IEEE802.3 4P Task Force

# Channel Pair To Pair Resistance Imbalance

(End to End System Imbalance)

# Ad Hoc

Straw poll for determine preferred way to go for specifying CHANNEL Pair to Pair Resistance Unbalance
WITH THE EFFECT OF TEMPERATURE ON THE WORST CASE RESULT.

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# Objectives of the straw poll

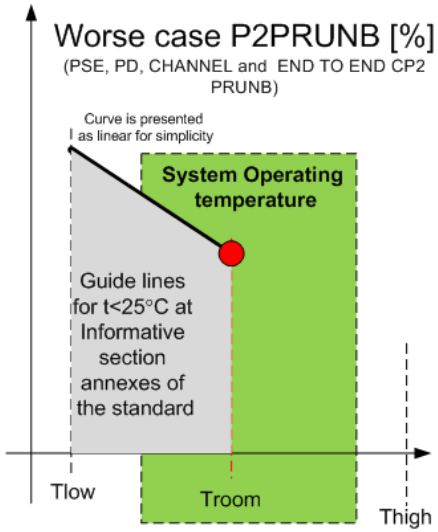
- To get inputs for the rational of different approaches (select option and explain why you believe that option N is best).

- To focus on approach that address our concerns and recommend it for the Task force by the ad-hoc.

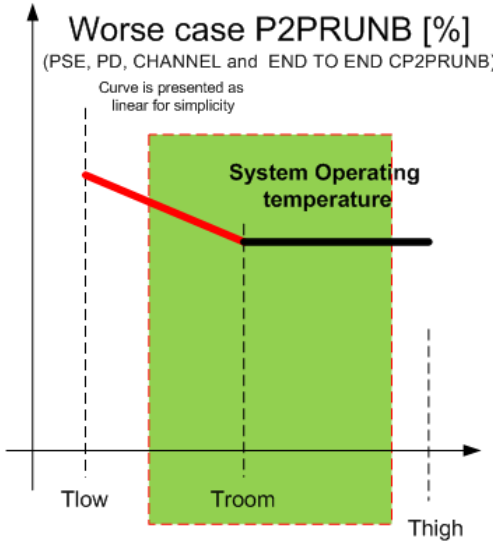
# Background: Our main concerns vs. Inputs/Remedies

- **To ensure interoperability**
  - Channel P2PRUNB is increasing when temperature is decreasing.
  - How PDs and PSEs with different operating range will work together?
- **Not forcing overdesign on system vendor**
- **Having guidelines at the informative may create interpretation issues**
- **Simple spec.**
- **Specifying number at any Tlow / Troom will not ensure interoperability for any other T<Tlow, therefore addition data such temperature coefficient must be supplied in the mandatory section or informative section so as a result, option 1 and option 3 are the same..**
- Proposed Remedies:
  - Like any other parameter in the spec… ☺, Specify at e.g. 20°C, and add data for temperature coefficients. (See examples at ANSI/TIA 568-C.2 Annex G, Clause 6.4.7 )
  - Specify CP2PRUNB at some low temperature. For lower temperature follow 33.7.7. or add data for temperature coefficients.
  - Like some other parameters, specify at 20°C.
  - Specify CP2PRUNB at some low temperature. For lower temperature follow 33.7.7.
  - To define singe point requirement i.e. one number.
  - Other?

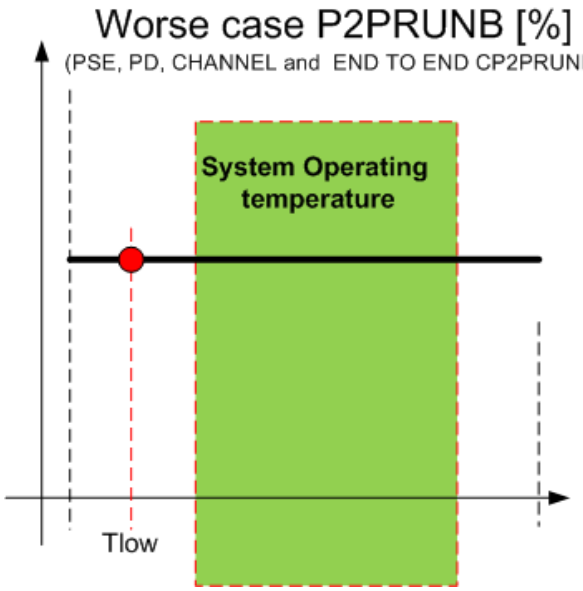
# Options for CP2PRUNB vs Operating temperature




- Option1
- Defining single point at e.g. Troom=20°C and:
- (a) add information for T<Troom at the informative section **and/or**
- **(b)** follow Clause 33.7.7
- No Over Design since system vendor responsible to design their system to meet requirements.
- It may increase interoperability concerns???. This concern is valid in all options whenever there is no single worst case number that covers Tlow of 100% of use cases.
- The remedy for it is specify the requirement and it is up to box designer to meet it over its operating temperature range.




- Option 2
- Defining curve from Tlow to Troom
- Tlow need to cover most of applications known to us.
- Prevents over design. (Allow system vendor to design for its operating temperature range)
- Tlow need to be investigated
- See interoperability concerns discussion in option 1




- Option 3
- Defining single point at Tlow which will be single worst case point.
- Tlow need to cover most of the applications min. temperature.
- This option may be overdesign for equipment with T>Tlow. (To investigate)
- Equipment that need to work at T<Tlow shall follow Clause 33.7.7
- See interoperability concerns discussion in option 1

# Straw Poll

- Select one option only.
- If possible, add rational for your selection, any concerns etc., new suggestions in the notes column.

| | Options | | | Notes |
|---|---|---|---|---|
| Name | 1 | 2 | 3 | |
| Yair Darshan / Microsemi | x | | | |
| Fred Schindler / Seen Simply | | | x | |
| Ken Bennett / Sifos | x | | | |
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