USB Power Delivery ENGINEERING CHANGE NOTICE

Title: Battery Numbering
Applied to: USB Power Delivery Specification Revision 3.0 V1.1

Brief description of the functional changes proposed:
Clarify the numbering of Fixed and Hot Swappable Batteries.

Benefits as a result of the proposed changes:
Ensures better inter-operability.

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:
This provides clarity for Compliance Testing which may have been lacking before.

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Actual Change
(a). Section 1.6, Page 39, Table 1-1

New Text:

Term	Description
Battery Slot	A physical location where a Hot Swappable Battery can be installed. A Battery Slot might or might not have a Hot Swappable Battery present in a Battery Slot at any given time.

(b). Section 6.5.1, Page 157, Table 6-43

From Text:

21	Source Inputs	1	Bit field		

				Bit	Description
				0	0b: No external supply 1b: External supply present
				1	If bit 0 is set: 0b: External supply is constrained 1b: External supply is unconstrained If bit 0 is not set Reserved and Shall be set to zero
				2	0b: No internal Battery 1b: Internal Battery present
				3…7	Reserved and Shall be set to zero

22	Batteries	1	Byte	Upper Nibble = Number of Hot Swappable Batteries (0…4) Lower Nibble = Number of Fixed Batteries (0…4)
23	Source PDP	1	Byte	0…6: Source's rated PDP 7: Reserved and Shall be set to zero

To Text:

21	Source Inputs	1	Bit field	

Bit	Description
0	0b: No external supply 1b: External supply present
1	If bit 0 is set: 0b: External supply is constrained 1b: External supply is unconstrained If bit 0 is not set Reserved and Shall be set to zero
2	0b: No internal Battery 1b: Internal Battery present
3...7	Reserved and Shall be set to zero

22	Number of Batteries/Battery Slots	1	Byte	Upper Nibble = Number of Hot Swappable Battery Slots (0...4) Lower Nibble = Number of Fixed Batteries (0...4)
23	Source PDP	1	Byte	0...6: Source's rated PDP 7: Reserved and Shall be set to zero

(c). Section 6.5.1.11, Page 160

From Text:

6.5.1.11 **Batteries**

The Batteries field **Shall** report the number of batteries the source supports. It **Shall** independently report the number of Hot Swappable Batteries and the number of Fixed batteries. The maximum number of each type of Battery **Shall** be no more than 4.

To Text:

6.5.1.11 Number of Batteries**/Battery Slots**

The Number of Batteries/Battery Slots field **Shall** report the number of Fixed Batteries and Hot Swappable Battery Slots the Source supports. ~~It~~This field **Shall** independently report the number of ~~Hot Swappable~~ Battery Slots and the number of Fixed Batteries.

A Source **Shall** have no more than 4 Fixed Batteries and no more than 4 Battery Slots.

Fixed Batteries **Shall** be numbered consecutively from 0 to 3. The number assigned to a given Fixed Battery **Shall Not** change between Attach and Detach.

Battery Slots **Shall** be numbered consecutively from 4 to 7. The number assigned to a given Battery Slot **Shall Not** change between Attach and Detach.