTION	A unit attention condition <u>is</u> established when a media magazine has been inserted into the media changer <<Do we need to relate to lock?>>
	NOT READY	N/A This combination shall not be used.
	<u>ILLEGAL REQUEST</u>	Editors Note 3 - KDB: There was discussion about whether or not to list ILLEGAL REQUEST. The point was raised that ADC specifies to use ILLEGAL REQUEST in certain conditions. Look and see when and what, if anything, it should drive in this table.
MEDIUM MAGAZINE LOCKED	UNIT ATTENTION	A unit attention condition <u>is</u> established when a media magazine has been locked; Storage elements in the magazine may now be accessed by the medium transport element. The <u>ACCESS bit in the element status data indicates whether access to a specific element by the medium transport element is allowed (see 6.11.5).</u>
	NOT READY	In response to a command that the device server is unable to process because... This combination shall not be used.
	<u>ILLEGAL REQUEST</u>	

Table 1 — Media magazine additional sense codes

Additional Sense Code	Sense Key	When used
MEDIUM MAGAZINE UNLOCKED	UNIT ATTENTION	A unit attention condition <u>is</u> established when a media magazine has been unlocked; Movement-Removal of the media magazine is allowed and storage elements in the magazine may not be accessed are not accessible by the medium transport element.
	NOT READY	In This CHECK CONDITION is returned in response to a command that the device server is unable to process because the media magazine is unlocked.
	ILLEGAL REQUEST	
MEDIUM MAGAZINE NOT ACCESSIBLE ^z	UNIT ATTENTION	
	NOT READY	In This CHECK CONDITION is returned in response to a command that the device server is unable to process because <u>a media magazine has been changed is not accessible by a medium transport element (e.g., magazine has been unlocked, position has changed, etc.)</u> such that the magazine is not accessible by the medium transport element and an attempt to access the magazine is attempted. Note that there is no method described in the SMC-3 whereby a media magazine may be addressed. I assume those libraries that can move magazines use Move-Medium and/or Exchange-Medium with a special address. A library vendor who uses media magazines should address this shortcoming.
	ILLEGAL REQUEST	

5.4 Volume tag information

Editor's Note 4: Nothing changed in the Volume tag information clause except numbering

6.11.4 Medium transport element descriptor

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An element disabled (ED) bit set to one indicates that the element is disabled (e.g., a media magazine or drive is not installed or has been logically disabled). An ED bit set to zero indicates that the element is enabled.

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7.3.3 Extended Device Capabilities mode page

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A storage magazine (SMGZ) bit set to one indicates that the media changer uses medium-media magazines for some storage elements. A SMGZ bit set to zero indicates that the media changer does not use medium-media magazines for any storage element.

An import/export magazine (IEMGZ) bit set to one indicates that the media changer uses medium-media magazines for some import/export elements. An IEMGZ bit set to zero indicates that the media changer does not use medium-media magazines for any import/export element.