Baseline for Autoclass Timing improvement v102

Info (not part of baseline)

Changes:

- The parameter T_{ACS}, defined in the PD section, is also used in the PSE section. It would be better to have a dedicated PSE parameter.
- We do not need to describe the timing aspect of Autoclass classification, this is handled by the state machine's two different Autoclass states.
- Previous baseline (yseboodt_07_0316_Autoclass3.pdf) instructed to rename tacs_timer to tacs_pd_timer, but this was not implemented.

33.2.5.10 Type 3 and Type 4 timers

Insert tclassacs_timer as follows:

tclassacs_timer

A timer used to indicate when the PSE may measure the class current during the first long class event, to check if the PD is requesting Autoclass. See T_{Class_ACS} in Table 33–15.

Rename tacs_timer in the PSE state diagrams to tclassacs_timer.

33.2.7.2 PSE Multiple-Event Physical Layer classification

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~~The referenced Autoclass time~~Autoclass timing, ~~T_{ACS}~~ T_{Class_ACS} is specified in Table 33–27.

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The total timing specification for Type 3 and Type 4 PSEs in the states CLASS_EV1_LCE and CLASS_EV1_AUTO shall be T_{LCE}. The PSE in the state CLASS_EV1_AUTO shall measure I_{Class} after ~~T_{Class_LCE}~~ T_{Class_ACS}, referenced from the application of the first class event, to determine if the PD will perform Autoclass. If the Autoclass enabled Type 3 or Type 4 PSE in the state CLASS_EV1_LCE does not measure I_{Class} in the range of class signature 0 ~~before $T_{ACS\ min}$~~ and the PSE in the state CLASS_EV1_AUTO does measure I_{Class} in the range of class signature 0 ~~after $T_{ACS\ max}$~~ this indicates the PD will perform Autoclass; see 33.2.7.3 and 33.3.5.3.

Insert new item T_{Class_ACS} into Table 33–15 as follows:

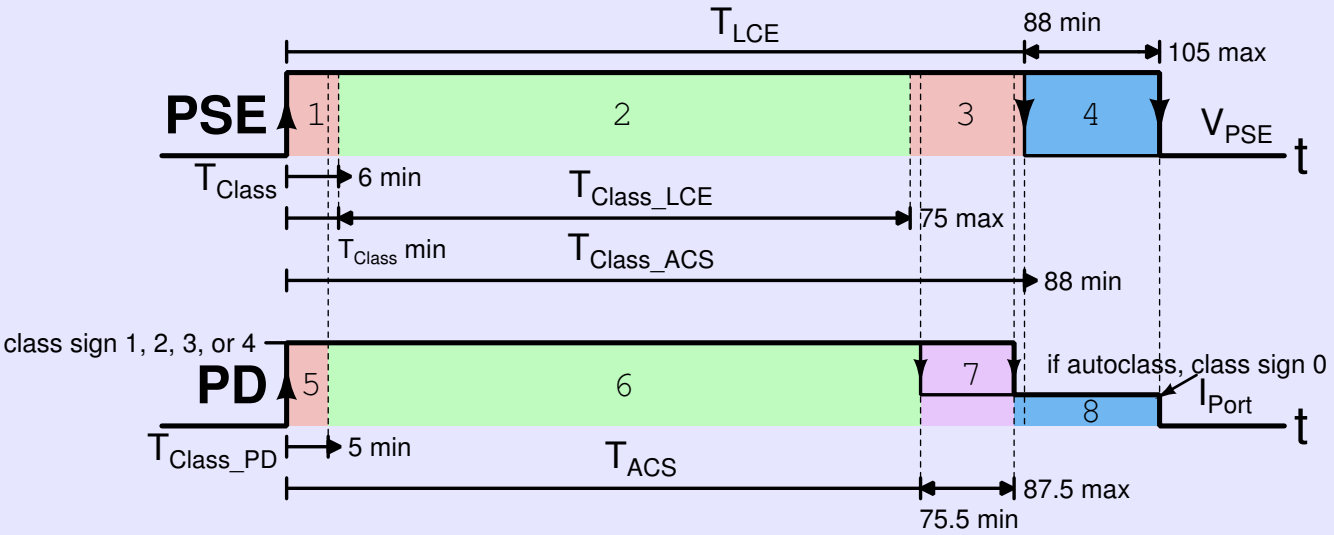
Item	Parameter	Symbol	Unit	Min	Max	Single- or Multiple Event	Additional information
x	Autoclass I_{Class} measurement timing	T_{Class_ACS}	ms	88.0		Multiple	See 33.2.7.3

33.3 Powered Devices (PDs)

Rename tacs_timer to tacs_pd_timer in the PD section 33.3 (text + state diagram).

Info (not part of baseline)

Overview of all Autoclass related timings:



All timing is in milliseconds.

1. PSE may not measure I_{Class}, wait for PD to stabilize class current
2. PSE measure class signature for first class event
3. PSE may not measure I_{Class}, PD may switch current level during this window
4. PSE may measure class signature to check if PD is Autoclass
5. PD to set class current during this window
6. PD to have valid and stable class current for class event 1
7. PD may switch current level to class sig 0 if it is Autoclass
8. If the PD is Autoclass, maintain class sig 0 for the duration of the class event