

To: INCITS T10 Committee
From: Paul Entzel, Quantum
Date: 8 June 2006
Document: T10/06-278r0
Subject: SPC-4 Fix persistence of SET DEVICE IDENTIFIER

1 Revision History

Revision 0:
Posted to the T10 web site on 8 June 2006.

2 Reference

T10/SPC-4 revision 4.

T10/SPC-3 revision 6.

T10/02-134r2 SAM-2 SPC-3 SBC-2 SSC-2 Clearing effects of I_T nexus loss

3 General

Some confusion has been expressed about the persistence of the identifier set by a SET DEVICE IDENTIFIER command and reported by a REPORT DEVICE IDENTIFIER command (see SPC-4). The persistence of the data is not specified in the SET DEVICE IDENTIFIER command description, other than to say "On successful completion of a SET DEVICE IDENTIFIER command that changes the device identifier saved by the logical unit..." and "The SET DEVICE IDENTIFIER parameter list (see table 182) contains the identifier to be set by the addressed logical unit."

The REPORT DEVICE IDENTIFIER does discuss the persistence of the identifier though. It states:

"The IDENTIFIER field shall contain a vendor specific value. The value reported shall be the last value written by a successful SET DEVICE IDENTIFIER command. The value of the identifier shall be changed only by a SET DEVICE IDENTIFIER command. The identifier value shall persist through logical unit resets, I_T nexus losses, media format operations, and media replacement."

The confusion is around the issue of whether the device server is required to save the value in non-volatile memory. Does the value persist through a power loss?

This paragraph changed in SPC-3 revision 7 due to the proposal 02-134r2 which defined the term "I_T nexus loss" and changed many clearing affects that were associated with power losses to I_T nexus loss. Before this proposal, the paragraph in question read:

"The IDENTIFIER field shall contain a vendor specific value. The value reported shall be the last value written by a successful SET DEVICE IDENTIFIER command. The value of the identifier shall be changed only by a SET DEVICE IDENTIFIER command. The identifier value shall persist through resets, power cycles, media format operations, and media replacement."

I've discussed this issue with Rob Elliot of HP who wrote the proposal and we are both of the opinion that removal of the "power cycles" condition was inadvertent. This proposal requests that this condition be reinstated using the more commonly used expression of "power loss". The proposal also asks that "hard resets" condition be added to the list.

Proposed additions to the SPC-4 standard are shown in **blue text**; proposed deletions are shown in **red crossed-out text**.

4 Proposed changes to SPC-4

4.1 Changes to subclause 6.20 (REPORT DEVICE IDENTIFIER command)

The IDENTIFIER field shall contain a vendor specific value. The value reported shall be the last value written by a successful SET DEVICE IDENTIFIER command. The value of the identifier shall be changed only by a SET DEVICE IDENTIFIER command. The identifier value shall persist through logical unit resets, **hard resets, power loss, I_T nexus losses, media format operations, and media replacement.**

4.2 Changes to subclause 6.31 (SET DEVICE IDENTIFIER command)

Add the following sentence to the subclause:

Upon successful completion of a SET DEVICE IDENTIFIER command, the identifier value that is saved by the logical unit shall persist through logical unit resets, hard resets, power loss, I_T nexus losses, media format operations, and media replacement.