Accredited Standards Committee
X3, Information Processing Systems

Doc: X3T10.1/96a168r0
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Reply to: Norman Apperley

To: X3T10.1 Membership
From: Norman Apperley

Subject: <u>Corrections to Reset Sections</u>

<u>BACKGROUND</u>

96a154r0 made some clarifications to handling Total Reset and Absolute Reset. Now that this proposal has been included in TL2, some additional changes are required to make the definition complete and also to make some corrections.

1.   96a154r0 proposed a 125 msec timeout by the Master for a Total Reset. This was decided on by allowing for a 100 msec delay around the loop and a 25 msec delay within the destination node. This is not defined in TL2, so a node could be designed that takes 124 msec to perform a Total Reset and it would comply with TL2, but the Master would time it out because of the delay around the loop. The maximum time allowed for a node to execute a Total Reset should be defined.

2.   In Web Reset Process, section 10.6.4, step 'c' refers to a 5 msec timer for Query Node Reply. This does not allow for the loop delay of 100 msec, so this should be changed to allow for this.

3.   In section 10.6.4, step 'f' refers to the 5 msec timer for Total Reset expiring - that should now be a 125 msec timer.

4.   In section 10.6.4, step 'f' refers to a 125 msec timer for Absolute Reset - that should have been a 5 second timer following 96a154r0. However, if the web is a string this 5 second timer will always expire for the last nodes of the string and means that network reset will always take more than 10 seconds to a string. It is not acceptable to mandate this excessive delay for systems.

There seems little value in waiting this time. If the node does reset successfully after 5 seconds, there will be an Async Alert at that time for the new port operational. If it doesn't reset successfully and the node is on a loop, then if the web reset stops here all the other nodes will be reset via the other path from the base node. If the node is on a string and the Absolute Reset is unsuccessful, then the nodes past the node cannot be accessed anyway.

Some systems will be impacted for a web reset that lasts 10 seconds and this delay should not be required by the architecture just because the web is a string.

5.   In section 10.6.4, step 'h' there is no mention that when the Previous port is updated to be that on the Current node, the next node from that port becomes the Current node. This omission has been there since day 1 of this web reset description.

<u>PROPOSAL</u>

1. Section 10.6.2 Total Reset or Absolute Reset

Add maximum Total Reset time for nodes:

Change step 'o' from

      "the Beginning Communication process shall be invoked"

to

      "the Beginning Communication process shall be invoked within 25 msec of receipt of Total Reset".

2. Section 10.6.4 Web Reset process

Correct Query Node timeout value.

Change step 'c' to

> "The Master sends QUERY NODE SMS to the Current node and starts a 125 msec timer."

3. Section 10.6.4 Web reset process

Correct Total Reset timeout value and remove Absolute Reset timeout.

Change step 'f' to

> "If the Master does not receive an ASYNC ALERT SMS with an alert code value of PORT NOW OPERATIONAL from the Previous port before the 125 msec timer expires, then the Master shall send an Absolute Reset to the Current node, assume the Current node to be not operational and skip to step i."

4. Section 10.6.4 Web reset process

Add that the next node from the port becomes the new Current node when the port on the Current node becomes the Previous port.

Change step 'h' to

> "......the Master updates the Previous port to refer to the port on the Current node that is further from the Master, identifies the next node from this port as the new Current node and returns to step b.........."

Sincerely,

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