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T10/07-015r1

To	From	Subject	Date
INCITS T10 Committee	Curtis Ballard, HP Michael Banther, HP Removal	Clarification of reporting Drive Prevented Media	5 March 2007

Revision History

Revision 0 – Initial document.

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

Related Documents

smc3r01 – SCSI Media Changer Commands - 3 revision 04

adc-r07 – Automation Drive Interface Commands - revision 07

spc3r23 – SCSI Primary Commands -3 revision 23

Background

Revision 04 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.

Note that the same paragraph that will be modified by this proposal has statements referencing SPC-3 for the definition of the prevent media removal condition and that reference is being removed by another proposal, 06-442R1. This proposal will attempt to incorporate the changes proposed in 06-442r1.

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

Changes to proposal 06-442r1

5.3 Data transfer device medium removal condition

The data transfer device medium removal condition defines whether the medium transfer device will allow removal of the medium by an operator. ~~for a media changer to remove media from the data transfer device.~~ The data transfer device medium removal condition is controlled by the PREVENT ALLOWE MEDIA REMOVAL command (see SSC-3, or SBC-3) to the data transfer device server.

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.

If the device server does not allow moves from a data transfer device when a data transfer device medium removal condition exits within the data transfer device, the element address specified in the SOURCE



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ADDRESS or the FIRST DESTINATION ADDRESS field of an EXCHANGE MEDIUM command represents a data transfer element, and the data transfer device medium removal is prevented, 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.

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.

If the device server does not allow moves from a data transfer device when a data transfer device medium removal condition exits within the data transfer device, the element address specified in the SOURCE ADDRESS of a MOVE MEDIUM command represents a data transfer element, and the data transfer device medium removal is prevented, 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.