USB Power Delivery ENGINEERING CHANGE NOTICE

Title: vSafe5V Voltage Range Clarification
Applied to: USB Power Delivery Specification Revision 2.0 Version 1.2

Brief description of the functional changes:
Clarify that the PD voltage range for vSafe5V and vSafeDB is 4.75-5.5V.

Benefits as a result of the changes:
USB 2.0 defines different voltage ranges for vbus depending on whether the port is low port or not which could lead to vendor confusion. USB 3.0 defines an erroneous range which is fixed in another ECR.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
We believe that it is unlikely that anyone is using the low power voltage range.

An analysis of the hardware implications:
Should be none for the majority of manufacturers.

An analysis of the software implications:
None

An analysis of the compliance testing implications:
We need to ensure that the correct voltage range is being tested for and applied in compliance without any confusion.

Actual Change

(a). Section 7.4.3, Page 286, Table 7-24

From Text:

vSafe5V	Safe operating voltage at 5V. See ***[USB 2.0]*** and ***[USB 3.1]*** for allowable V_{BUS} voltage range.	***[USB 2.0]*** / ***[USB 3.1]***		***[USB 2.0]*** / ***[USB 3.1]***	V	Section 7.1.6
vSafeDB	Safe operating voltage for Dual-Role ports operating as DB Source. See ***[USB 2.0]*** and ***[USB 3.1]*** for allowable V_{BUS} voltage range.	***[USB 2.0]*** / ***[USB 3.1]***	Refer to Operating Region in Figure 7-9	***[USB 2.0]*** / ***[USB 3.1]***	V	Section 7.1.13.3 Section 7.2.9.3 Table 7-20

To Text:

vSafe5V	Safe operating voltage at 5V. See ***[USB 2.0]*** and ***[USB 3.1]*** for allowable V_{BUS} voltage range.	4.75		5.5	V	Section 7.1.6
vSafeDB	Safe operating voltage for Dual-Role ports operating as DB Source. See ***[USB 2.0]*** and ***[USB 3.1]*** for allowable V_{BUS} voltage range.	4.75	Refer to Operating Region in Figure 7-9	5.5	V	Section 7.1.13.3 Section 7.2.9.3 Table 7-20