TDP vs Tx VEC tests

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Where I think we are in discussion:

- John Petrilla's work:
  - Demonstrated that constant TDP (where Tx parameters are traded-off to maintain constant TDP) does not yield a constant link margin.
  - Demonstrated that forcing BLW, MN, and MPN penalties to zero eliminates the variation in link margin as other parameters are traded for a constant TDP Tx.
  - Proposed an alternative Tx VEC test, which measures vertical eye closure of the Tx eye at +/-0.11 UI.

- During discussions:
  - We think BLW, MN and MPN penalties should be included when calculating link margin, because the allocations for those penalties are needed to close the link.
    - And at least one expert thinks the TDP test (as currently defined), will not capture BLW, MN or MPN penalties, so the TDP value cannot be expected to track link margin as Tx parameters are traded.
  - TDP has not been embraced by the industry.
  - A Tx VEC test could be oscilloscope based, and may be 'easier' to implement with better reproducibility.

- Question: Can we show that a Tx VEC test is a better (more consistent) predictor of link margin where Tx parameters are traded off ?