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| 8802-3/802.3 REVISION REQUEST 1230 |
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DATE: 2nd August, 2010
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REQUESTED REVISION:
STANDARD: 802.3at-2009
CLAUSE NUMBER: 33.3.7.8
CLAUSE TITLE: PD classification stability time

PROPOSED REVISION TEXT:

Present text reads:
The PD Physical Layer classification signature shall be valid within Tclass as specified in Table 33-18 and remain valid for the duration of the classification period.

I would like the revision to read:

Following a valid detection and a rising voltage transition from Vvalid to Vclass, the PD Physical Layer classification signature shall be valid within Tclass as specified in Table 33-18 and remain valid for the duration of the classification period.

RATIONALE FOR REVISION:

It is clear from the PSE state diagram that the only time a compliant PSE is after a successful detection cycle (Figure 33-9-PSE state diagram); the proposed added text merely states the interpretation of the PSE state machine as related to classification stability.

The PD is required to be polarity insensitive (33.3.1 paragraph 2, page 54.) The most common implementation method for this is a diode bridge.

The PD is also required to have between 0.05uF to 0.12uF of input capacitance (Table 33-14.) The most common placement in the PD circuit for this capacitance is after the diode bridge.

If the classification stability is evaluated after a falling transition in voltage from a higher than valid Vclass to a valid Vclass, then the input cap will be charged above the Vclass and must bleed down to below Vclass before the rest of the PD circuits can operate in the Vclass range. It is possible to provide leakage paths in the PD circuit, however these additional leakages waste energy in normal operation, add cost and are needed just to ensure that a non-real world test case is met.

IMPACT ON EXISTING NETWORKS:

None expected, valid PSEs following the PSE state diagram will not be affected.

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| Please attach supporting material, if any |
| Submit to:- David Law, Chair IEEE 802.3 |
| and copy:- Wael William Diab, Vice-Chair IEEE 802.3 |
| E-Mail: stds-802-3maint-req@ieee.org |

| +----- For official 802.3 use -----+ |
| REV REQ NUMBER: 1230 |
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| EDITORIAL/TECHNICAL |
| ACCEPTED/DENIED |
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| For information about this Revision Request see - |
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