

Adding a 75W Class

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IEEE802.3bt Task Force

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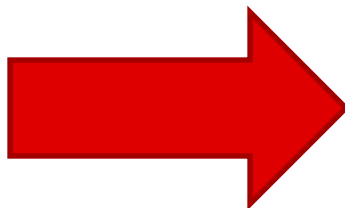
A Brief History

- The mutual ID work adopted assumed that the unused code (4-4-0) would be used for Autoclass.
- A different approach (class current removal) was chosen for Autoclass for a number of reasons.
 - See http://www.ieee802.org/3/bt/public/jan15/yseboodt_1_0115.pdf
- Thus, we now have an “extra” code that can be used to create another class level.

The Proposal

- We should add another class between the 60W* and 90W* (TBD) classes in order to improve physical layer classification.
- This class should be considered Type 4 operation.
- I have proposed that the power level of this class should be 75W.
- Class 5 and class 6 have been “shifted” to 4-4-0 and 4-4-1 respectively in order to have the classes in a logical, sequential order.

Class	Code	Power Level*
0	0	15.4W
1	1	4W
2	2	7W
3	3	15.4W
4	4-4-4	30W
5	4-4-1	45W
6	4-4-2	60W
7	4-4-3	90W



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1	1	4W
2	2	7W
3	3	15.4W
4	4-4-4	30W
5	4-4-0	45W
6	4-4-1	60W
7	4-4-2	75W
8	4-4-3	90W

*Note: All power levels are referenced to the PSE PI.

Changes Required to 33.2 (PSE)

- 33.2.4.4 Variable
 - Value 7 (Class 8) added to pse_available_power variable.
- 33.2.4.6 Functions
 - pd_requested_power variable under do_classification needs:
 - The class signatures for values 4-6 (classes 5-7) to “shift down”.
 - The class signature for class 8 to be added as value 7.
- 33.2.4.7 PSE State Diagrams
 - Figure 33-9(cont.) needs to be update with the new class transitions.
- Table 33-7
 - Class 7 must be redefined as 75W, and class 8 must replace class 7.
- 33.2.6 PSE classification of PDs and mutual identification
 - Class 8 needs to be added as a valid classification result.
- See 75W_Class_PSE.pdf for all baseline text changes.

Changes Required to 33.3 (PD)

- 33.3.3.3 Variables
 - Class 8 needs to be added to `pd_max_power` variable.
- Table 33-TBDA1 needs:
 - `class_sig_B` “shifted down” for classes 5-7.
 - Class 8 added with a `class_sig_A` of ‘4’ and `class_sig_B` of ‘3’.
- Table 33-18 needs:
 - A row added for input average power, Class 8 (value TBD).
 - A row added for peak operating power, Class 8 (value TBD).
- See [75W_Class_PD.pdf](#) for all baseline text changes.

Summary

- We should add a new class at the 75W level (sourced from the PSE PI).
- Baseline text has been submitted:
 - See 75W_Class_PSE.pdf for PSE changes.
 - See 75W_Class_PD.pdf for PD changes.
- I will submit a motion for the adoption of these two documents during the “motion madness” period at this meeting.