USB4 1.0 ENGINEERING CHANGE NOTICE FORM

Title: Adding Condition to Deactivate RS-FEC Encoding
Applied to: USB4 Specification Version 1.0

Brief description of the functional changes:

When transitioning to Training.LOCK2 RS-FEC encoding should be deactivated.

Benefits as a result of the changes:

In some flows the Lane Adapter won't transition to Training.LOCK1 but directly to Training.LOCK2.

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:

Deactivating RS-FEC encoding in one more scenario

An analysis of the software implications:

None

An analysis of the compliance testing implications:

None

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Actual Change

(a). Section 4.3.6.1, Page 176

From Text:

A USB4 Port shall deactivate RS-FEC encoding on a Lane in the following cases:

- When transitioning to Training state, after transmitting n SLOS1 Symbols in LOCK1 substate with RS-FEC on, where 32=<n<=64 in Gen 2 and 16=<n<=32 in Gen 3.
- Entry to Disabled state.
- Entry to CLd state.
- Entry to CL0s state, in the direction entering Low Power state.
- Entry to CL2 or CL1 states.

To Text:

A USB4 Port shall deactivate RS-FEC encoding on a Lane in the following cases:

- When transitioning to Training state, after transmitting n SLOS1 Symbols in LOCK1 sub-state with RS-FEC on, where 32=<n<=64 in Gen 2 and 16=<n<=32 in Gen 3.
- Entry to Training.LOCK2 sub-state.
- Entry to Disabled state.
- Entry to CLd state.
- Entry to CL0s state, in the direction entering Low Power state.
- Entry to CL2 or CL1 states.