Differences in Jitter specs
CAUI4 chip-chip vs 100GBASE_KR4

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In Indian Wells we changed CAUI4 chip to chip specs to be more closely aligned with 100GBASE_KR4 spec. I am a proponent of alignment and supported the change **but:**

- 100GBASE_KR4 also changed at the same meeting in particular in details of how jitter is specified
- In Indian Wells 100GBASE_KR4 did away with direct specification of RJ and instead is specifying BUJ and a weighted sum of RJ and BUJ. Current draft of CAUI4 still specs BUJ and RJ. CAUI4 c-c should change to BUJ, TJ spec.
- 100GBASE_KR4 uses FEC and need only be specified to a BER of 10^{-5} while CAUI4 chip-chip seems to require a BER of 10^{-15}.
- Since 100GBASE_KR4 and CAUI4 c-c have different target BER, the weights should be different. I suggest:
    - 100GBASE_KR4: TJ=BUJ+3.9*2*RJ   TJ< 180mUI
    - CAUI4 c-c   : TJ=BUJ+7.8*2*RJ   TJ< 260mUI

The weighted sum TJ amounts to extrapolation to low BER. In the case of 100GBASE_KR4 it is a minimal amount of extrapolation, we compute RJ and BUJ by fitting over a region of Q from about 2-3 and extrapolate to about 4. If we use the same method in CAUI4 c-c we will be extrapolating out to a Q of almost 8, a lot farther. As I showed in moore_3bj_01_0114, BUJ and RJ are not very accurately measured but the weighted sum for Q near 2-3 is good. If we do the fitting at higher values of Q we can get somewhat more accurate values of BJU and RJ at the cost of having to wait for more hits in the histogram. I recommend that we do so but I do not have a specific range for the fit yet.

Editors note to be removed in later version:

When I use the terms RJ and BUJ I mean the terms ERJ and EBUJ as defined in Clause 92.8.3.9.2, and by TJ I mean effective total uncorrelated jitter as defined in equation 92-21.