

October 18, 2002

To: T10 Technical Committee
From: Timothy Hoglund (LSI Logic)
Subject: SATA_ERROR primitive removal

SAS currently specifies that expanders which are forwarding dwords to a SATA physical link shall replace an invalid dword or an ERROR primitive with a SATA_ERROR primitive. The SATA_ERROR primitive is defined as [K28.3, K28.3, K28.3, K28.3] (reference: sas-r02a Table 37).

Some SATA devices may be confused when receiving a consecutive series of K characters and may attempt to re-determine dword boundaries indiscriminately (and potentially incorrectly). This proposal seeks to insure full interoperability with SATA devices while allowing for error propagation through the topology.

Proposal

1. Modify the following sentence in sections (6.9.5.2 , 6.9.6.3, 6.9.7.3, 6.9.8.3, 6.9.9.3) :

“An expander forwarding the dword to a ~~another SAS~~ link shall replace the invalid dword with ERROR_ ~~or SATA_ERROR~~An expander forwarding the dword to a SATA link shall replace the invalid dword with a dword containing a coding violation (see 7.14.13).”

2. Modify sentence in 7.1.2 as follows: “~~Except for SATA_ERROR, these~~These values are defined by SATA.”

3. Remove SATA_ERROR primitive from Table 34 and Table 37

4. Remove Editor’s Note 34

5. Remove 7.1.6.1 SATA_ERROR description

6. Modify the following sentence in 7.14.13:

“Expander devices that are forwarding dwords to a SATA physical link shall replace an invalid dword or an ERROR primitive with a ~~SATA_ERROR primitive~~dword containing a coding violation.”