USB4 2.0 ENGINEERING CHANGE NOTICE FORM

Title: Object CLx Until Previous Exit Finished
Applied to: USB4 Specification Version 2.0

Brief description of the functional changes:
Since exiting CLx in Gen 4 might not end at the same time on both directions, we could have a scenario where a transmitter in one Port is in CL0 and the transmitter on the Link Partner Port is still transmitting Gen 4 TS4 as part of the CLx exit flow. If, during this time, the transmitter that is in CL0 will initiate an entry to CL1 we might have a transition to CLx before the Link was completely in CL0. The suggested change is to add an objection to CLx when the Link is in Gen 4 and the receiver of the Port is receiving Gen TS3-4.

Benefits as a result of the changes:
Entry to CLx will happen from a clean state of CL0.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
None.

An analysis of the hardware implications:
None.

An analysis of the software implications:
None.

An analysis of the compliance testing implications:
None.

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Actual Change Requested

(a). 4.2.1.6.3 Objections

To Text:

- The Link is operating at Gen 4 speed, and the Port's receiver receives Gen 4 Training Sequence.
- The Link is operating at Gen 4 speed, and the Port's receiver in the process of CL0s (Rx) Exit flow (see 4.2.1.6.5.1.2)
- Less than tTimeInCL0 time has passed since the Lane 0 Adapter transitioned from CLx to CL0.