USB Type-C ENGINEERING CHANGE NOTICE

Title: Default Current Clarification for non-USB Devices
Applied to: USB Type-C Specification Release 1.3, July 13, 2017

Brief description of the functional changes proposed:

Clarify the power a non-USB device is allowed to draw when a Source advertises default USB Type-C current.

Benefits as a result of the proposed changes:

Allows a non-USB device such as a power bank to draw up to 500mA when the Source advertises default USB Type-C Current.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:

Likely little as the Sources are already required to be able to supply at least 500mA when advertising default USB Type-C Current.

An analysis of the hardware implications:

Little.

An analysis of the software implications:

None.

An analysis of the compliance testing implications:

Little.

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Actual Change Requested

(a). Section 1.5
To Text:
Add to the table:

Power Sinking Device (PSD)	Sink which draws power but has no other USB or Alternate Mode communication function e.g. a power bank.

(b). Section 4.6.2.1
From Text:

4.6.2.1 USB Type-C Current

Default USB voltage and current are defined by the *USB 2.0* and *USB 3.2* specifications. All
USB Type-C Current advertisements are at the USB V$_{BUS}$ voltage defined by these specifications.

The USB Type-C Current feature provides the following extensions:
- Higher current than defined by the *USB 2.0*, the *USB 3.2* or the *USB BC 1.2* specifications
- Allows the power source to manage the current it provides

The USB Type-C connector uses CC pins for configuration including an ability for a Source to advertise to its port partner (Sink) the amount of current it can supply:

- Default values when configured for high-power operation as defined by the USB Specification (500 mA for USB 2.0 ports; 900 mA or 1,500 mA for USB 3.2 ports in single-lane or dual-lane operation, respectively)
- 1.5 A
- 3.0 A

The relationship of USB Type-C Current and the equivalent USB PD Power (PDP) value is shown in Table 4-18.

To Text:

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When a Source is advertising USB Type-C Default current, the Sink behavior is defined as follows:

- It connects as a *USB 2.0* or *USB 3.2* device, after which the Sink shall follow the appropriate USB specification.
- It enters a *USB PD* contract, after which the Sink shall follow the *USB PD* specification to determine the current (e.g., *Rp* will no longer be Default as it is superseded by the *USB PD* contract).
- It detects a *USB BC 1.2* charging port, after which the Sink shall follow the *USB BC 1.2* specification.
- It attaches as a USB Type-C Power Sinking Device (PSD), after which the Sink may draw up to 500 mA.

A PSD shall fully support USB Type-C Current operation, should support *USB PD* and may support *USB BC 1.2*. A PSD may be a Sink or a DRP operating in Sink mode. A PSD shall not have a USB or USB Type-C Alternate Mode communications function.

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