



# Remedy for PSE SD variable 'power\_available' comments

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# Presentation Objectives

- Propose a new definition for the PSE state diagram variable 'power\_available' that clearly identifies valid pairings of PSEs and PDs for the delivery of compatible voltage and power
- Propose changes to the PSE state diagram in order to prevent a PSE from attempting to source power to PD when the required compatible voltage and power is unavailable and allow the PSE to withdraw power from a PD if compatible voltage and power becomes unavailable subsequent to POWER\_UP.

# D3.0 PSE SD variable 'power\_available'

- The definition of power\_available in D3.0 is:
  - power\_available
    - TRUE: the PSE is able to source the required power to the attached PD.
    - FALSE: the PSE is unable to source the required power to the attached PD.
  - A precise definition of 'the PSE is able to source the required power to the attached PD' is needed.
- A PSE that does not support classification may proceed to POWER\_UP from DETECTION\_EVAL when mr\_valid\_signature is TRUE with no check on the availability of compatible power.
  - power\_available=TRUE should also apply to this arc
- A PSE that does not support classification may proceed to RESTART state from DETECTION\_EVAL only if mr\_invalid\_signature is TRUE.
  - A PSE should be allowed to go to RESTART from DETECTION\_EVAL if !power\_available
- A PSE may exit the POWER\_ON state only when MFVS is no longer valid.
  - A PSE should be allowed to go to RESTART from POWER\_ON if !power\_available

# Remedy for PSE SD Variable ‘power\_available’

*Editor’s instruction: Replace the definition of power\_available in sub-clause 104.4.3.3 with the following:*

power\_available :

**TRUE:** A compatible PSE class to PD class pairing exists as defined in Table 104-2 and the PSE is able to source the required voltage and power.

**FALSE:** A valid PSE class to PD class pairing does not exist as defined in Table 104-2 or the PSE is not able to source the required voltage and power.

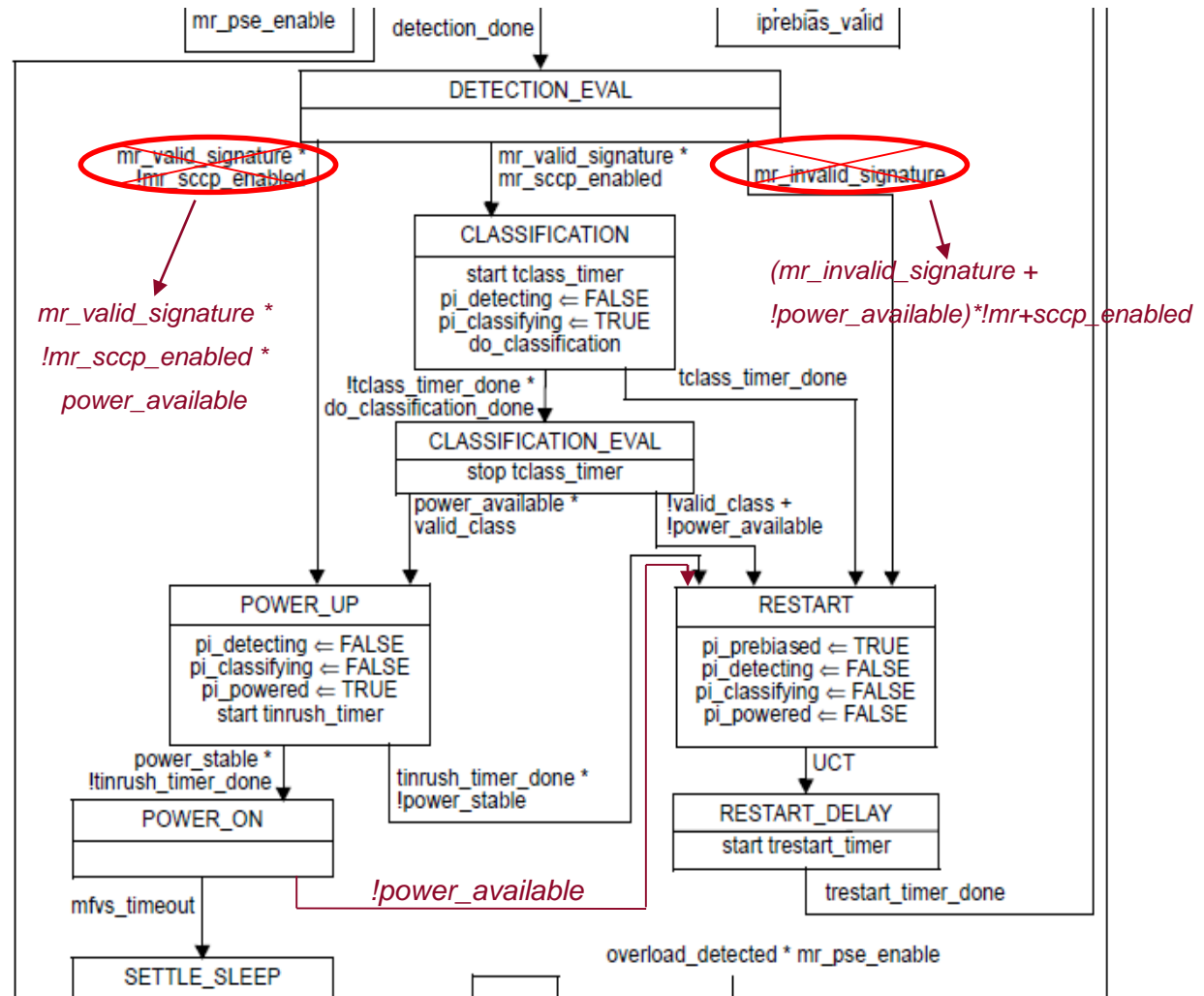
		PSE Class									
		12V unregulated		12V regulated		24V unregulated		24V regulated		48V regulated	
		0	1	2	3	4	5	6	7	8	9
12V unregulated	0	X	X	X	X						
	1		X	X	X						
12V regulated	2			X	X						
	3				X						
24V unregulated	4					X	X	X	X		
	5						X	X	X		
24V regulated	6							X	X		
	7								X		
48V regulated	8									X	X
	9										X

Note - An X indicates a PSE-PD pairing where power\_available is TRUE.

Table 104-2 - PSE power\_available matrix

# Remedy for PSE SD Arcs from DETECTION\_EVAL

- power\_available must be TRUE before a PSE can go from DETECTION\_EVAL to POWER\_UP.
- If !mr\_sccp\_enabled and !power\_available, the PSE must go to to RESTART state from DETECTION\_EVAL.
- A PSE in POWER\_ON state may proceed to RESTART state from the POWER\_ON state if 'power\_available' becomes FALSE subsequent to POWER\_UP.



Editor's instruction – Make the changes shown above to Figure 104-4. The DETECTION\_EVAL to RESTART arc condition change is to be made in conjunction with proposed remedy in [abramson\\_3bu\\_1\\_0716.pdf](#)

# Questions?

**Thank you!**