

CAUI-4 Ad hoc

Ryan Latchman ryan.latchman@mindspeed.com

Agenda

- Patent Policy: The meeting is an official IEEE ad hoc. Please review the patent policy at the following site prior to the meeting.
<http://www.ieee802.org/3/patent.html>
- TBD for CAUI-4
 - Annex 83E
 - Chip-module eye opening
 - Equalizer settings
 - Stress receiver parameters
 - Bits for CDF used in eye contour measurement
 - Annex 83D:
 - Transmitter wave form specification (output jitter, waveform, de-emphasis)
 - COM value and parameters
 - Channel library on CAUI-4 site

CAUI-4 chip-module TBDs

Eye opening: OIF VSR starting point (discussed on last call):

	Eye height extrapolated to 1E-15	Eye width extrapolated to 1E-15	Table
Host	95mVppd	0.46UIpp	83E-1
Module	228mVppd	0.57UIpp	83E-3

Equalizer settings: 9 for host transmitter, 2 for module transmitter. Remove note that CTLE coefficients are TBC. Consider increasing significant digits for Z1/2pi

Stress Receiver Equalizer: 9 for host transmitter, 2 for module transmitter. Remove note that CTLE coefficients are TBC. Consider increasing significant digits for Z1/2pi

Stress Receiver :

	Eye height extrapolated to 1E-15	Eye width extrapolated to 1E-15	Table
Host input	228mVppd	0.57UIpp	83E-6
Module input	95mVppd	0.46UIpp	83E-9

Number of bits to generate CDF: 4 million

Channel & COM

- We will be posting CAUI-4 chip-chip sample channels for evaluation with various settings
- COM posting for CAUI-4 has been delayed due to updates for next draft of 802.3bj
- Common channels and evaluation tool

Chip-chip transmitter spec

Parameter	Subclause Reference	Value	Units
Output Jitter (max) Random jitter ^a Deterministic jitter ^b Total jitter ^c	83D.3.1.4	0.15 with reference CTLE 0.15 0.28, with reference CTLE	UI
Output waveform	83D.3.1.5	TBD (eye mask or other)	
De-emphasis range	83D.3.1.6	TBD (no Tx training or back channel)	

Reference CTLE
not needed given
compliance points

^aRandom jitter at BER of 10^{-15}

^b~~measured with reference CTLE per section~~ TBD

^cTotal jitter at BER of 10^{-15}

Output Waveform

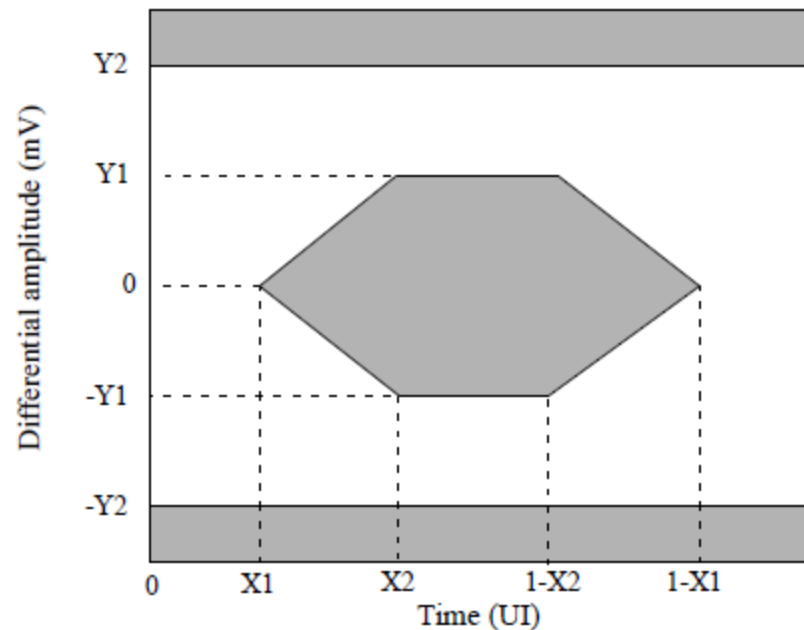


Figure 83A-8—Transmitter eye mask

Transmitter mask definition X1:

Transmitter mask definition X2:

Transmitter mask definition Y1:

Transmitter mask definition Y2:

De-emphasis options

Recap from May 30th meeting. Removed “No De-emphasis option”

	ON/OFF Setting	Multiple Setting
User control	- Manual based on long/short channel	- Manual - (precise mechanism for setting could be assumed to be “system management function”)
Spec	-Establish pre/post and tolerance -Far end eye mask based on reference channel (perhaps informative IL)	802.3bj / OIF CEI like

Need to iterate with COM parameters

ON/OFF

Output jitter and waveform measured in OFF state.

Define ON state using functional model, specify single dB setting, with recommendation for use on channels $>$ TBD dB insertion loss

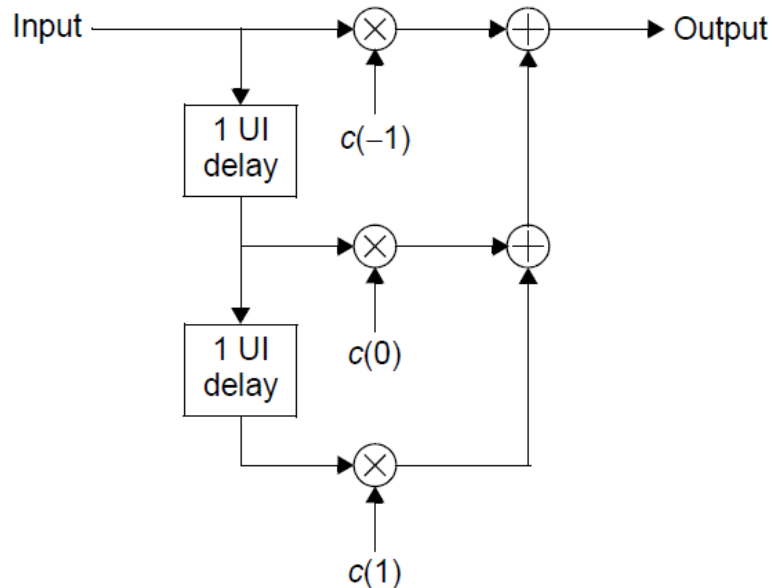


Figure 93–7—Transmit equalizer functional model