

MPoE Unit Loads

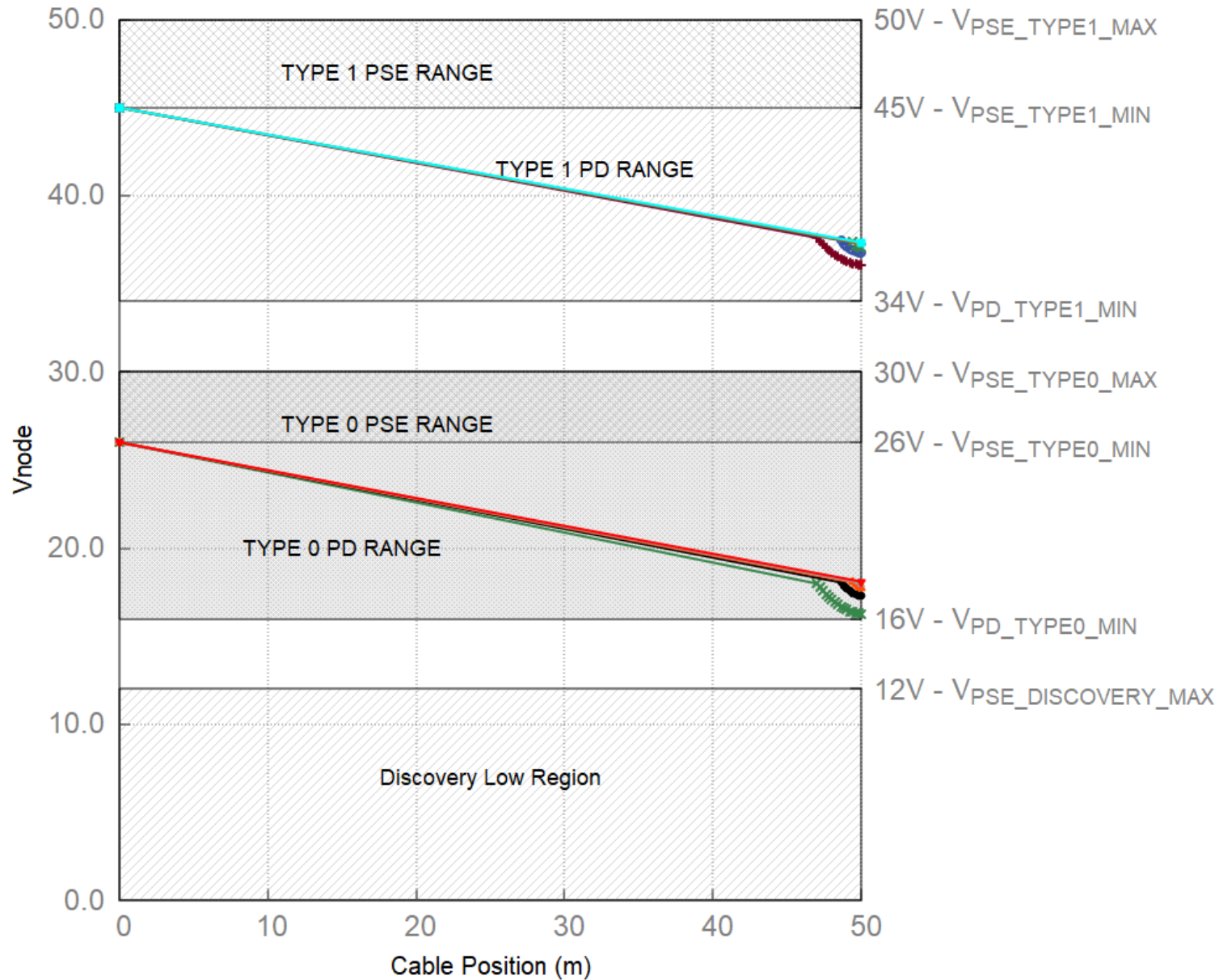
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- ▶ Extend idea introduced by Jason Potterf (Cisco)
 - https://www.ieee802.org/3/da/public/0923/SPMD_Potterf_UnitLoadConcept_2023-09-07.pdf
- ▶ Improve system flexibility by allowing loads to consume more than 1xMPD worth of power
- ▶ A “16-node” mixing segment may consist of, 1 x MPSE plus:
 - 16 x 1U loads
 - Or
 - 4 x 4U loads
 - Or
 - 1 x 16U load
 - Or
 - 1 x 8U load, 1 x 4U load, and 4 x 1U loads
 - Etc...

Unit Load Level Dependent Parameters

| | 1/2U | Data | 1U | 2U | 4U | 8U | 16U |
|-------------------|------|------|-----|----|----|----|-----|
| Pmpd_type0_max(W) | 0.5 | 0 | 1 | 2 | 4 | 8 | 16 |
| Pmpd_type1_max(W) | 1 | 0 | 2 | 4 | 8 | 16 | 32 |
| Lcouple_min(uH) | 160 | Inf | 80 | 40 | 20 | 10 | 5 |
| #Nodes | 32? | 16 | 16 | 8 | 4 | 2 | 1 |
| Rconn(mΩ) | 100 | 200 | 200 | | | | |
| Cmpd_max(nF) | 100 | 0.03 | 200 | | | | |

Loading Chart w/ Unit Loads



- ▶ Specify power coupling inductance with RL/IL
 - How will it move with unit load concept?
 - Does it belong in Clause 168 or Clause 169?

- ▶ Do we need to update LLDP to communicate unit load data?

Thank You