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TO: X3T10 Committee (SCSI)

SUBJECT: SSC READ REVERSE command byte order selection

The traditional byte order for the READ REVERSE command is to have the bytes transferred to the initiator in the reverse order from that which they were recorded (i.e., from highest offset to lowest offset). However, recent compression algorithms decode only in a forward direction, regardless of the direction in which data are transferred into the device server buffer. Since the READ REVERSE command is still useful in some applications, it is necessary to update its function for these newer products.

This proposal adds an optional function to the CDB to transfer bytes in a direction opposite that historically used.

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Attachment of 1 page is part of this document

5.2.8 READ REVERSE command

Table 1-1 READ REVERSE command

Bit Byte	7	6	5	4	3	2	1	0
0	Operation code (0Fh)							
1	Reserved					BytOrd	SILI	Fixed
2 : : 4	Transfer Length							---
5	Control							

Replace the paragraph starting “The execution of this command...” with

When the byte order (BytOrd) field is set to 0b, the READ REVERSE commands is similar to a READ command, except that the logical motion is toward BOPx. Any blocks are transferred in reverse order, and bytes within those blocks are transferred in descending order of relative offset within each block. The order of bits within each block shall not be changed. Support for this function is mandatory when the command is implemented.

When the byte order (BytOrd) field is set to 1b, the READ REVERSE commands is similar to a READ command, except that the logical motion is toward BOPx. Any blocks are transferred in reverse order, but bytes within those blocks are transferred in ascending order of relative offset within each block (i.e., the same order as a READ command). The order of bits within each block shall not be changed. Support for this function is optional when the command is implemented.

Upon completion of a READ REVERSE command, the logical position shall be before the last block or filemark encountered (BOPx side).