

USB4 2.0 ENGINEERING CHANGE NOTICE FORM

**Title: Removing Requirement to Check ReturnBounce Bit
Applied to: USB4 Specification Version 2.0**

Brief description of the functional changes:

Removing a redundant requirement in the Bounce mechanism in TBT-Compatibility mode.

Benefits as a result of the changes:

Aligning the specification with the current behavior of TBT3 Active Cables with Re-timers

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

An analysis of the hardware implications:
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None

An analysis of the software implications:
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None

An analysis of the compliance testing implications:
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Need to verify that Routers don't check this bit.

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Actual Change

(a). Section 13.2.1.2.2.1 – Bounce Mechanism

To Text:

The Bounce mechanism is used when a Router needs to access the Register Space of a Cable Re-timer that can only be accessed by its Link Partner. A Router shall support the Bounce Mechanism. The Bounce Mechanism consists of the following rules:

- A Router shall set the *Bounce* bit to 1b and the *ReturnBounce* bit to 1b to target a Cable Re-timer that is adjacent to the Router's Link Partner.
- A Router that receives an AT Transaction with the *Bounce* bit set to 1b and the *ReturnBounce* bit to 1b shall set the *Bounce* bit to 0b, then forward the AT Transaction towards its adjacent Cable Re-timer.

Note: A Cable Re-timer responds to an AT Transaction with the Bounce bit set to 0b and the ReturnBounce bit to 1b. The AT Response from the Cable Re-timer has the Bounce Bit set to 1b and the ReturnBounce bit set to 0b.

- A Router that receives an AT Response with the *Bounce* bit set to 1b and the *ReturnBounce* bit to 0b shall set the *Bounce* bit to 0b, then forward the AT Response to its Link Partner.

An example of the Bounce Mechanism is shown in Figure 13-2 where Router A is accessing the Configuration Space of Cable Re-timer B.

Note: The Bounce Mechanism is only used when operating with a bi-directional Re-timer.

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