USB4 1.0 ENGINEERING CHANGE NOTICE FORM

Title: Adding Option of DP Wake
Applied to: USB4 Specification Version 1.0

Brief description of the functional changes:
Adds an option to wake a Router on a DP connect and disconnect

Benefits as a result of the changes:
Allows improved control when system in sleep mode

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
Device Routers that support DP tunneling and can be connected to a Monitor should add this functionality

An analysis of the hardware implications:
Adding control, status and wake implementation for DP

An analysis of the software implications:
Connection Manager should enable Wake on DP when needed.

An analysis of the compliance testing implications:
Need to add a DP wake test

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Actual Change

(a). Table 8-3, Page 276

From Text:

2	**Enable Wake on USB3 (WoU)** When set to 1b, a USB3 Wake indication from a USB device causes the Router to exit from sleep. When set to 0b, a USB3 Wake indication from a USB device does not cause the Router to exit from sleep. A Host Router shall hardwire this bit to 0b.	R/W	0
22:3	**Reserved**	Rsvd	0

To Text:

2	**Enable Wake on USB3 (WoU)** When set to 1b, a USB3 Wake indication from a USB device causes the Router to exit from sleep. When set to 0b, a USB3 Wake indication from a USB device does not cause the Router to exit from sleep. A Host Router shall hardwire this bit to 0b.	R/W	0
3	**Enable Wake on DP** When set to 1b, an HPD change or reception of an HPD IRQ causes the Router to exit from sleep. When set to 0b, an HPD change or reception of an HPD IRQ does not cause the Router to exit from sleep. A Host Router shall hardwire this bit to 0b.	R/W	0
22:43	**Reserved**	Rsvd	0

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(b). Table 8-3, Page 277

From Text:

3	**Wake on USB3 Status** A Router shall set this bit to 1b when a USB3 Wake indication causes the Router to exit from sleep. A Router shall set this bit to 0b upon entry to sleep.	RO	0b
17:4	**Reserved**	Rsvd	0

To Text:

3	**Wake on USB3 Status** A Router shall set this bit to 1b when a USB3 Wake indication causes the Router to exit from sleep. A Router shall set this bit to 0b upon entry to sleep.	RO	0b
4	**Wake on DP Status** A Router shall set this bit to 1b when a DP Wake indication causes the Router to exit from sleep. A Router shall set this bit to 0b upon entry to sleep	RO	0b
17:54	**Reserved**	Rsvd	0

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(c). Table 4-42, Page 188

From Text:

Enable Wake on USB3	Router Configuration Space	*Enable Wake on USB3* bit prior to sleep entry.
Far-end receiver termination	--	Indicator value of USB far-end receiver termination. See Section 9.1.1.1.2.

To Text:

Enable Wake on USB3	Router Configuration Space	*Enable Wake on USB3* bit prior to sleep entry.
Enable Wake on DP	Router Configuration Space	*Enable Wake on DP bit prior to sleep entry.*
Far-end receiver termination	--	Indicator value of USB far-end receiver termination. See Section 9.1.1.1.2.