To: T10 Technical Committee
From: Kevin Butt, IBM
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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 Send a Login Process Complete message 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 Send a Login Process Complete message to the port state machine and transition to N0:Idle.

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
3) 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 T1⁰: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 T2¹: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.