Fixing DLL and LLDP
D2.0, v2

Fred Schindler, Seen Simply

Affiliation: Broadcom, Cisco, Texas Instruments

Editor instructions highlighted in orange.

Review Draft 1.7 fix up

Previously, pse_dll_power_level replaced pse_dll_type , which attempted to base DLL decisions on class rather than Type.

Most of these changes were backed out by schindler_3bt_01_05_16.

Draft 1.7 Fix up continued

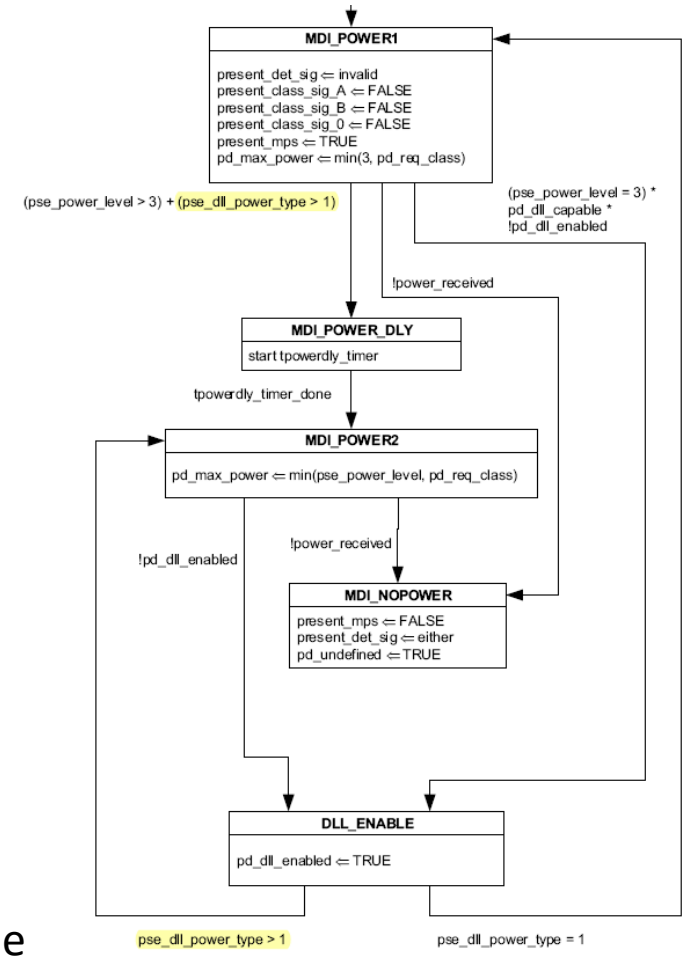
Type 1, 2 PDs always used pse_dll_type

pse_power_type is the PD physical layer view and pse_dll_power_type is the PD DLL view.

New PDs with class >3 are required to support DLL, i.e. class > 3 and Type >1

Type 3 and 4 PD State Diagram

- Type 3, 4 PSEs use one class event when powering up a PD presenting class = 3. **Incomplete mutual ID**
- A PSE with a power budget change may transition from class-3 power to higher power using DLL, for Type 3 and 4 PDs.

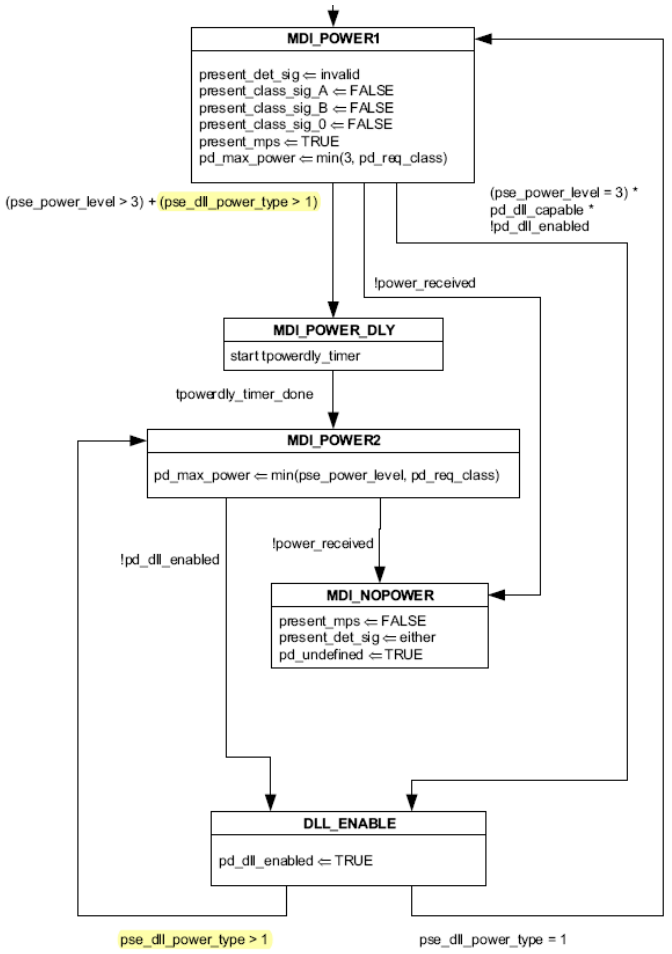


Type 3, 4 PD

A Type-3 PD may present class-4 and be probed with one class event by an underpowered PSE port.

