

X3T9.2/87-39

Maxtor

The last word in
small disk storage

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TO: SCSI-2 Working Group and Accredited
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SUBJ: Proposal For a READ UPDATED BLOCKS Command

Attached for your review is a proposal for a READ UPDATED BLOCKS Command, intended primarily for use with optical devices (WORM in particular) which allow the updating of logical blocks, or more specifically, devices which relocate the physical location of a logical block.

As an example, say a device has six versions (or "GENERATIONS") of LBA 7F. A normal READ command to 7F results in the most current generation being transferred.

What if the host wants one of the other generations of LBA 7F?

This command allows the host to specify which generation and the number of subsequent generations of a particular are to be transferred, avoiding device-specific implementations.

Additionally, this command allows the host to determine the TOTAL number of generations that exists for a particular LBA.

READ UPDATED BLOCKS

Peripheral Device Type: WORM, Optical Devices
Operation Code Type: Optional

READ UPDATED BLOCKS Command

Bit	7	6	5	4	3	2	1	0
Byte								
0	Operation Code (3Eh)							
1	Logical Unit Number			Reserved		MaxGen		RelAddr
2	(MSB)							
3								
4	Logical Block Address							
5								
6	(MSB)							
7	Generation Address							
8								
9	Vendor Unique		Reserved		Flag		Lini	

The READ UPDATED BLOCKS Command (Table ___) provides a means for reading data from blocks where the Logical Block Address has been physically relocated.

A MaxGen bit of zero requests the target to transfer the data from each block defined by the Transfer Length. The transfer begins at the Generation Address and continues with each generation of the Logical Block Address that exists after the Generation Address specified. The transfer ends when the Transfer Length is exhausted. If the Transfer Length and Generation Address specified results in exceeding the number of existing generations for the Logical Block specified, the command shall be terminated with a CHECK CONDITION status and the ILLEGAL REQUEST sense key.

A MaxGen bit of one requests the target transfer the four bytes of Maximum Generation data shown in Table __ during the DATA IN phase of the command. The MAXIMUM GENERATION ADDRESS field specifies the generation address of the most current generation of the Logical Block Address specified in the CDB. The Generation Address and the Transfer Length fields of the CDB are not implemented.

The Generation Address specifies the generation of the Logical Block Address that data transfer begins. Generation Address zero defines the first original

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location of the Logical Block Address. Generation Address one defines the second generation of the Logical Block Address, etc..

The Transfer Length specifies the number of contiguous generation blocks of data that shall be transferred. A transfer length of zero indicates that no generation blocks shall be transferred. This condition shall not be considered an error.

Table _-_: MAXIMUM GENERATION Data

Byte :	Description
0 : (MSB)	Maximum Generation Address (LSB) :
1 :	
2 :	Reserved
3 :	Reserved

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