Proposal for Type D PSEs and PDs

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Presentation Objectives

- To define a new Type D that will address PSEs and PDs that are not Type A, B, or C.
  - Type D Example: PSEs or PDs that operate without a data entity.

Proposed Changes to D3.0 for Type D

- Add the following sentence to the end of 104.1.3:
  - Type D PSEs and Type D PDs are not compatible with 100BASE-T1 or 1000BASE-T1 PHYs and may contain no data entity.
- Change 104.4.1 as follows:
  - For PoDL systems there are three types of PSEs, Type A, Type B, Type C, and Type ~~C~~D consistent with 104.1.3.
- Change 104.5.1 as follows:
  - For PoDL systems there are three types of PDs, Type A, Type B, Type C, and Type ~~C~~D consistent with 104.1.3.
- Change Table 104-8

Proposed Changes to D3.0 for Type D cont'd

- Change Table 104-8 as shown:

Table 104–8—CLASS_TYPE_INFO Register Table

Bit(s)	Name	Description	R/W
b[15:12]	Type 0111 – Type D →	Type: 1110 – Type A 1101 – Type B 1011 – Type C Other – Reserved	RO
b[11]	pd_fault	1 - error condition exists that prevents PD from receiving power at the PI 0 - no error condition exists	RO
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

Proposed Changes to D3.0 for Type D cont'd

- On page 18 after 1.4.418c add the following:

  1.4.418c Type D PoDL System: A PSE, link section, and PD that contain no data entity or are not compatible with 100BASE-T1 or 1000BASE-T1 PHYs.

Proposed Changes to D3.0 for Type D cont'd

- Change 30.15.1.1.4 aPoDLPSEType as follows:

ATTRIBUTE
APPROPRIATE SYNTAX:
An ENUMERATED VALUE that has one of the following entries:
unknown initializing, true state not yet known
typeA Type A PoDL PSE
typeB Type B PoDL PSE
typeC Type C PoDL PSE
typeD Type D PoDL PSE

- Change 30.15.1.1.5 aPoDLPSEDetectedPDType as follows:

ATTRIBUTE
APPROPRIATE SYNTAX:
An ENUMERATED VALUE that has one of the following entries:
unknown initializing, true state not yet known
typeA Type A PoDL PD
typeB Type B PoDL PD
typeC Type C PoDL PD
typeD Type D PoDL PD

Proposed Changes to D3.0 for Type D cont'd

- Change Table 45-211-j as follows:

13.1.9:7	PSE Type	1	x	x	= Reserved	RO
		0	1	1	= ~~Reserved~~ ← Type D PD	
		0	1	0	= Type C PSE	
		0	0	1	= Type B PSE	
		0	0	0	= Type A PSE	

- Change 45.2.7b.2.7 as follows:
  - Bits 13.1.9:7 report the PSE Type of the PSE as specified in 104.4.1. When read as '000', bits 13.1.9:7 indicate a Type A PSE, when read as '001' a Type B PSE is indicated, ~~and~~ when read as '010' a Type C PSE is indicated, and when read as ‘’ a Type D PSE is indicated.

Proposed Changes to D3.0 for Type D cont'd

- Change Table 45-211k and 45.2.7b.3.1 as follows:

Table 45–211k—Single-Pair PSE Status 2 register bit definitions

Bit(s)	Name	Description	R/W[a]
13.2.15:3	Reserved	Value always 0	RO
13.2.2:0	PD Type	1 x x = Reserved 0 1 1 = ~~Reserved~~ ← Type D PD 0 1 0 = Type C PD 0 0 1 = Type B PD 0 0 0 = Type A PD	RO

[a]RO = Read Only

Insert ", and when read as '011' a Type D PD in indicated"

45.2.7b.3.1 PD Type (13.2.2:0)

Bits 13.2.2:0 report the PD Type of a detected PD as specified in 104.5.1. When read as '000', bits 13.2.2:0 indicate a Type A PD, when read as '001' a Type B PD is indicated, ~~and~~ when read as '010' a Type C PD is indicated.The value in this register is valid while a PD is connected, i.e., while the PSE Status (13.1.2:0) bits are reporting "delivering power".

Questions?

Thank you!