USB Type-C ENGINEERING CHANGE NOTICE

Title: Captive Cable Charger Output
Applied to: USB Type-C Specification Release 1.1, April 3, 2015

Brief description of the functional changes:
Clarify the allowable output from a captive cable charger.

Benefits as a result of the changes:
We have not clearly defined the expected behavior of a captive cable charger. This ECR allows the power source to compensate for its cable power loss.

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

USB Type-C ENGINEERING CHANGE NOTICE

Actual Change

(a). A.1

From:

4.8.1.2 Chargers with USB Type-C Captive Cables

- A charger with a USB Type-C captive cable may supply VBUS at any time. It is recommended that such a charger only apply power to VBUS when it detects a UFP is present and remove power from VBUS when it detects the UFP is not present (vOPEN).
- A charger with a USB Type-C captive cable shall limit its current advertisement so as not to exceed the current capability of the cable (up to 5 A).

To:

4.8.1.2 Chargers with USB Type-C Captive Cables

- A charger with a USB Type-C captive cable may supply VBUS at any time. It is recommended that such a charger only apply power to VBUS when it detects a UFP is present and remove power from VBUS when it detects the UFP is not present (vOPEN).
- A charger with a USB Type-C captive cable shall limit its current advertisement so as not to exceed the current capability of the cable (up to 5 A).
- The voltage as measured at the plug of a charger with a Type-C captive cable can be up to 0.75V lower than the standard tolerance range for the chosen voltage. For example:
    - A charger that advertises 3A Type-C Current shall output a voltage in the range of 4.0V – 5.5V at any load between 0A and 3A.
    - A PD Charger that has negotiated a contract to provide 20V at 5A shall output a voltage in the range of 18.25V - 21V at any load between 0A and the negotiated current.