S Y M B I O S
L O G I C

Date: 4 July, 1998

To: T10 Membership

From: Ralph Weber, T10 Alternate member from Symbios, Inc.

Subject: Discovering If This Is SES Port A or Port B

FC-AL drives are being implemented with the ability to have redundant loops. To utilize this redundancy systems are configured with redundant host adapters or adapters with dual ports. Let's label the redundant loops from the host's point of view as loop X and loop Y.

Using the Device element entry in the SES Enclosure Control page, an application client may independently manage the bypass circuits found on dual port disk drives by setting the ENABLE BYP A (enable bypass on port A) and/or the ENABLE BYP B bits. The physical connection from the drive's port A (or B) to the host's loop X (or Y) is an FC cable, often installed by the user. So, the association between A and B and X and Y is unpredictable and must be detected automatically by the application client. If the association is not detected correctly, use of the SES Enclosure Control page ENABLE BYP X bits could easily render device access impossible.

An application client might detect a configuration by trial and error. It could enable the bypass on port A and scan loops X and Y to discover where the path to the device disappeared. This is unacceptable due to its disruptive nature, especially in multiple-host environments.

The goal of this proposal is the definition of a mechanism for identifying the port being used for communications. The proposed definition is intended to meet the requirements described by the SCSI Working Group in May 1998. All clause and table numbers reference SPC-2 revision 3.

The Proposal

It is proposed that the Device Identification VPD page (SPC-2 clause 8.4.3) be enhanced to allow reporting of a port number that has a defined relationship to the A and B identifiers used in SES. The specific proposed changes are as follows.

In Table 121 (Identifier Type), add code value 4h with the following description:

"If the Association value is 1h, the identifier value contains a four-byte binary number identifying the port relative to other ports in the device using the values shown Table x. In this case, the Code set field shall be set to 1h and the Identifier length field shall be set to 4. If the Association value is not 1h, use of this identifier type is reserved."

Add Table x, titled "Relative Port Identifier Values", with the following contents:

Value	Description
0h	Reserved
1h	Relative port 1, also known as port A
2h	Relative port 2, also known as port B
3h-7FFFh	Relative port 3 through 7FFFh
8000h-FFFFh	Reserved