

To: T10 Technical Committee

From: Kevin Butt, IBM Document: T10/04-231r1

Subject: Automation/Drive Interface - Transport Protocol (ADT) - Resolution of LB Comment

IBM48

IBM 48: In paragraph 4.3.3.8, the delay indicated in item 2 of the numbered list is incorrect, Move the delay from item 2 of the numbered list to a delay on entry into P2:Logged-In state after allowing receive but before allowing send. This would add an additional state to the transmitter state machine that is turn on receiver then delay time then transition to T0:Active.

Proposal

4.3.3.6.2 Transition N3:Accept ACK Sent to N0:Idle

When the ACK IU has finished transmitting, the port shall <u>Send a Login Process Complete message</u> to the port state machine and transition to N0:Idle.

4.3.3.7.3 Transition N4:Agreed to N0:Idle

After receiving an ACK IU for the Port Login IU it sent, the port shall <u>Send a Login Process Complete message to the port state machine</u> and transition to <u>N0:Idle</u>.

4.3.3.8 N5:Login Complete state

A port enters this state when both ports have it has sent and received a Port Login IU with the ACCEPT bit set to one. Upon entry into this state, the port shall:

- 1) Set its operating parameters to the negotiated values,
- 2) Delay a period of 100 milliseconds, and
- 32) Send a Login Process Complete message to the port state machine.

While in this state, a port shall not transmit.

4.3.4 Transmitter state machine

4.3.4.1 Transmitter state machine overview

The transmitter state machine manages the ports permission to transmit. It is a sub-state machine of the port state P2:Logged-In. The transmitter state machine consists of the following states:

- a) T0:Active; and
- b) T1:Paused.

- a) T0:Entering
- b) T1:Active, and
- c) T2:Paused.

This state machine becomes active in T0:Entering when the port enters P2:Logged-In state.

Figure 6 shows the transmitter state machine. The following subclauses describe the transitions and the actions taken in each state.

Figure 6 — Transmitter State Diagram

<< Figure 6 graphic >>

4.3.4.x T0:Entering state

4.3.4.x.1 State description

On entry to this state the port shall start a 100 millisecond timer.

While in this state, a port shall not transmit.

4.3.4.x.2 Transition T0:Entering to T1:Active

A port shall transition to T1:Active state when it receives a frame that is not corrupted (see 4.6.1.3) or after a period of 100 milliseconds.

4.3.4.2 T₁₀: Active state

4.3.4.2.1 State description

A port in $T_{\underline{10}}$: Active state may transmit and receive all types of information units.

4.3.4.2.2 Transition T₁₀:Active to T₂₁:Paused

A port shall transition to T1:Paused state after it receives a Pause IU and sends the corresponding ACK IU.

4.3.4.3 T₂+:Paused state

4.3.4.3.1 State description

A port in T21:Paused state shall not initiate an exchange.

4.3.4.3.2 Transition T21:Paused to T10:Active

A port shall transition to T10:Active state after receiving any frame other than a Port Login IU, Port Logout IU, Pause IU, or acknowledgment IU.