

T10/05-070r0 SMC-3 OPEN/CLOSE ELEMENT command

To: T10 Technical Committee
From: Noud Snelder, BDT (Noud.Snelder@BDT.de)
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Subject: T10/05-070r0 SMC-3 OPEN/CLOSE ELEMENT command

Revision History

Revision 0 (11 February 2005): initial revision

Related Documents

smc2r07 - SCSI Media Changer Commands - 2 revision 2

Overview

Many media changers with an import/export element implement a vendor specific command to open and or close the import/export element (mail-slot). And some media changers have an electric door, but no SCSI command exists to open and close this door. This document proposes a SCSI command to standardize this functionality.

Suggested Changes to SMC-3

Table 3 - Commands for independent media changers

[Add a row for:]
OPEN/CLOSE ELEMENT, 1Bh, O, 6.x

Table 5 – SMC commands allowed in the presence of various reservations

[Add a row for:]
OPEN/CLOSE ELEMENT, Conflict, Conflict, Conflict, Allowed, Conflict, Conflict

6.x OPEN/CLOSE ELEMENT command

The OPEN/CLOSE ELEMENT command (see table X) provides a method for the application client to change the open/closed state of the specified element address. The ELEMENT ADDRESS field specifies the element address and the ACTION CODE field specifies the requested action to the device server.

Support for this command is optional for independent media changers. This command has no command parameter data. No command response data is returned.

Table X. OPEN/CLOSE ELEMENT command

Bit	7	6	5	4	3	2	1	0
Byte								
0	OPERATION CODE 1Bh							
1	Reserved				ACTION CODE			
2	(MSB) ELEMENT ADDRESS (LSB)							
3								
4	Reserved							
5	CONTROL							

The ACTION CODE field specifies the requested action for the specified element within the media changer. If the device server supports the OPEN/CLOSE ELEMENT command, it shall support one or more of the listed action codes. The device server shall return CHECK CONDITION status on not supported ACTION CODE values. The sense key shall be ILLEGAL REQUEST and the additional sense code INVALID FIELD IN CDB.

Table X+1. Supported Action Codes

ACTION CODE	Description
0h	Open element
1h	Close element
2h-7h	Reserved

If ACTION CODE is set to 0h (Open element) the media changer shall open the specified element. It is not considered an error when the element was already open.

If ACTION CODE is set to 1h (Close element) the media changer shall close the specified element. It is not considered an error when the element was already closed.

If the requested element address is locked with the PREVENT ALLOW MEDIA REMOVAL command, and ACTION CODE is set to "Open element", the device server shall return CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST and the additional sense code to MEDIUM REMOVAL PREVENTED.

If the address specified in the ELEMENT ADDRESS field has not been assigned or has been assigned to an element type other than import/export element, the device server shall return CHECK CONDITION status. The sense key shall be set to ILLEGAL REQUEST and the additional sense code to INVALID ELEMENT ADDRESS.

Comment: it is desired for autoloaders without an Import Export element to have a command to open and close the autoloader's door. Maybe an element type can be specified for autoloader doors (Door Element)? This assigns element addresses to doors. And that allows the OPEN/CLOSE ELEMENT command to open and close doors of an autoloader.