POEP RECCOMENDATION

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SYSTIMAX SOLUTIONS

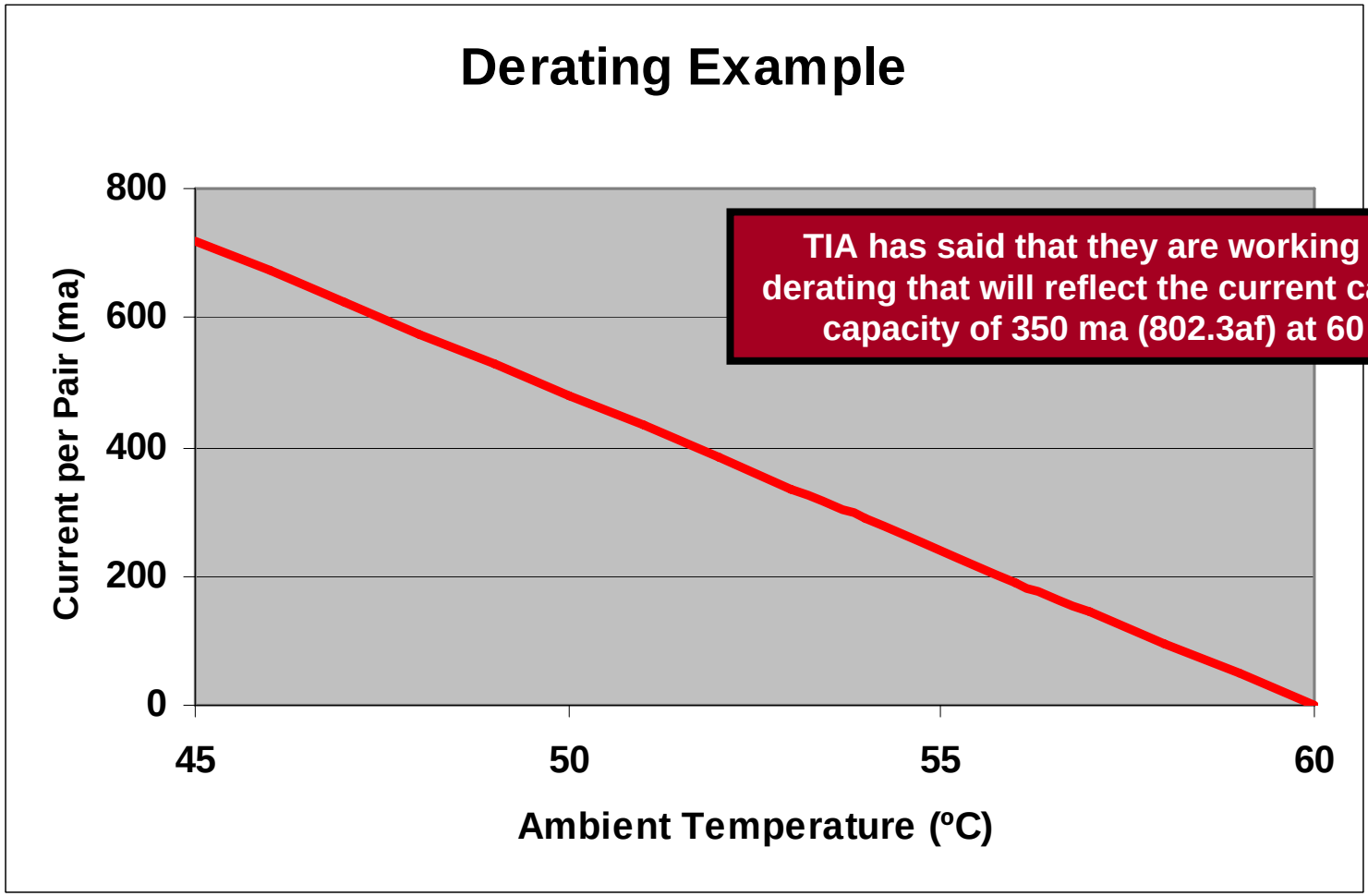
Presentation

- Review of what I think the TIA response was (Unofficial).
  - An example is provided on the derating using data that was presented in jan07/cobb_1_0107.pdf
- Options
- Recommendation

