

To: INCITS T10 Committee

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Subject: Add Abort Other Exchanges bit to Port Login IU in ADT

1. Revision History

Revision 0:
Posted to the T10 web site 31 March 2003.

Revision 1:
Changed bit name to "Abort Other Exchanges" and replace references to "open exchanges" with just "exchanges" per working group decision at 8-Apr-2003 conference call (see 03-159r0).

2. General

The ADI working group has expressed a desire that a port be capable of re-negotiating the transfer characteristics of the ADT transport layer without aborting all other exchanges. This feature would be useful to negotiate a higher transfer rate for firmware updating purposes or to recover from errors using the Port Login IU without loss of exchange data.

3. Proposal

3.1 *Additions for subclause 6.5.4*

Add a bit to the Port Login IU called Abort Other Exchanges (AOE) in bit 7 of byte 3, sharing the byte with the MAXIMUM ACK OFFSET field.

Add the following text to define this new field:

The Abort Other Exchanges (AOE) field shall be set in a Port Login IU sent by a port under the following conditions:

- a) The port has experienced a hard reset condition.
- b) The port has experienced an error condition that may have led to loss of data or state on one or more exchanges.
- c) The port has received a Port Login IU with the AOE bit set to one.

The AOE bit shall not affect Port Login exchanges. See subclause 6.5.4 for Port Login exchange precedence.

A port that receives a valid Port Login IU with the AOE bit set to one shall abort all other exchanges, other than Port Login exchanges. No frames shall be sent for exchanges other than the Port Login exchange after a Port Login IU with the AOE bit set to one has been acknowledged.

A Port that receives a valid Port Login IU with the AOE bit set to zero shall suspend transmission of any frames not associated with the Port Login exchange after acknowledging the Port Login IU until the Port Login exchange is complete. Frames from exchanges other than Port Login exchanges shall not be transmitted until all port login exchanges are complete.

3.2 *Changes to other clauses*

All places in the standard that refer to aborting exchanges when a Port Login IU is received need to be updated:

- In table 12, changes the description of status code 82h to “Login in progress”.
- In subclause 6.5.4, state 1, change status to “Login in progress”.
- In subclause 6.5.4, state 2, change the first sentence to “After acknowledging a Port Login IU, transmission of frames for other exchanges shall either suspended or aborted based on the setting of the AOE bit in the Port Login IU.
- Change the sentence immediately before editors note 5 to “A Data Transfer Device that receives a Port Login IU in a new exchange shall abort all other Port Login exchanges.
- In subclause 6.6.2.3, step 5 should be changed to “If the Initiate Recovery IU has been sent twice with no ACK IU returned, or a NAK IU is received indicating an error on the Initiate Recovery IU, the port in error shall abort all exchanges, set the operating parameters of the interface to default settings, and initiate a Port Login exchange with the AOE bit set to one.