

SPMD Study Group  
Connectors  
Chad Jones – Cisco

# My View

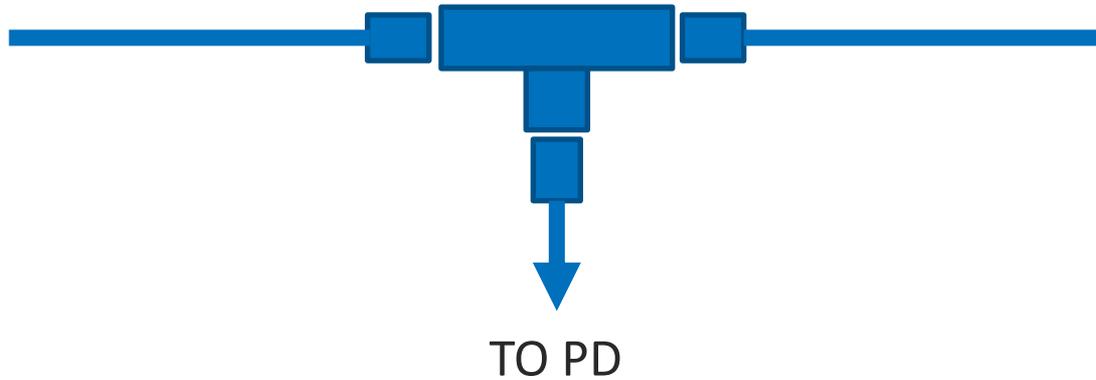
- This is me taking off the chair hat, giving my technical opinion
- The goal is to induce discussions
- Let me make the first inflammatory statement:
- The resulting SPMD standard MUST mandate a family of connectors
  - But only one per permutation

# Data

- Its quite likely that an 802.3cg compliant device will not be compatible with an SPMD device
- Misconnection of one into the others network may result in bringing down the network
- Therefore, SPMD should not use the same connectors as 802.3cg
- Need plug & play interoperability

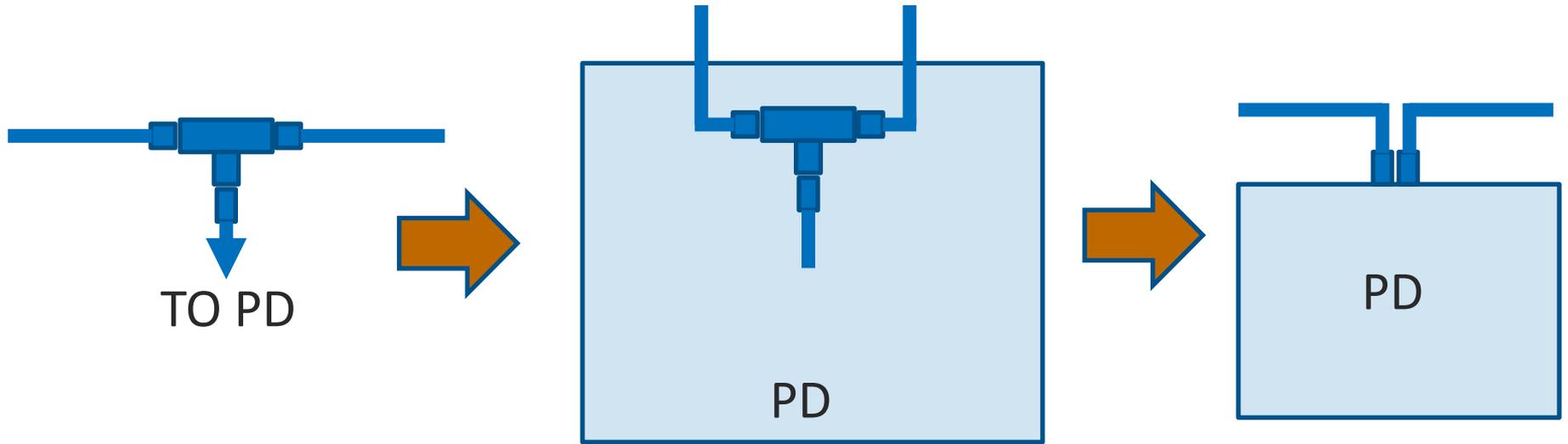
# PD Configuration

- 'T' connector



- Requires three connectors (4 including PD) plus the 'T'
- Will have to restrict length from T to PD

# To 'T' or not to 'T'



# Pass Thru Config

- Logically the same as the T
- Less total connectors
- No 'T' connector
- Zero stub length
- PD required to handle max current passed through
- More connectors on PD

