PoE: Extended Power

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Status with Extended Power

Short recap

- **Maintain interoperability & Increase power budget at PD**
  - PSE might not even notice that PD is using Extended Power
  - Make reserved cable loss power available

- **Done after July Plenary**
  - Digest the comments
  - Generate a first collection of chapters which need to be touched

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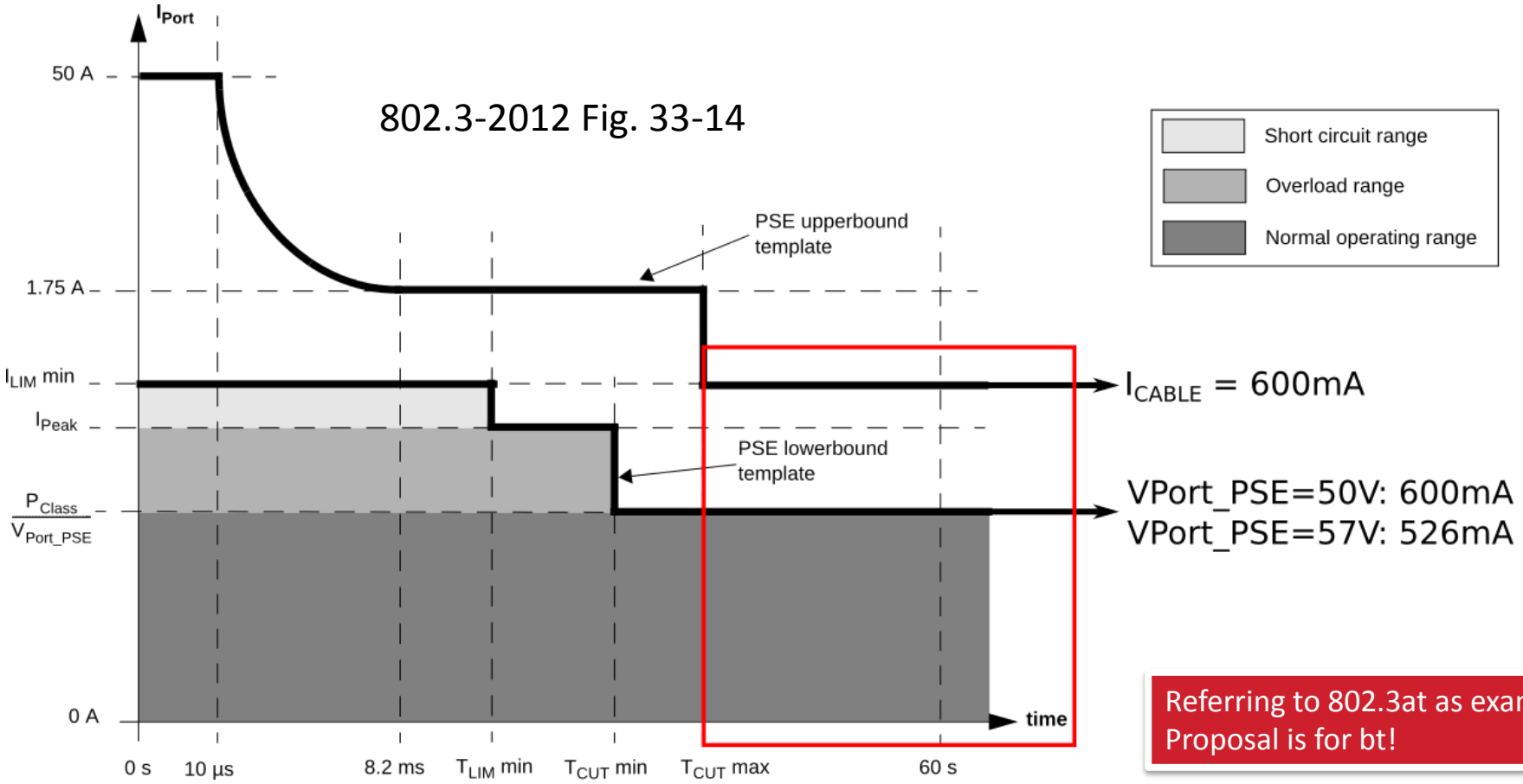
Definitions in 802.3at

- Maximum cable current I_{cable} is 600mA
- Channel DC loop resistance 12.5 ohm



Referring to 802.3at as example, Proposal is for bt!

