#### Proposal for 6G SAS TX Specification via Reference Receiver

Mike Jenkins LSI Logic

## The Question...

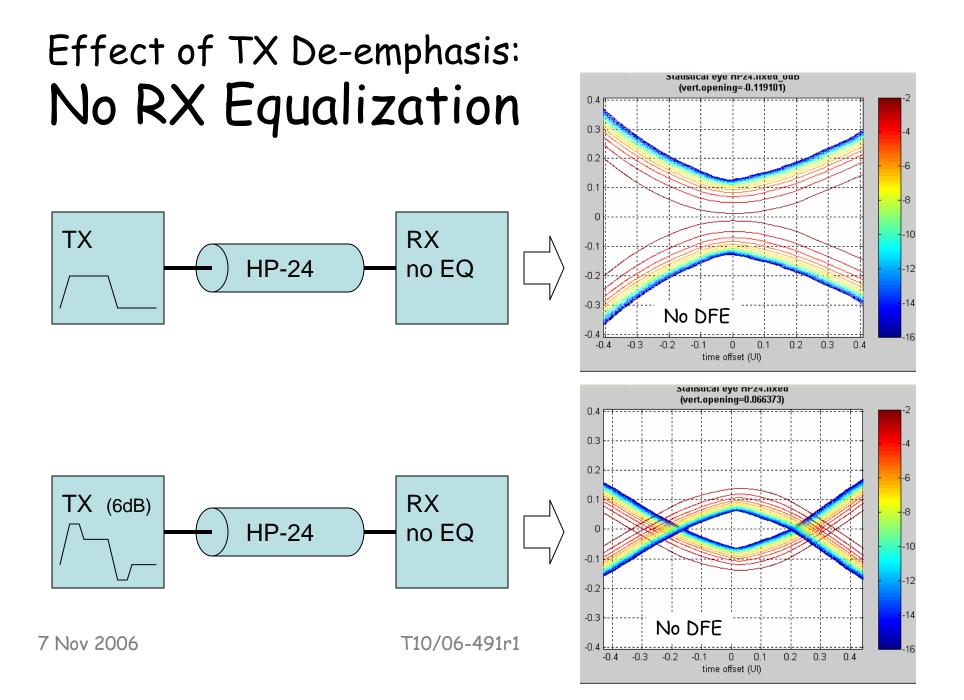
# Whether to specify TX de-emphasis and, if so, how?

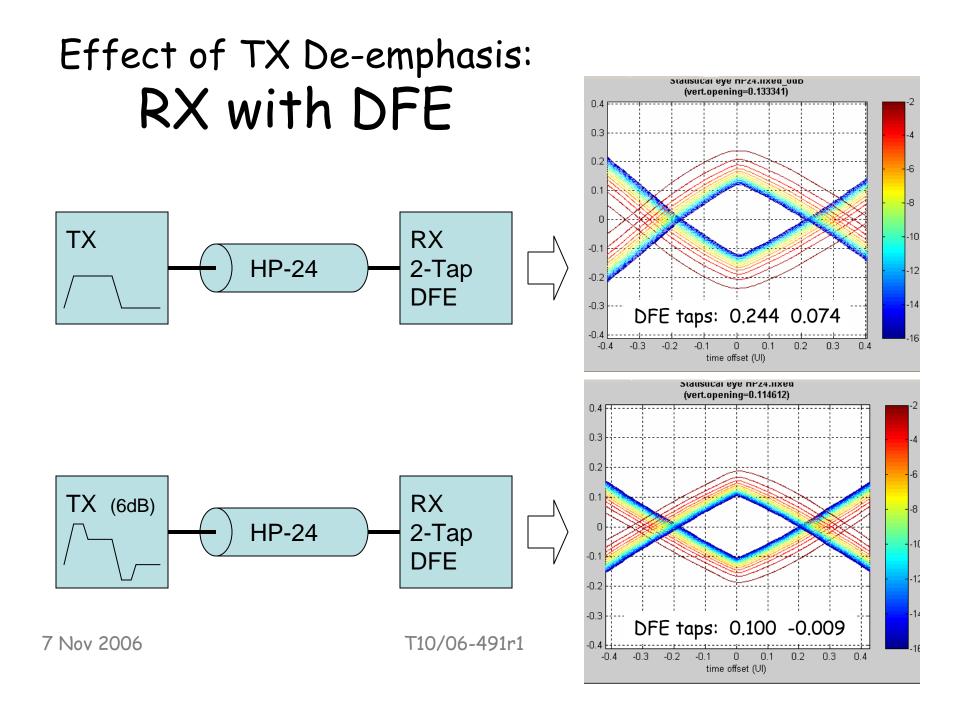
- 6dB TX de-emphasis clearly produces open eye after worst case channels
- TX de-emphasis causes more crosstalk & EMI for a given eye height
- Equalization via DFE in RX theoretically reduces noise

### The Answer...

#### Avoid the question!

- Specify TX performance via reference channel(s) & reference RX
  - OIF CEI 6G "Medium Reach"
- Reference RX is 2-tap DFE





## Conclusion

- Best to defer decision on level of TX de-emphasis
- OIF CEI provides a framework to accomplish this:
  - "2.4 Method D This sub-clause defines the interoperability methodology specifically for interfaces where transmit emphasis <u>may</u> be used and the receiver eye requires DFE equalization (from channel interoperability point of view) to be open to within the BER of interest."
  - Proposed: 2-tap reference receiver & single post-cursor tap TX FFE with max de-emphasis of 6 dB