Comment (#54 P164 L4, #55 P164 L20)

1. TDL#370 D2.3 need to be resolved:
   Comment: Figure 145-22 is titled "PSE PI unbalance specification and E2EP2PRunb" This impossible abbreviation...
   Response: (Yair): check correct usage of these terms and provide new definition(s).

2. Figure 145-22 need some updates to match with the current text in D2.4.

Suggested Remedy:

1. Change page 266 line 19-32 as follows:

"End to end pair-to-pair resistance/current unbalance (E2EP2PRunb) refers to the ratio of current differences in powered pairs of the same polarity to the total 4-pairs current. The end to end pair-to-pair effective current unbalance is equal to the end to end pair-to-pair effective resistance unbalance which refers to the ratio of effective resistance difference in the powered pairs of the same polarity to the sum of the effective resistance elements of both pairs of the same polarity and is shown by Figure 145-22. Current unbalance can occur in positive and negative powered pairs when a PSE uses all four pairs to deliver power to a PD."

Current unbalance requirements (R_{PSE_min}, R_{PSE_max} and $I_{Con\text{-}2P\text{-}unb}$) of a PSE is met with R_{load_max} and R_{load_min} as specified in Equation 145-16, Equation 145-17 and Table 145–17.

A compliant unbalanced load, R_{load_min} and R_{load_max}, consists of the channel (cables and connectors) and PD effective resistances, including the effects (or influence) of system end-to-end unbalance.

Equation (145–15) is described in 145.2.8.5.1, specified for the PSE, assures that E2EP2PRunb end to end pair-to-pair effective resistance unbalance will be met in the presence of all compliant unbalanced loads (R_{load_min} and R_{load_max}) attached to the PSE PI.

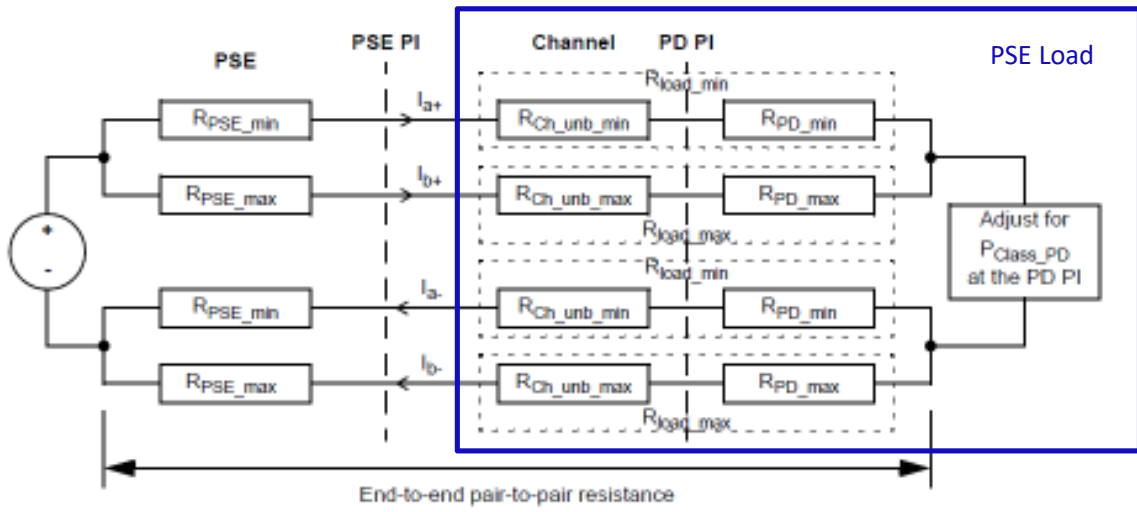*2. Change the title of Figure 145-22 from:*

Figure 145–22—PSE PI unbalance specification and system resistance unbalance

To:

Figure 145–22—PSE PI unbalance and system end to end pair-to-pair effective resistance unbalance test verification model.

3. Update Figure 145-22 as follows:
(Adding the blue rectangular thatshows what is PSE load when PSE is evaluated for unbalance)

PSE   PSE PI   Channel   PD PI   PSE Load

R_{PSE_min} I_{a+} $R_{Ch\_unb\_min}$ R_{PD_min}

R_{load_min}

R_{PSE_max} I_{b+} $R_{Ch\_unb\_max}$ R_{PD_max}

R_{load_max}

R_{load_min}

R_{PSE_min} I_{a-} $R_{Ch\_unb\_min}$ R_{PD_min}

Adjust for P_{Class_PD} at the PD PI

R_{PSE_max} I_{b-} $R_{Ch\_unb\_max}$ R_{PD_max}

R_{load_max}

End-to-end pair-to-pair resistance

End of Baseline