Type 3 and 4 PD State Diagram

- For physical class > 3 MDI_POWER2 need to be reached.
- Exit conditions from DLL_ENABLE should check pse_power_level to permit this behavior.
- The existing solution incorrectly uses pse_dll_power_type.

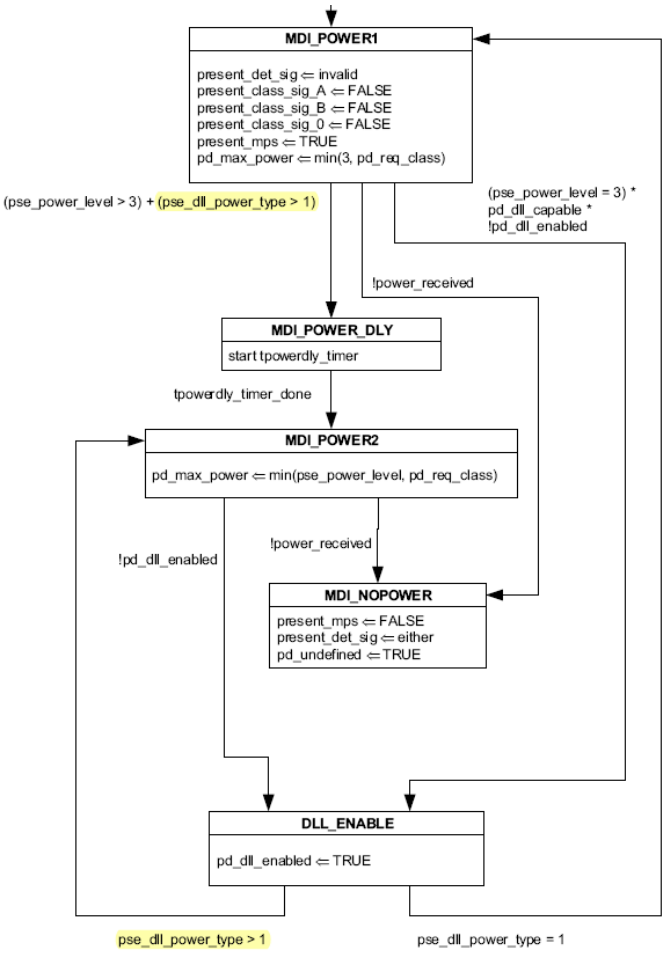


Type 3, 4 PD

Lennart Yseboodt caught this error.

FIX:Type 3 and 4 PD State Diagram

- On D2.0, page 129:
- Replace DLL_ENABLE exit pse_dll_power_type > 1 with pse_power_level > 3.
- Replace DLL_ENABLE exit pse_dll_power_type = 1 with pse_power_level = 3.



Type 3, 4 PD

DLL still works using MDI_POWER1, pse_dll_power_type > 1

Type 3 and 4 PD State Diagram

Variable **pse_dll_power_type** is used but not defined for the Type 3,4 PD state diagram.

On D2.0, 33.3.3.7, add:

pse_dll_power_type

A control variable output by the PD power control state diagram (Figure 33-50) that indicates the PSE type as 1 or 2, see 79.3.2.4.1.

Values:

1: The PSE is a Type 1 PSE, for a Type-1 PSE.

2: The PSE is a Type 2 PSE, for a Type 2, 3 and, 4 PSE.

Yair Darshan caught this error.

DLL State Diagram

Variable **pse_dll_power_type** is used but not defined for the DLL state diagram.

On D2.0, 33.6.3.3, add:

pse_dll_power_type

A control variable output by the PD power control state diagram (Figure 33-50) that indicates the PSE type as 1 or 2, see 79.3.2.4.1.

Values:

1: The PSE is a Type 1 PSE, for a Type-1 PSE.

2: The PSE is a Type 2 PSE, for a Type 2, 3 and, 4 PSE.

Yair Darshan caught this error.

Motion

Move to accept text from slides 6– 8, of Schindler_02_0916.pdf as IEEE802.3bt baseline text.

Mover: Fred Schindler

Seconder:

Y: N: A:

Seen Simply

Turning complexity into understanding.