



## **IEE802.3 4P Task Force**

Updating 33.3.7.10 per D1.4 requirements

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Rev003

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Background:

D1.4 requires in its Editor Note in page 137 line 17 to address longer channel as well due to the fact that it looks that meeting Icon-2P\_unb is restricted to short channel only per the old text rather than Icon-2P\_unb has to be met at any case. However Icon-2P\_unb should be measured at worst case conditions i.e. short cable . The following changes fix the problem.

### 33.3.7.10 PD PI pair-to-pair resistance and current unbalance

1. Change according to the following text:

"All Class 5 and higher PDs shall not exceed Icon-2P-unb as defined in Table 33-11 on any pair. PDs shall ~~meet this requirement~~ have the pair currents measured when PD PI pairs of the same polarity are connected to a common source voltage through a two common mode resistance of  $R_{source\_min}=0.16 \Omega \pm 1\%$  and  $R_{source\_max}=0.19 \Omega \pm 1\%$  ~~to PD PI pairs of the same polarity~~ for all PD operating conditions as shown in Figure 33-18a.

$R_{source\_min}$  and  $R_{source\_max}$  represent the Vin source common mode effective impedance that consists of the PSE PI components ( ~~$R_{Pair}$~~  $R_{pse\_min}$  and  ~~$R_{Pair}$~~  $R_{pse\_max}$  as specified in 33.2.7.4.1),  $V_{port\_PSE\_diff}$  as specified in table 33-11 and the channel resistance. Common mode effective impedance is the impedance of two conductors of the same pair and their other components connected in parallel including the effect of  $V_{port\_PSE\_diff}$ . IA and IB are the pair currents of pairs with the same polarity. See Annex 33A.5 for design guide lines for meeting the above requirements."

2. Delete the editor note in line 17.

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See response to comment #146 for changing  $R_{pair\_min}$  and  $R_{pair\_max}$  to  $R_{pse\_min}$  and  $R_{pse\_max}$ .