

USB4 2.0 ENGINEERING CHANGE NOTICE FORM

Title: Gen T Path Enable on Disconnect Applied to: USB4 Specification Version 2.0

Brief description of the functional changes:

Remove the requirement of setting the *Path Enable* bit to 0 for the USB3 Gen T Path upon USB4 disconnect.

Benefits as a result of the changes:

In case the Unplug doesn't occur on the immediate Hop, the *Path Enable* would not be reset by the Host Router and the system would still need to handle the Unplug and make sure the internal component and the SW stack doesn't get to an undesired state due to the lack of responses from the device.

Since the above solution must exist, the benefit of this ECN is to simplify the solution for the Router.

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

(a). 4.4.5.2.1 SBRX Goes Low

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...

The Router shall do the following for each enabled Lane Adapter in the disconnected USB4 Port:

- ...
- If the Lane Adapter is connected to a Downstream USB3 Gen X Adapter, set the *Path Enable* field in the USB3 Gen X Adapter Configuration Capability of the USB3 Gen X Adapter to its default value.
- ~~Set all of the *Path Enable* bits for the Paths that goes through the disconnected Lane Adapter to their default values.~~
- If the Lane Adapter is connected to a Downstream PCIe Adapter, set the *Path Enable* field in the PCIe Adapter Configuration Capability of the PCIe Adapter to its default value.
- ...

The Router may do the following for each enabled Lane Adapter in the disconnected USB4 Port:

- For USB3 Gen T Paths that goes through the disconnected Lane Adapter, ~~Set all of the *Path Enable* bits to their default values in the USB3 Gen T Adapter Configuration Capability for the Paths that goes through the disconnected Lane Adapter to their default values.~~