To: Membership of X3T10

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Subject: Initiator-controlled Write Protect

Background

For some applications, it is desirable to provide a mechanism of write protecting a removable medium (tape or disk). Normally, this is accomplished by some physical switch (a tab) on the cartridge holding the medium. However, it may be desirable to provide a write-protect that the driver can issue to the logical unit. This would create a soft write-protect.

While I am only proposing these changes for sequential devices (i.e., tape), other models, such as the block device model may wish to make the same changes.

Proposal

The following changes are required in the Device-specific parameter of the Mode data in the Sequential-access device section of SSC for SCSI-3. Changes are marked with change bars and underline.

[changes for section 5.3.3 Mode Parameters in SSC rev 2]

Table 23 - Device-specific parameter

Bit	7	6	5	4	3	2	1	0
	WP	Buffered mode			Speed			

When used with the MODE SENSE command, a write protect (WP) bit of zero indicates that medium is write enabled. A WP bit of one indicates that the medium is currently write protected. When used with the MODE SELECT command, this field is not defined.

NOTE 1 Write-protect indicates that the medium is currently write-protected. The write-protect may be due to logical unit internal restrictions, soft write-protect, or a physical write-protect.

[changes for section 5.3.3.5 Read-write error recovery page in SSC rev 2]

Table 35 - Read-write error recovery page

Bit Byte	7	6	5	4	3	2	1	0
0	PS	Rsvd	Page Code (01h)					
1	Page length (0Ah)							
2	Reserved		TB	Rsvd	EER	PER	DTE	DCR
3	Read retry count							
4	Reserved							
5	Reserved							
6	Reserved							
7	Reserved						SWP	Rsvd
8	Write retry count							
9	Reserved							
10	Reserved							
11	Reserved							
NOTE - The parameters in this page also apply to verify operations.								

A soft write protect (SWP) bit of one indicates that the logical unit shall inhibit all writing to the medium after writing all buffered data, if any. When SWP is one, all commands requiring eventual writes to the medium shall return CHECK CONDITION status with the additional sense code set to WRITE PROTECTED. A SWP bit of zero indicates that the logical unit may inhibit writing to the medium, dependent on other write inhibits.