

T10/07-199r0 SMC-3 POSITION TO ELEMENT command clarification

To: T10 Technical Committee

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Subject: T10/07-199r0 POSITION TO ELEMENT command clarification

Revision History

Revision 0 (16 April 2006): initial revision

Related Documents

SMC3r06 - SCSI Media Changer Commands - 3 revision 6

Overview

The POSITION TO ELEMENT command refers to the Device Capabilities mode page for supported source element or destination element combinations. This mode page is not relevant for the POSITION TO ELEMENT command; therefore this proposal suggests removing this text. The new Extended Device Capabilities mode page includes a property relevant for the POSITION TO ELEMENT command. This proposal proposes to include text to refer to this property bit.

Suggested Changes to SMC-3

6.8 POSITION TO ELEMENT command

The POSITION TO ELEMENT command (see table 13) ~~shall request the device server to position the medium transport address element such that further motion of the medium transport address element is unnecessary to execute an appropriate MOVE MEDIUM command between the medium transport address element and~~ to the destination address element is unnecessary.

Table 13 — POSITION TO ELEMENT command

Bit	7	6	5	4	3	2	1	0
Byte								
0	OPERATION CODE (2Bh)							
1	Reserved							
2	(MSB)	MEDIUM TRANSPORT ADDRESS						(LSB)
3								
4	(MSB)	DESTINATION ADDRESS						(LSB)
5								
6	Reserved							
7	Reserved							
8	Reserved							INVERT
9	CONTROL							

The MEDIUM TRANSPORT ADDRESS field specifies the medium transport element used to execute this command. The default medium transport element address of zero may be used. If the element address specified in the MEDIUM TRANSPORT ADDRESS element field has not been assigned or that element address has been assigned to a different element type, then the logical unit shall return CHECK CONDITION status. The sense key shall be ILLEGAL REQUEST and the additional sense code INVALID ELEMENT ADDRESS.

The element specified by the DESTINATION ADDRESS field may represent a storage element, an import/export element, a data transfer element, or a medium transport element. If the element address specified in the DESTINATION ADDRESS field has not been assigned to a specific element of the media changer, then the target shall return CHECK CONDITION status. The sense key shall be ILLEGAL REQUEST and the additional sense code INVALID ELEMENT ADDRESS.

~~The Device Capabilities mode page (see 7.3.2), provides a matrix with the supported source element or destination element combinations for the POSITION TO ELEMENT command.~~

An INVERT bit of one specifies that the medium transport element be inverted or rotated prior to positioning at the destination address element. If the media changer does not support volume rotation for handling double-sided media, then the INVERT bit should be set to zero. If this bit is set to one, then a target that is not capable of volume rotation shall return CHECK CONDITION status. The sense key shall be ILLEGAL REQUEST and the additional sense code INVALID FIELD IN CDB.

See SAM-3 for a description of the CONTROL byte.

~~If the PEPOS bit in the Extended Device Capabilities mode page (see 7.3.3) is set to one, then the media changer requires a POSITION TO ELEMENT command to position the medium transport element to a data transfer element before an eject (see SSC-3) operation.~~