USB Type-C ENGINEERING CHANGE NOTICE

Title: Exiting Attached.SNK for PPS Sink
Applied to: USB Type-C Specification Release 1.3, July 14, 2017

Brief description of the functional changes proposed:

USB PD contracts with a Programmable Power Supply (PPS) may operate in current limit mode. In those cases the V$_{BUS}$ voltage at the sink will generally be significantly less then vPpsNew, but this shall not indicate a disconnect. The sink disconnect rules are amended to take this use case into account.

Benefits as a result of the proposed changes:

This clarifies how PPS sinks are to determine disconnect when in current limit mode.

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

None, this is just a clarification.

An analysis of the hardware implications:

None.

An analysis of the software implications:

None.

An analysis of the compliance testing implications:

Minor.

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Actual Change Requested

(a). Section 4.4.2, Table 4-3, Page 126
From Text:

vSinkDisconnect	0.8V	3.67V	Threshold used for transition from Attached.SNK to Unattached.SNK. This also applies for USB PD contracts at 5V. For USB PD contracts at 5V, the Sink shall take IR drop and margin into account when selecting this threshold.
vSinkDisconnectPD	90% of vSinkPD_min	vSinkPD_min	V$_{BUS}$ disconnect threshold when V$_{BUS}$ voltage was negotiated through *USB PD* to a value above 5V.

To Text:

vSinkDisconnect	0.8V	3.67V	Threshold used for transition from Attached.SNK to Unattached.SNK. This also applies for USB PD contracts at 5V. For USB PD contracts at 5V, the Sink shall take IR drop and margin into account when selecting this threshold.
		PPS_APDO_Min_Voltage	Threshold used for transition from Attached.SNK to Unattached.SNK. This applies for USB PD PPS contracts for RDO output voltage less than or equal to 5V. This also applies for USB PD PPS contracts operating in the current limit mode. The Sink shall take IR drop and margin into account when selecting this threshold.
vSinkDisconnectPD	90% of vSinkPD_min	vSinkPD_min	V$_{BUS}$ disconnect threshold when V$_{BUS}$ voltage was negotiated through *USB PD* to a value above 5V. This applies for USB PD PPS contracts for RDO output voltage above 5V. This also applies for USB PD PPS contracts operating in the constant voltage mode.