memorandum

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304-1185
USA
www.hp.com

T10/06-235r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	ADC-2, SSC-3 Align Clean Notification Names	8 May 2006

Revision History

Revision 0 – Initial document.

Reference documents

Automation/Drive Interface – Commands – 2 (ADC-2), Project 1741-D, Rev 04, 8 March 2006.

SCSI Stream Commands – 3 (SSC-3), Project 1611-D, Rev 02, 1 March 2006.

Background

Currently ADC-2 and SSC-3 use three different names for notifications that request use of cleaning tape. The three names are: Clean Requested used in the VHF Data of ADC-2; Cleaning Required used in the Sequential-Access Device log page of SSC-3; and Clean Periodic used in the TapeAlert flags in both documents.

Likewise currently ADC-2 and SSC-3 use two different names for notifications that require use of a cleaning tape. The two names are: Clean Required used in the VHF Data of ADC-2 and Clean Now used in the TapeAlert flags in both documents.

This proposal changes Cleaning Required and Clean Periodic to Clean Requested, and it changes Clean Now to Clean Required.

Changes to the ADC-2 draft standard

4.2.6 TapeAlert application client interface

Table 4 – Additional TapeAlert state flag clearing conditions

Flag	Name	Additional clearing condition
13h	Nearing media life	Start of next medium load
14h	Clean ~~now~~ required	After successful cleaning or cause resolved
15h	Clean ~~periodic~~ requested	After successful cleaning
16h	Expired cleaning media	Start of next medium load

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Changes to the SSC-3 draft standard

4.2.15.1 TapeAlert introduction

Table 9 – TapeAlert flags

Flag	Name	Type	Severity	Deactivation condition
13h	Nearing media life	O	I	Start of next medium load
14h	Clean ~~now~~ required	O	C	After successful cleaning or cause resolved
15h	Clean ~~periodic~~ requested	O	W	After successful cleaning
16h	Expired cleaning media	O	C	Start of next medium load

8.2.2 Sequential-Access Device log page

Table 54 – Parameter codes for Sequential-Access Device log page

Parameter Code	Description	Support
0006h	Minimum native capacity in megabytes (i.e., 106) between EW and EOP of the current partition. This native capacity is assuming one-to-one compression (e.g., compression disabled), the medium is in good condition, and that the device recommended typical block size is used. If no volume is mounted the device server shall set all bits in this parameter to one.	M
0007h	Approximate native capacity in megabytes (i.e., 106) from BOP to the current position of the medium. If no volume is mounted the device server shall set all bits in this parameter to one.	M
0008h	Maximum native capacity in megabytes (i.e., 106) that is currently allowed to be in the device object buffer. This value may change depending on the current position of the medium (e.g., available native capacity may decrease as the current position of the medium approaches EOP).	M
0009h -00FFh	Reserved.	-
0100h	Clean~~ing required~~ requested.	O
0101h -7FFFh	Reserved.	-
8000h - FFFFh	Vendor-specific parameters.	-

A non-zero value of the clean~~ing required~~ requested parameter ~~specifies a condition requiring cleaning has been detected~~ indicates that the device has requested a head cleaning and a subsequent cleaning cycle has not been completed. A zero value of the clean requested parameter indicates that the device has not requested a head cleaning. The clean~~ing required~~ requested parameter value shall ~~be~~ persist~~ent~~ across I_T nexus losses, logical unit resets, and power cycles.

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A.2 TapeAlert flag associated information

Table A.1 lists the TapeAlert flags and associated information.

Table A.1 — TapeAlert associated information (Continued)

Code	Flag	Recommended application client message	Probable cause
13h	Nearing media life	The tape cartridge is nearing the end of its calculated life. It is recommended that you: 1. Use another tape cartridge for your next backup. 2. Store this tape cartridge in a safe place in case you need to restore data from it.	Media may have exceeded its specified number of passes.
14h	Clean ~~now~~ required	The tape drive needs cleaning: 1. If the operation has stopped, eject the tape and clean the drive. 2. If the operation has not stopped, wait for it to finish and then clean the drive. Check the tape drive users manual for device specific cleaning instructions.	The drive thinks it has a head clog or needs cleaning.
15h	Clean ~~periodic~~ requested	The tape drive is due for routine cleaning: 1. Wait for the current operation to finish. 2. Then use a cleaning cartridge. Check the tape drive users manual for device specific cleaning instructions.	The drive is ready for a periodic cleaning.
16h	Expired cleaning media	The last cleaning cartridge used in the tape drive has worn out: 1. Discard the worn out cleaning cartridge. 2. Wait for the current operation to finish. 3. Then use a new cleaning cartridge.	The cleaning tape has expired.