

To: INCITS Technical Committee T10

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Subject: SPC: Log Page subpages

1. Revisions

2. Introduction

In response to the ISV Feedback this is a proposal for how to modify the TapeAlerts and specify which are hardware, which are software, and which are firmware. I am also taking this opportunity to specify when the device server will recognize the condition as having gone away and clear the specific tapealert.

3. Proposal

A.1 TapeAlert log page parameter codes (flags)

Table A.1 specifies the TapeAlert log page parameter codes and associated information.

In Table A.1 the following keywords are used:

O = optional

M = mandatory

C = critical

W = warning

I = informational

Hw = Hardware

Me = Media

Op = Operational Information

Fw = Firmware

TABLE A.1. TapeAlert log page parameter codes

Parameter Code	Description	Set	Clear¹	Type	Class	Severity
01h	Read Warning (Performance Reduction)			O	Me	Warning
02h	Write Warning (Capacity Reduction)			O	Me	Warning
03h	The operation has stopped because an error has occurred while reading or writing data which the drive cannot correct.		R	M	Me	Warning
04h	Media can no longer be written or read, or performance is severely degraded.		R	M	Me	Critical
05h	Read Failure.		R	M	Me?	Critical
06h	Write Failure.		R	M	Me?	Critical
07h	Media Life		R	O	Me	Warning
08h	The cartridge is not data-grade.		R	O	Me	Warning
09h	The WRITE command was attempted to a write-protected tape.		R	O	Op	Critical
0Ah	A manual or software unload was attempted when Prevent Media Removal was on.		R	O	Op	Informational
0Bh	The tape in the drive is a cleaning cartridge.		R	O	Op?	Informational
0Ch	You attempted to load a cartridge with an unsupported tape format (for example, Ultrium 2 cartridge in Ultrium 1 drive)		R	O	Me?. Op?	Informational
0Dh	Recoverable mechanical cartridge failure			O	Me	Critical
0Eh	Unrecoverable mechanical cartridge failure			O	Me	Critical
0Fh	The memory chip failed in the cartridge.		R	O	Me	Critical
10h	The operation has failed because the tape cartridge was manually ejected while the tape drive was actively writing or reading.		L	O	Op	Warning
11h	Media loaded is Read-Only format.	E	R	O	Op	Informational

Legend:**TapeAlert Set/Cleared when:****N/A** Not set/supported**L** Load -medium is loaded**C** Clean -cleaner tape is loaded**U** Unload -medium is ejected**E** Error -error code is posted**R** Removal -medium is fully removed (No longer can be sensed)**S** Sensor -sensor check**Notes:****1. All TapeAlerts are cleared on POR/Reset.**

TABLE A.1. TapeAlert log page parameter codes

Parameter Code	Description	Set	Clear ¹	Type	Class	Severity
12h	The tape directory on the tape cartridge has been corrupted. File search performance will be degraded. The tape directory can be rebuilt by reading all the data on the cartridge.		R	O	Me	Warning
13h	Nearing media life		R	O	Me	Informational
14h	Clean now		C	O	Me	Critical
15h	Clean periodic		C	O	Me	Warning
16h	Expired cleaning media	C	C	O	Me	Critical
17h	Invalid cleaning tape	C	R	O	Me	Critical
18h	Retension Requested		C	O	Me	Warning
19h	Primary Port Interface Error		C	O	Hw	Warning
1Ah	Cooling Fan Failure		C	O	Hw	Warning
1Bh	Power Supply Failure		C	O	Hw	Warning
1Ch	Power Consumption		C	O	Hw	Warning
1Dh	Drive Preventive Maintenance Required		C	O	Hw	Warning
1Eh	The drive has a hardware fault that requires a reset to recover.			O	Hw	Critical
1Fh	The drive has a hardware fault that is not related to a read/write operation, or the drive requires a power cycle to recover.			M	Hw	Critical
20h	The drive has identified an interface fault.			O	Hw	Warning
21h	Request Eject media as part of ERP		U,R	O	Me	Critical
22h	Firmware download failed.			O	Fw	Warning
23h	The drive's humidity limits are exceeded.	S		O	Hw	Warning
24h	The drive's temperature limits are exceeded.	S		O	Hw	Warning
25h	The drive's voltage limits are exceeded.	S		O	Hw	Warning
26h	Predictive failure of drive hardware.			O	Hw	Critical
27h	Diagnostics required			O	Hw	Warning
28h - 2Eh	Obsolete			O		

Legend:**TapeAlert Set/Cleared when:****N/A** Not set/supported**L** Load -medium is loaded**C** Clean -cleaner tape is loaded**U** Unload -medium is ejected**E** Error -error code is posted**R** Removal -medium is fully removed (No longer can be sensed)**S** Sensor -sensor check**Notes:****1. All TapeAlerts are cleared on POR/Reset.**

TABLE A.1. TapeAlert log page parameter codes

Parameter Code	Description	Set	Clear¹	Type	Class	Severity
2Fh - 31h	Reserved			O		
32h	Media Statistics Lost			O	Me	Warning
33h	Tape directory invalid at unload	E	L	O	Me	Warning
34h	Tape system area write failure	E	R	O	Me	Critical
35h	Tape system area read failure	E	R	O	Me	Critical
36h	No Start of Data			O	Me	Critical
37h	Loading or threading Failure			O	Me	Critical
38h	Unrecoverable unload failure			O	Me	Critical
39h	Automation Interface Failure			O	Hw	Critical
3Ah	Firmware Failure Caused Device Reset			O	Fw	Warning
3Bh	WORM Medium - Integrity Check Failed			O	Me	Warning
3Ch	WORM Medium - Overwrite Attempted			O	Op	Warning
3Dh - 40h	Reserved			O		

Legend:**TapeAlert Set/Cleared when:****N/A Not set/supported****L Load -medium is loaded****C Clean -cleaner tape is loaded****U Unload -medium is ejected****E Error -error code is posted****R Removal -medium is fully removed (No longer can be sensed)****S Sensor -sensor check****Notes:****1. All TapeAlerts are cleared on POR/Reset.**