

To: T10 Technical Committee
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Subject: T10/02-436r0, SAS EOFa Proposal

Revision History

Revision 0 (October 23, 2002) first revision

Related Documents

SAS-r02b – Serial Attached SCSI revision 02b.

Overview

This document proposes the addition of an EOFa to SAS protocol to allow a SAS device that detects a soft-error on an outbound frame to signal the recipient to discard the frame and expect immediate retransmission of the frame by the initiator. This is required because of drastically increasing soft error rates with high gate densities in state of the art process technologies that are sensitive to neutrino collisions. This is particularly important for large tape backup applications.

Suggested Changes

Add EOFa to table 41.

Add EOFa to table 44 [K28.5, D24.0, Dxy.z, Dab.c] ← Determine encoding

Add section 7.1.5.5 EOFa (End Of Frame abort)

Indicates end of a frame the transmitter has determined is invalid and should be discarded by the recipient. The recipient shall expect immediate retransmission of the intended frame.

Most places where EOF appears will have to be modified to read, “EOF or EOFa”, depending on the context.

Many state machines will have to be modified to reflect EOFa handling.