



## IEEE802.3 4P Task Force

Updating 33.3.7.10 per D1.4 requirements

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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 ( $R_{Pair\_min}$  and  $R_{Pair\_max}$  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  $V_{port\_PSE\_diff}$ .  $I_A$  and  $I_B$  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.