Backward Compatible Enhanced Classification

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Ping-Pong scheme review

- Ping-Pong scheme (Patoka 11-05) seems to get the best tradeoff between simplicity and accuracy
- .af PSEs do not classify .at PDs at all (af class 4)
- .at PDs within af power level are classified also by .af PSEs
- PD programming requires to follow a large table

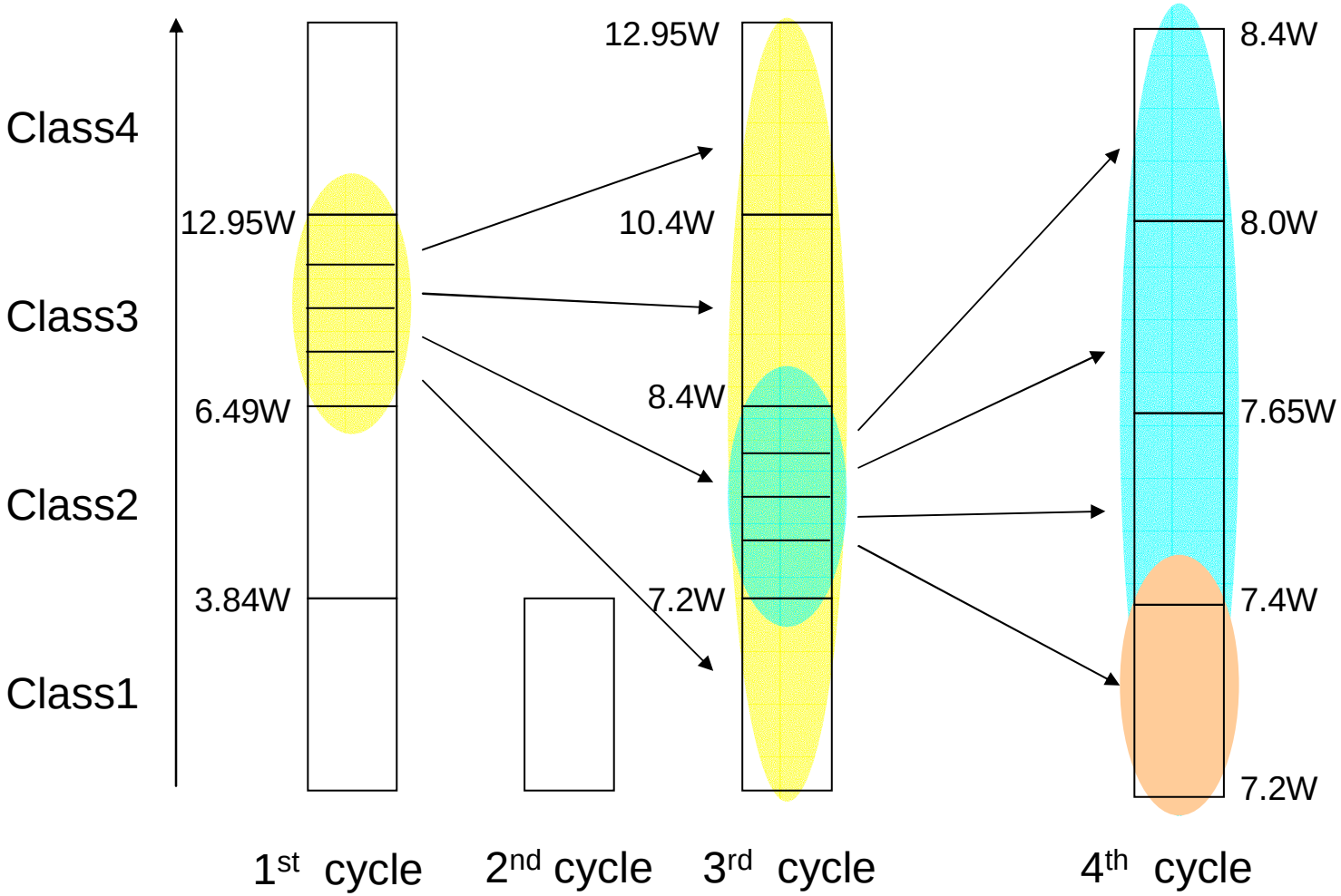
Proposed Classification Scheme

- It’s a ping-pong scheme revisited
  - First cycle .af classification (macro classes)
    - 0.44 to 3.84W →Class1
    - 3.84 to 6.49W →Class2
    - 6.49 to 12.95W →Class3
    - More than 12.95W →Class4
  - Second cycle .at confirmation
    - Class 4 current for macro-classes 1&2
    - Class 1 current for macro-classes 3&4
  - Third cycle and more, class refining
  - Each cycle divides macro classes into 4 subsets

Proposed Scheme - Rules

- The second cycle allows .at PSEs to recognize .at PDs. Unlikely false .at indication
- .at PSE does only two Class cycles if second value does not indicate .at PD
- .at PD indicates .af PSE type if there are not at least three Class cycles before powering
- No avoided class codes
- Other rules same as Martin’s proposal

Class Set Example – 7.3W PD



Proposed scheme - Features

- Easy to program
  - Each subclass limit can be set by a formula (linear, logaritmic…)
  - No prohibited class codes
- The PSE can decide to do a coarser classification, decreasing the number of cycles
- Four cycles set 4^3=48 classes
  - About the same of other proposals
  - Fifth cycle available for special classes