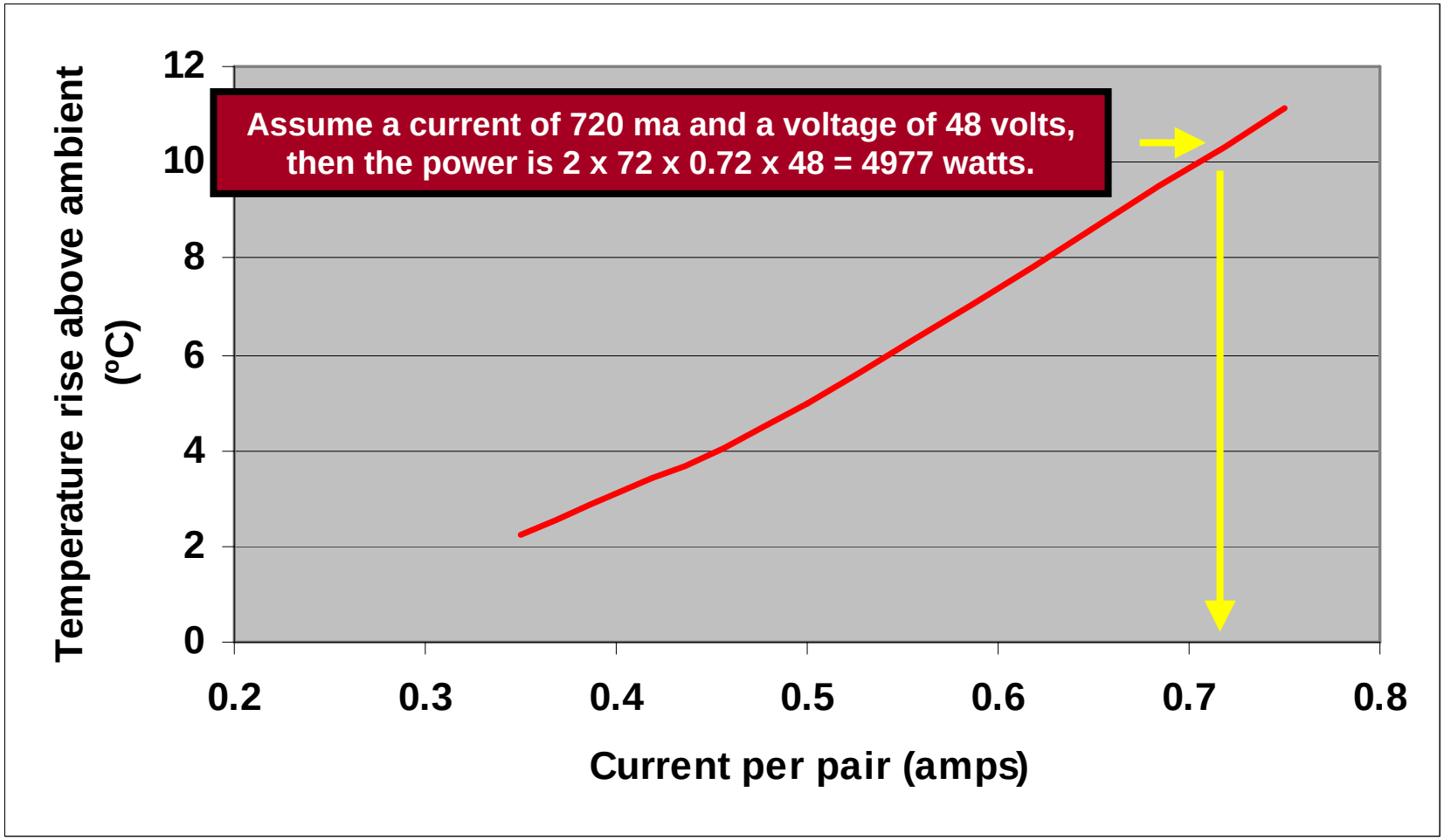
TIA Response (Unofficial)

- 720 ma maximum current on any pair.
- 5000 watts maximum power into a bundle.
- Derate the current on each individual pair from 720 ma for ambient temperatures above 45 ºC.
- The TIA TSB will not be a compliance document.

