Remedy for Comment about pd_fault Behavior

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Presentation Objectives

- To propose changes to the PD state diagram and the PD CLASS_TYPE_INFO register that allow a PSE to clear the pd_fault variable and pd_fault bit, respectively.

LINEAR TECHNOLOGY

Proposed Change to PD State Diagram

- Currently the pd_fault variable is set to FAULT only in the RESET state.

- Need to add pd_fault⟸FALSE assignment to a state subsequent to DO_CLASSIFICATION so PSE can check for a persistent fault condition by cycling the voltage at the PI through $V_{sig\_disable}$.

- Propose adding pd_fault⟸FALSE assignment to the MDI_POWER1 state.

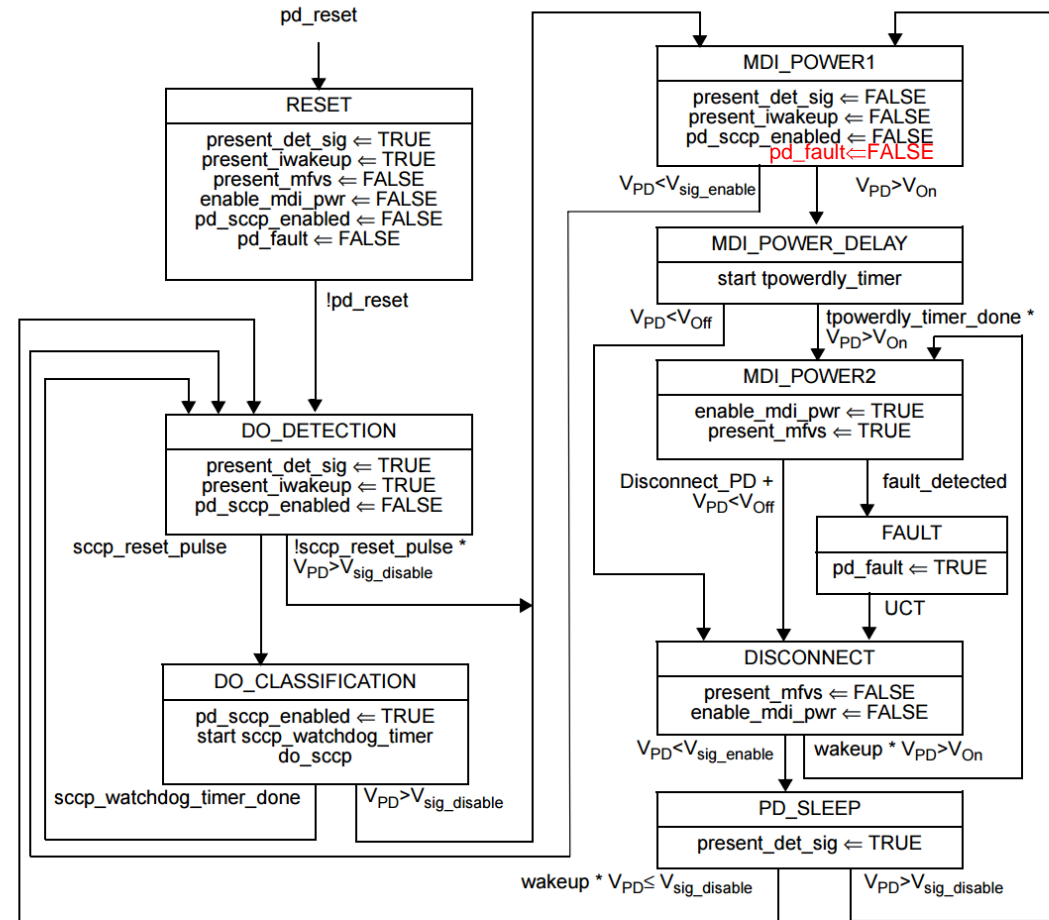**104.5.3.6 State Diagram**

Figure 104–8—PD state diagram

Editor: make change to Figure 104-8 shown in red.

Proposed Changes to Table 104-8 CLASS_TYPE_INFO register

- Currently the pd_fault bit is read only.
- Need to change behavior to latched-high clear on read. Bit is set to 1 when PD SD variable pd_fault transitions from FALSE to TRUE.
- Propose changing name of bit to pd_faulted as well.

Table 104–8—CLASS_TYPE_INFO Register Table

Bit(s)	Name	Description	R/W
b[15:12]	Type	Type: 1110 – Type A 1101 – Type B 1011 – Type C Other – Reserved	RO
b[11]	~~pd_fault~~ pd_faulted	1 - error condition exists that prevents PD from receiving power at the PI 0 - no error condition ~~exists~~ detected	~~RO~~ RO/LH
b[10]	Reserved	value always 0	RO
b[9:0]	Class	Class: 1111111110 – Class 0 1111111101 – Class 1 1111111011 – Class 2 1111110111 – Class 3 1111101111 – Class 4 1111011111 – Class 5 1110111111 – Class 6 1101111111 – Class 7 1011111111 – Class 8 0111111111 – Class 9	RO

Change circled text to "1 - error condition has occurred that prevented the PD from receiving power at the PI. Set to 1 when the pd_fault variable transitions from FALSE to TRUE."

Editor: make changes to Table 104-8 shown in red.

Questions?

Thank you!