To: INCITS T10 Committee

From: Paul Entzel, Quantum

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Subject: SPC-4 and ADC-2, add new ADC-2 command to set Volume Tag

1 Revision History

Revision 0:
Posted to the T10 web site on 16 December 2004.

2 General

In addition to the time of day, there is a desire to add other information to the event logs that can be used to coordinate logs from more than one device. Specifically, if the drive saved the bar code from the medium in its log it would make coordinating logs between the drive and the library easier.

This proposal adds a command to the ADC-2 command set that can pass the Volume Tag to the drive as parameter data. While the current proposal only gives the command the ability to pass a Volume Tag to the drive, the command was left generic enough that other types of attributes could be added later.

As an alternative, more fields could be added to the NOTIFY DATA TRANSFER DEVICE command to allow a parameter block to be passed and indicate what to do with it, but I felt this command was overloaded enough already.

3 Proposed change in ADC-2

Add a new command to the ADC-2 standard as optional.

5.3 SET MEDIUM ATTRIBUTE command

The SET MEDIUM ATTRIBUTE command (see table X) is used to pass attributes of the medium to the DT Device.

Table X – SET MEDIUM ATTRIBUTE command

Bit Byte	7	6	5	4	3	2	1	0
0	OPERATION CODE (A9H)							
1	SERVICE ACTION (1Fh)							
2	ATTRIBUTE							
3 - 5	Reserved							
6	MSB							
7 - 8	PARAMETER LIST LENGTH							
9								LSB
10	Reserved							
11	CONTROL							

The attribute field indicates the medium attribute to be set. Table Y describes the attribute that can be set by the SET MEDIUM ATTRIBUTE command.

Table Y – ATTRIBUTE field values

ATTRIBUTE	Description	Maximum length (bytes)
00h	Volume Tag. The DT Device may use this value to update a device type attribute in the MAM (see SAM-3)	32
01h - FFh	Reserved.	

The PARAMETER LIST LENGTH field specifies the length in bytes of parameter data contained in the Data-Out Buffer. A parameter list length value of zero indicates that the Data-Out Buffer is empty. This shall cause the attribute specified to be cleared in the device server. If the parameter list length exceeds the maximum length value from table Y for the attribute specified, then the command shall be terminated with a CHECK CONDITION status, with the sense key set to ILLEGAL REQUEST, and the additional sense code set to INVALID FIELD IN CDB.

All medium attributes set by the SET MEDIUM ATTRIBUTE command shall be cleared by the device server when the medium is removed from the device.

4 Proposed changes to SPC-4

In the table named "Device type attributes" (table 224 in SPC3r21), add a line:

0008h	VOLUME TAG	32	BINARY	7.3.2.2.5

Modify the row showing 0008h-020Ah as reserved to indicate 0009h-020Ah.
Add a new subclause 7.3.2.2.5 bumping the existing subclauses down:

7.3.2.2.5 VOLUME TAG
Indicates the volume tag (see SMC-2) of the medium. If the device server supports this attribute but does not have access to the volume tag, it shall report this attribute with an attribute length value of zero.