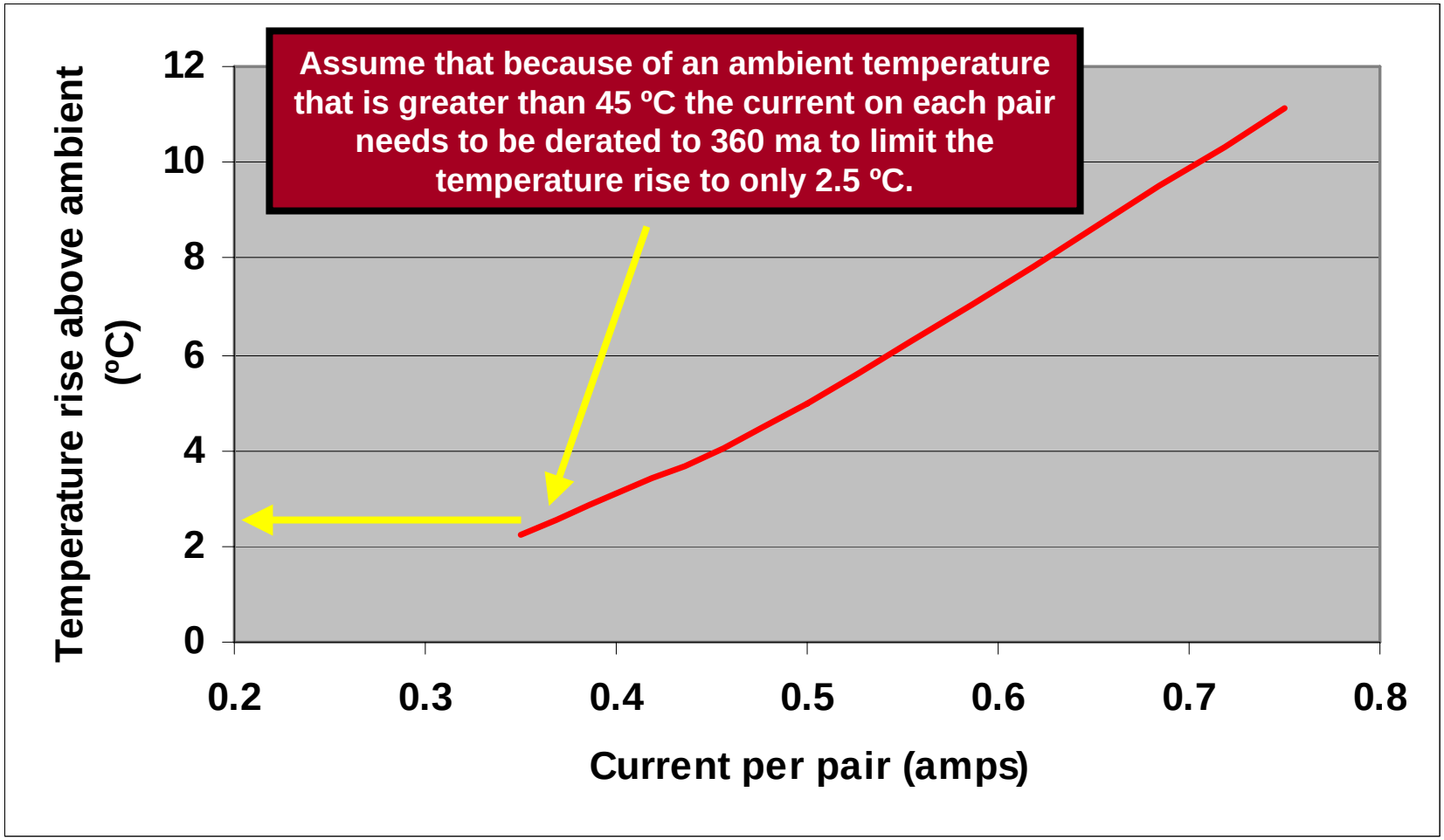
Derating the Current on Each Pair



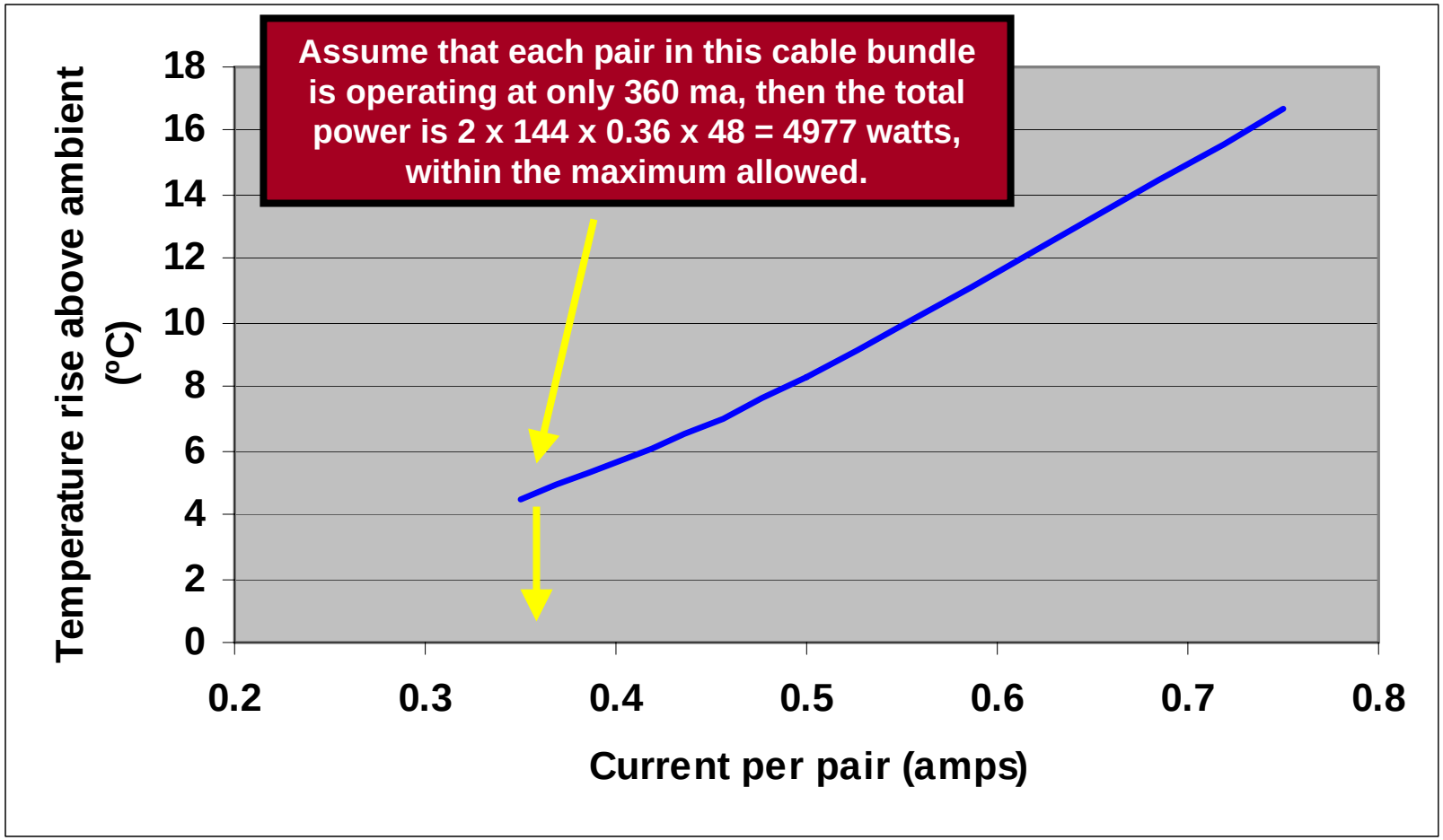
72 Cable Bundle Example



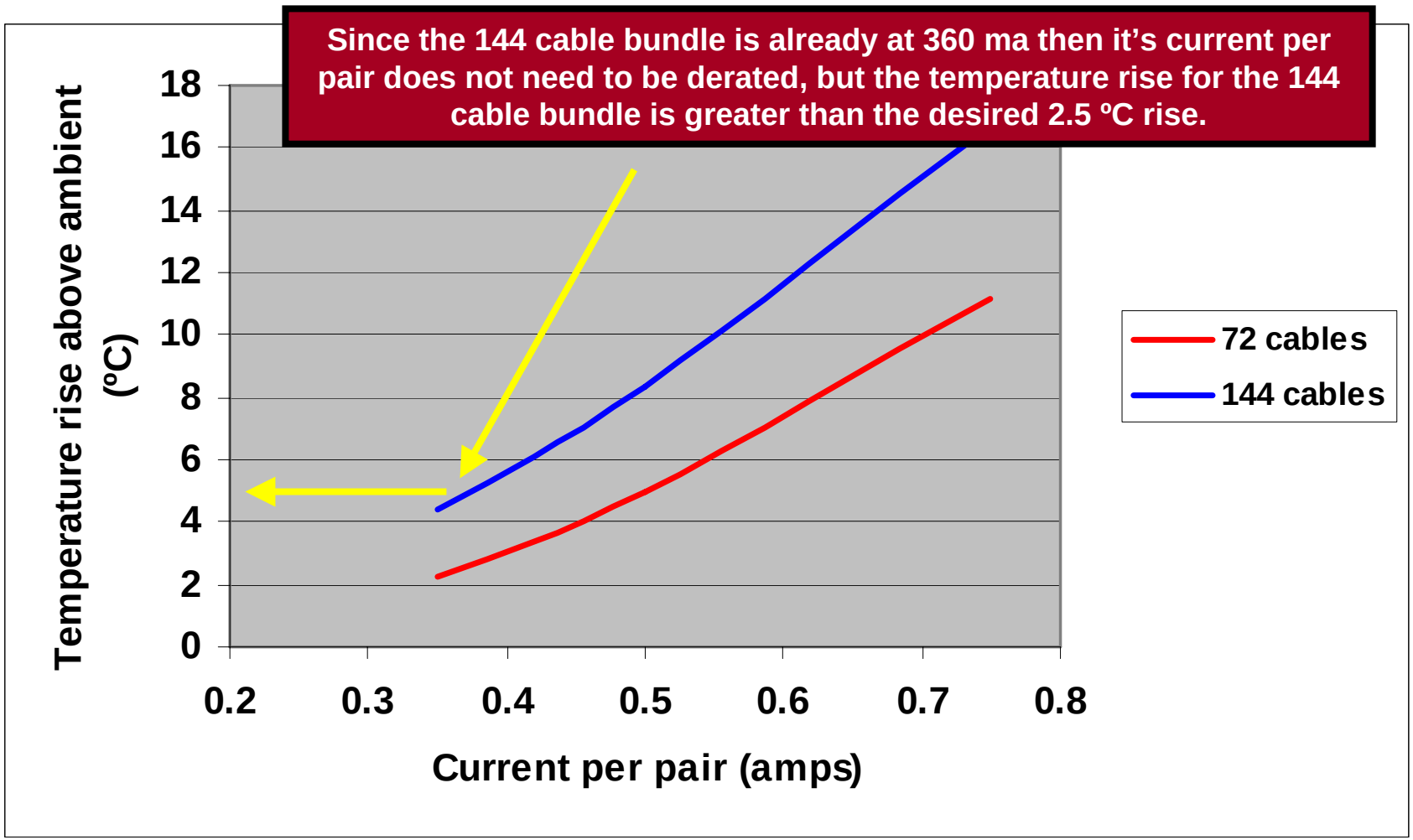
