

To: Members of X3T10 Doc # 96-275-r0

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Subject: Write Append Only Proposal

At the 18 July 1996 SSC Working Group Meeting, I agreed to propose an additional write protect to the list presented by Mr. Gary R. Stephens of FSI (Doc.# X3T10/96-179r0). In that proposal Mr. Stephens added three additional write protect functions:

- Associated Write Protect - Currently mounted volume is logically write protected until volume dismounted
- Persistent Write Protect - Write protected via flag recorded with volume (presumably on the media). The write protect flag CAN be changed to non-write protect
- Permanent Write Protect - Once set for the volume. Cannot be changed.

In addition to these proposed changes, I would request the addition of the following write protect function.

Definition

Write Append Only - A volume that is write append only behaves similarly to WORM (Write Once Read Many) with the additional characteristic that the tape drive can append customer data to the media. In this mode, the drive allows the initiator to overwrite trailing tapemarks (EOF and EOD marks) and ANSI standard header labels (writes at Beginning of Partition), but does NOT allow the initiator to overwrite existing user data. Write data can be appended only.

Modify Mr. Stephens request to add 'Five optional means of setting the write protects state...persistent write protect of a volume across mounts, permanent write protect of a volume also across mounts and append write protect of a volume.'
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The Device Configuration page, byte 15, bit 3 would be changed from Reserved to:

Bit	7	6	5	4	3	2	1	0
Byte								
0	PS	Rsvd				Page code (10h)		
.	.	.						
15		Reserved			AppdWp	AssoWp	PersWp	PermWp

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The Append Write protect field (AppdWp), when set to 1b, instructs the drive to place the mounted volume into write append only mode. A Unit Attention condition is not generated as the result of this change in write protect state. The drive shall determine the state of the volume when the volume is mounted and set the AppdWp bit if appropriate.

Once a volume is set to write append only mode, initiator attempts to reset the mode will be rejected by the logical unit with a CHECK CONDITION status for the Mode Select Command. The sense key shall be set to DATA PROTECT. The additional sense information shall be set to APPEND WRITE PROTECTED. (ASC/ASCQ - 27/06 - APPEND WRITE PROTECT).