

To: T10 Technical Committee
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 Subject: T10/05-136r0 SAT - REASSIGN BLOCKS command

Revision History

Revision 0 (March 31, 2005) first revision

Related Documents

- (T10) sat-r02 – SCSI to ATA Translation (SAT), Revision 2
- (T10) sbc-2r16 – SCSI Block Commands -2, Revision 16
- (T13) ata7v1r4b – AT Attachment with Packet Interface -7 Volume1, Revision 4b

Overview

1. Most SCSI implementations and many popular operating systems use the REASSIGN BLOCKS command even though the REASSIGN BLOCKS command is an optional SCSI command per SBC-2.
2. Complexity of the emulation of the REASSIGN BLOCKS command is estimated to be minimal.

Suggested Changes

9.6 REASSIGN BLOCKS command (07h)

9.6.1 Command summary

The REASSIGN BLOCKS command requests that the device server reassign defective logical block(s) to another area on the medium set aside for this purpose (see SBC-2). The SATL device server emulates the SCSI REASSIGN BLOCKS command through use of an ATA READ VERIFY SECTOR(S) or an ATA READ VERIFY SECTOR(S) EXT command since non-packet devices do not support or have a direct translation for the REASSIGN BLOCKS command.

NOTE: SATL emulations may have many iterative routines to extensively support the command emulation. Additionally, SATL emulations may have varied routines with read and write operations (followed by read verify operations) to the location(s) to be reassigned. These operations may influence the error detection and "auto-reassignment" capability of the device.

Table 1- REASSIGN BLOCKS command CDB fields

Field	SATType	Description or reference
OPERATION CODE	E	The SATL shall issue an ATA READ VERIFY SECTOR(S) command, or if the non-packet device supports 48-bit Address feature set, the SATL shall issue an ATA READ VERIFY SECTOR(S) EXT command.
LONGLBA	I	(see SBC-2)
LONGLIST	I	(see SBC-2)
CONTROL	I	(see 6.4)

9.6.2 REASSIGN BLOCKS parameter list

The REASSIGN BLOCKS command parameter list provided in the data-out buffer contains the defective LBA(s) to be reassigned. The LBA(s) provided in the list shall be utilized for the LBA(s) in the ATA READ VERIFY SECTOR(S) or ATA READ VERIFY SECTOR(S) EXT command(s). The SATL device server may support a list of more than one LBA for reassignment. If not, and the list contains more than one LBA, the SATL device server shall terminate the command with CHECK CONDITION STATUS with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN PARAMETER LIST.

The SATL device server shall support the LONGLBA and LONGLIST fields (see SBC-2).