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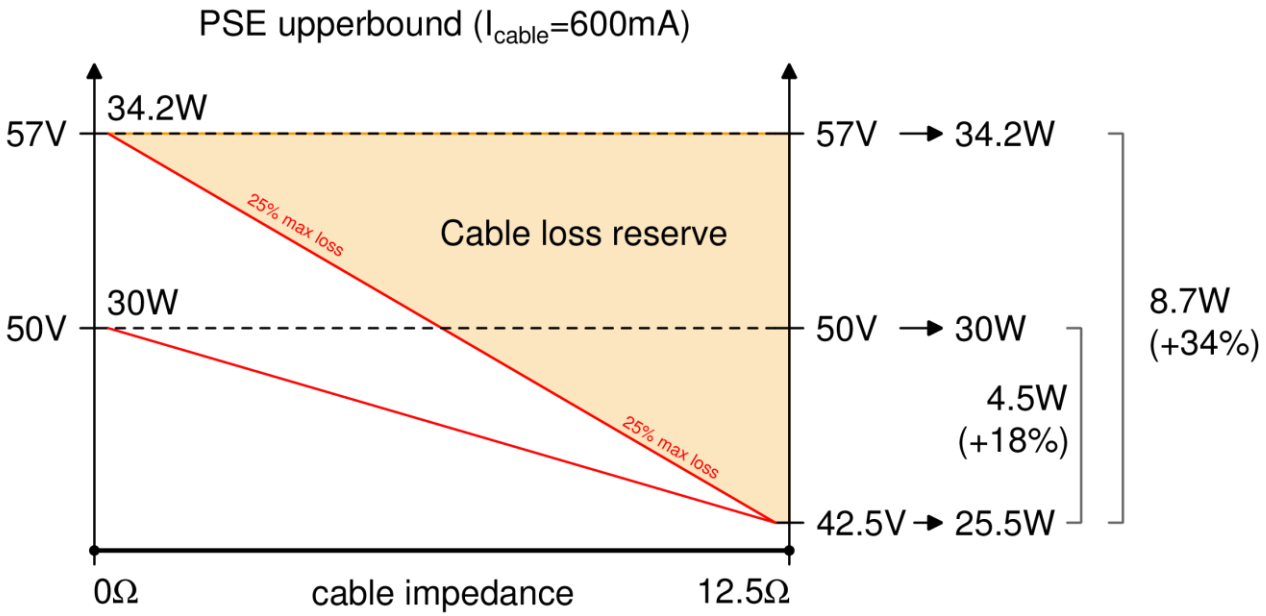
Cable reserves (in .at)



PD maximum power is 25.5W, PSE power is min 30W (lowerbound) to max 34.2W

Consequences:

- Introduction of a **current limit** for the PD on top of the limit **guaranteed power**
- Primary goal is to increase the available power at PD side for advanced features, PD needs to be fully operable on bad/long cable getting only **guaranteed power**

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Which changes and where?