# Stubs

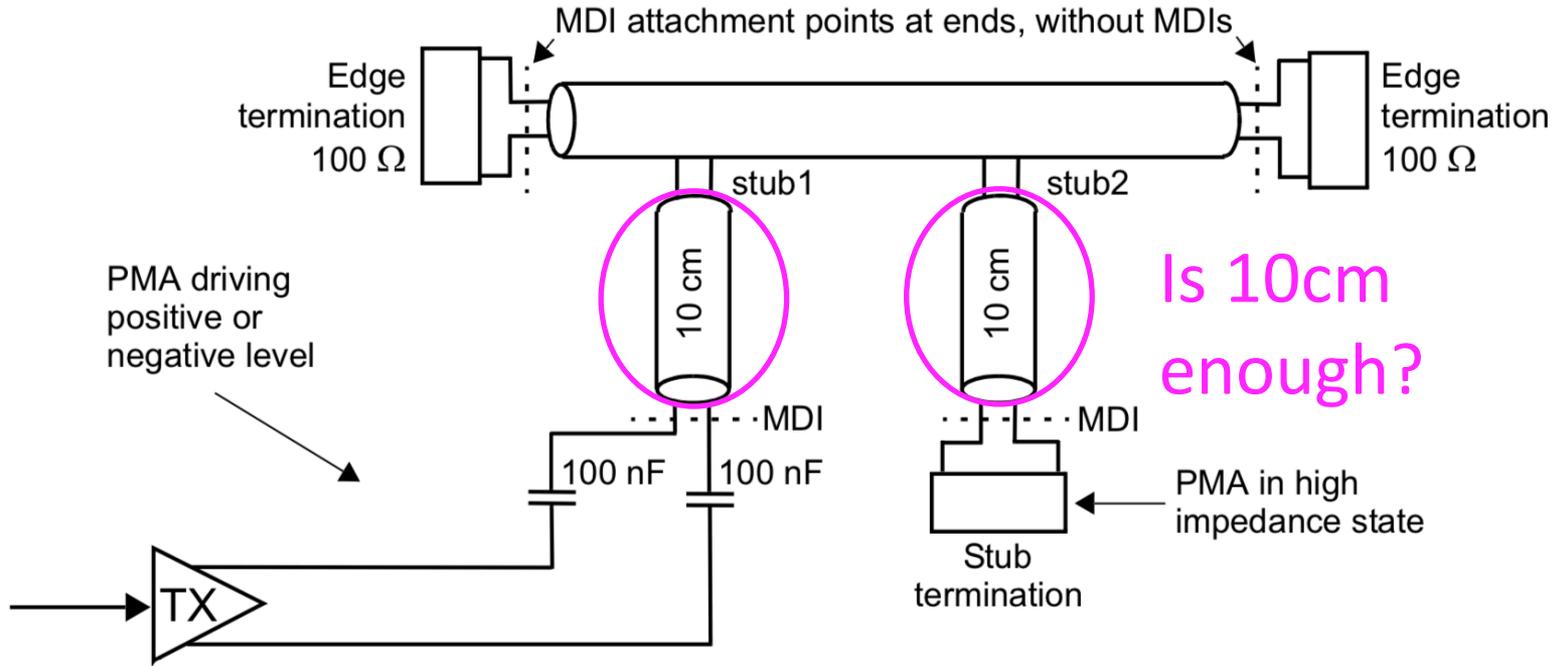
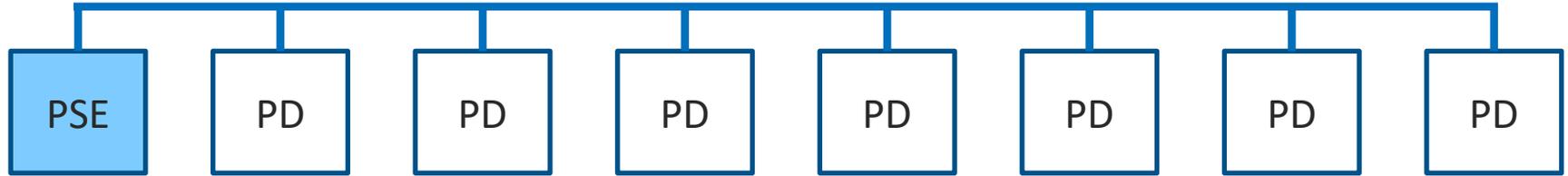


Figure 147-20—Multidrop line termination and PMA

# System Structure

Allow this:



Or allow this:



# Power

- The CFI called out at least two voltages, 24V and ~60V
- I view the 24V PSE and the 60V PSE as two distinct entities
- The connector should prevent 24V PDs from being connected to 60V PSEs

PSE	PD	Hybrid PD
24V	24V	24V or 60V
60V	60V	

# Power – 24V vs 60V

- The connector is detection & voltage selection
- Voltage correction is not possible in the PD pass through
- A connector is needed to avoid polarity swaps
- OR: we can avoid this by focusing on 60V
- The objective should be 60V only

# And, as always, COST

- This standard will focus on systems that use lots of these connectors
- Cost will be a large consideration (the largest?) in the eventual choice
- Need cost effective solutions to these problems

# Objectives?

- For sure, a lot of the questions are things that will have to be answered in TF
- Which of these lead to objectives?

Thank You!