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SMC-2 Proposal

Read Element Status Device
Identifier

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SMC-2 Proposal

Read Element Status Device Identifier

Introduction

Objective

Clarify the Read Element Status reporting of Identifier fields of differing length for the same Element Type.

Problems with Current Draft Technical Standard

The current draft technical standard does not specify clearly how to handle Identifier fields of differing length in the Read Element Status' Element Descriptor data.

Consider a media changer containing data transport elements of several differing types, say for example one SDLT tape drive and one HP LTO tape drive. The SDLT tape drive supports Identifier types 1, 2, and 3 whilst the HP LTO tape drive supports only type 1 Identifiers. For consistency then the designer of the media changer chooses to return type 1 Identifiers in the Read Element Status data. However the SDLT type 1 Identifier requires two more bytes than the HP LTO type 1 Identifier.

This situation presents the designers of the media changer and the application client unnecessary complexity and ambiguity, as the standard does not clearly specify how to report the differing length Identifiers.

Change Concept

To resolve this problem, HP proposes to allow padding of the Identifier fields of Element Descriptors of the same Element Status page such that all Element Descriptors for the page have the same length.

Detailed Changes to Draft Technical Standard

Section 6.10.7

The CODE SET, IDENTIFIER TYPE, IDENTIFIER LENGTH and IDENTIFIER fields in element descriptors are defined by the device identification page in SPC. Device identifiers may be available for some or all elements in a media changer. If no device identifier is available or the DVCID bit in the CDB is zero, the IDENTIFIER LENGTH shall be zero, the IDENTIFIER field is omitted, and the CODE SET and IDENTIFIER TYPE fields shall be zero.

Within the element descriptors for a single element status page, the device server may pad IDENTIFIER fields to the right with ASCII spaces (20h) to achieve a consistent length between such fields.

For a data transfer element, the IDENTIFIER field returns a device identifier from the primary device (disk or tape drive) associated with this element. With the exception of ASCII space (20h) padding in the IDENTIFIER field, the ~~The~~ same CODE SET, IDENTIFIER TYPE, IDENTIFIER LENGTH and IDENTIFIER fields should be available via an INQUIRY command (see SPC) issued to the primary device.