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To: T10 Serial Attached SCSI PHY Working Group
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Subject: Behavior when receiving a BREAK primitive while in an SAS connection

Introduction

The wording in the latest revision of the SAS draft does not specify the behavior of an SSP device when a connection is broken. This proposal clarifies the behavior. The following are the changes in SAS-r00b required to implement this proposal. Revision 2 of this proposal includes input from the SAS Working Group teleconference, 18 June 2002.

7.11.5 Abandoning a connection request

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In a system using expanders, the BREAK response to the source device is generated by the recipient (i.e., the expander), not the target destination device. If the expander device has sent a connection request to the destination, it shall also send BREAK to the destination. If the expander device has not sent a connection request to the destination, it shall not send BREAK to the destination. The expander device shall send BREAK back to the originating port after it has ensured that an open response will not occur. Figure 51 shows an example of BREAK usage.

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7.11.6 Breaking an open connection

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[add the following below the table]

In addition to a BREAK primitive sequence, a connection may be broken as the result of an error or disconnection at the PHY layer.

In addition to the actions described above and in 7.11.5, the following shall be the responses by an SSP device to a broken connection.

- a) Received frames having no CRC error may be considered valid regardless of whether an ACK has been transmitted in response to the frame prior to the broken connection.
- b) Transmitted frames for which an ACK has been received prior to a broken connection shall be considered successfully transmitted.
- c) Transmitted frames for which an ACK or NAK has not been received prior to a broken connection shall be considered not successfully transmitted.