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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

Date:

The wording in the latest revision of the SAS draft does not specify the behavior of an SAS device when a connection is broken. This proposal clarifies the behavior. The following are the changes in SAS-r00a required to implement this proposal.

## 7.11.6 Breaking an open connection

A BREAK primitive sequence may also be used to break an open connection, in cases where CLOSE is not available. After sending BREAK, the originating port shall ignore all incoming data except for BREAK primitives.

A connection may also be broken as the result of an error or disconnection at the PHY layer. The following shall be the responses to a broken connection regardless of the cause.

- a) If a BREAK is received while a connection is open, the receiving device shall transmit a BREAK. This confirms that the open connection has been broken.
- b) If a device transmits a BREAK but does not receive a BREAK before its BREAK timer expires, the device shall consider the connection broken.
- c) Received frames having no CRC error shall be considered valid regardless of whether an ACK has been transmitted in response to the frame prior to the broken connection.
- d) Transmitted frames for which an ACK has been received prior to a broken connection shall be considered successfully transmitted.
- e) Transmitted frames for which an ACK or NAK has not been received prior to a broken connection shall be considered not successfully transmitted.

Table 51 lists the possible responses to a BREAK sent after a connection has been established.

## Table 51. Break connection responses

Resnance	Description
<del>1100ponoo</del>	<del>- Dooonphion</del>

BREAK: This confirms that the open connection has been broken.

No response; timer expires: The originating port shall assume the connection has been broken.

broken.