- Introduction of a **current limit** for the PD on top of the limit **guaranteed power**

Location in 802.3-2012	Current text
33.3.7 PD Power	Table 33-18 Definitions average and peak power
33.3.7.4 Peak operating power	Power dependent on $I_{portmax}$
33.6.3.3 Variables	DLL: PDMaxPowerValue

- Extended power at PD side for advanced features, PD needs to be fully operable on bad/long cable getting only **guaranteed power**

Location in 802.3-2012	Current text
33.3.7.2.1 System stability test conditions during ….	Definition P_{Port_PD}

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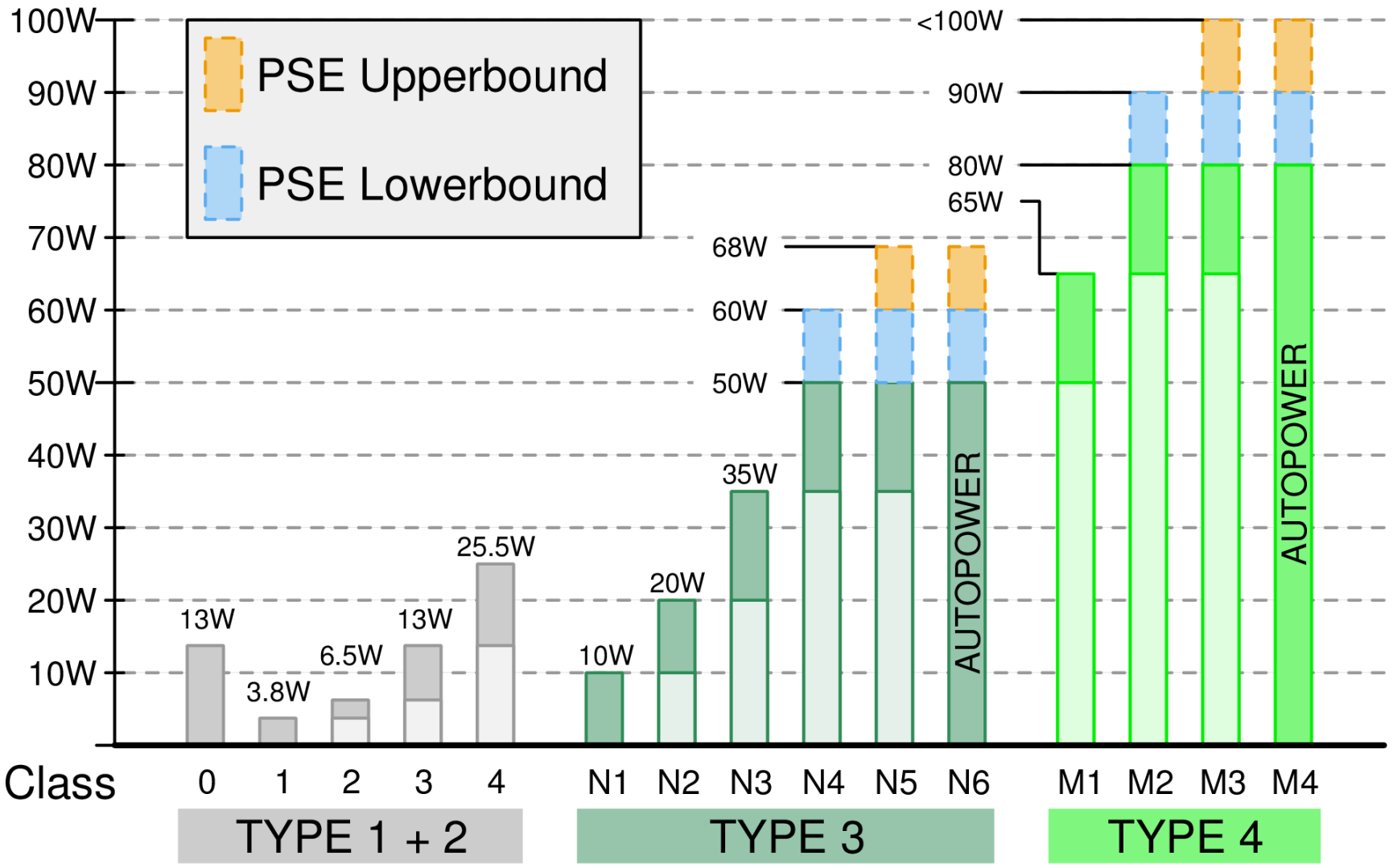
Extended Power class



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