Derating a 72 Cable Bundle



144 Cable Bundle Example



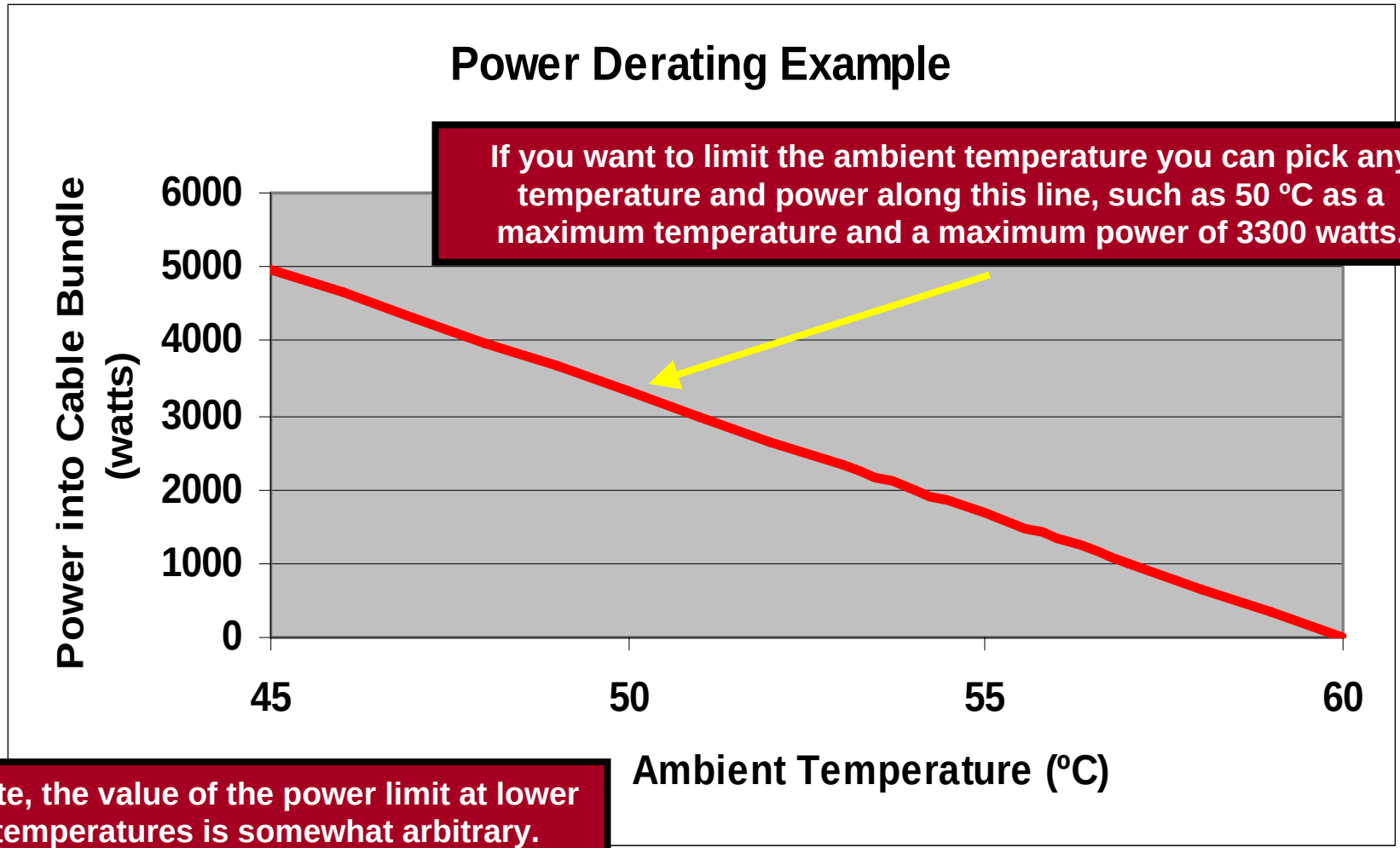
Comparing the Cable Bundles



Options

- If you derate the current on the individual pairs then you must consider the bundle size.
- Alternate methods of derating that are independent of bundle size:
  - Derate the total current into a bundle.
  - Derate the total power into a bundle.
- If you do not want to derate then you can limit the ambient temperature at which POEP can operate.

