

# memorandum



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T10/07-015r3

To	From	Subject	Date
INCITS T10 Committee	Curtis Ballard, HP Michael Banther, HP	Clarification of reporting Drive Prevented Media Removal	14 June 2007

## Revision History

Revision 0 – Initial document.

Revision 1 – Updated to match revision 1 of proposal 06-442.

Revision 2 – Updated to match final version of PREVENT ALLOW MEDIUM REMOVAL in SMC3r07  
Incorporated comments from May 2007 T10 meetings in Seattle

Revision 3 – Incorporated wording changes from June 2007 conference call.

## Related Documents

smc3r07 – SCSI Media Changer Commands - 3 revision 07

adc-r07 – Automation Drive Interface Commands - revision 07

spc3r23 – SCSI Primary Commands -3 revision 23

## Background

Revision 07 of SMC3 has “shall” statements requiring a medium changer to prevent moves when a prevent media removal condition is set in a data transfer device that is a source of a move or an exchange and return a specific sense code in that case.

The ADC specification section 4.2.2 provides guidance on how device servers should interact and states that “PREVENT ALLOW MEDIA REMOVAL COMMANDS (see SPC-3) issued to the RMC device server shall not affect the ADC device server.” That means that a prevent media removal condition in a removable media device supporting ADI will not prevent a medium changer from removing the volume. The prevent media removal condition will be reported by the removable media device in the DT Device Status log page very high frequency data parameter so the medium changer may choose to honor the prevent media removal condition or may choose to override that condition.

Non-ADI automation/drive interfaces have differing behavior with some ignoring the prevent media removal condition in the drive and others enforcing it.

Because the current preferred automation/drive interface standard makes enforcement of the prevent media removal condition optional and non-ADI interfaces have differing behaviors, the SMC-3 standard must be able to support either implementation.

In the proposed changes that follow, new text appears in blue, deleted text appears in ~~red~~, and editorial comments appear in green.

## Changes to proposal SMC3r07

### 6.3 EXCHANGE MEDIUM command

Comment: The CDB and most of the descriptive text for this command is not changed and is not repeated here. Text shown here is from the first full paragraph on page 25.

~~If the element address specified in the SOURCE ADDRESS field or the FIRST DESTINATION ADDRESS field of an EXCHANGE MEDIUM command represents a data transfer element and a prevention of medium removal condition exists within the data transfer device (see applicable command standard), then~~

When processing an EXCHANGE MEDIUM command, the device server shall return CHECK CONDITION status and shall set the sense key to ILLEGAL REQUEST and the additional sense code to MEDIUM REMOVAL PREVENTED BY DATA TRANSFER ELEMENT if:

- a) the element address specified in the SOURCE ADDRESS field or the FIRST DESTINATION ADDRESS field represents a data transfer element;
- b) the device server detects a prevention of medium removal condition exists within the data transfer device (see applicable command standard); and
- c) the device server does not allow moves from an element associated with a data transfer device that has a prevent medium removal condition.

### 6.6 MOVE MEDIUM command

Comment: The CDB and most of the descriptive text for this command is not changed and is not repeated here. Text shown here is from the second full paragraph on page 29.

~~If the element address specified in the SOURCE ADDRESS field of a MOVE MEDIUM command represents a data transfer element and a prevention of medium removal condition exists within the data transfer device (see applicable command standard), then~~

When processing a MOVE MEDIUM command, the device server shall return CHECK CONDITION status and shall set the sense key to ILLEGAL REQUEST and the additional sense code to MEDIUM REMOVAL PREVENTED BY DATA TRANSFER ELEMENT if:

- d) the element address specified in the SOURCE ADDRESS field represents a data transfer element;
- e) the device server detects a prevention of medium removal condition exists within the data transfer device (see applicable command standard); and
- f) the device server does not allow moves from an element associated with a data transfer device that has a prevent medium removal condition,