

October ~~28~~29, 2002 |

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

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-r02b Table 45).

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

Change definition of SATA_ERROR primitive:

from { K28.3, K28.3, K28.3, K28.3 }
to { ~~K28.7~~K28.6, D02.0, D01.4, D29.7 }

Notes:

1. This makes the SATA_ERROR identical to the SAS ERROR primitive with the exception of which control character is used (~~K28.7~~K28.6 vs K28.5).
2. SATA devices interpret a ~~K28.7~~K28.6-based primitive as a coding violation.