Limiting the Ambient Temperature

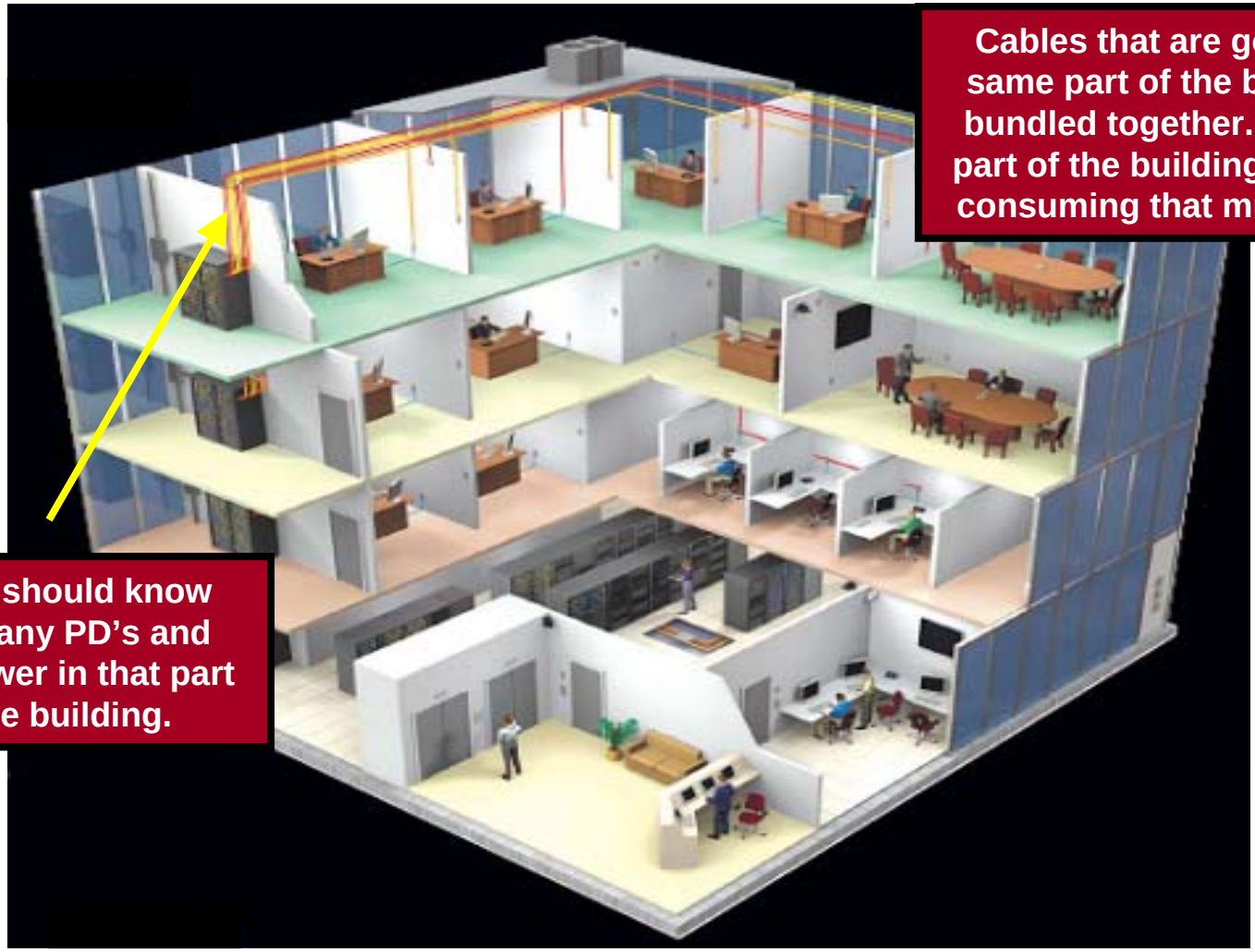


Note, the value of the power limit at lower temperatures is somewhat arbitrary.

Is Power the Right Metric?

- **Some PSE vendors do educate their customer on power requirements (and heat) for POE.**
  Cisco white papers:
  - **PoE IEE 802.af White Paper**
  - **Power and Cooling for VOIP and IP Telephony Applications**
- **PSE equipment is usually limited in the maximum power that it can deliver.**
- **A user who is going to add 5000 watts into his wiring closet should know what he is doing.**

Is 5000 Watts Right?



Cables that are going to the same part of the building are bundled together. Would one part of the building actually be consuming that much power?

A user should know how many PD's and their power in that part of the building.

Recommendation

- **Decide what would be best for POEP.**
- **Stop worrying about 802.3af.**
- **Send recommendation to TIA/ISO.**
- **Write an informative Annex for the 802.3at document explaining the limitations for POEP.**