



FLR allocation for 800GBASE-ER1/ER1-20  
(comment #585 against 2.0)

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# Background

- During the March plenary the consensus was to adopt option# 2 of [https://www.ieee802.org/3/dj/public/25\\_03/brown\\_3dj\\_04a\\_2503.pdf](https://www.ieee802.org/3/dj/public/25_03/brown_3dj_04a_2503.pdf), for the FLR allocation for 800GBASE-ER1/ER1-20.
- An implication of this decision is that 800GBASE-ER1/ER1-20 PHYs are different all from other 802.3dj PHYs, in that you are only allowed to have AUIs in the PHY or Extender, but not both (see slide 18 of brown\_3dj\_04a\_2503). For all other 802.3dj PHYs you are allowed to have AUIs in both the PHY and the Extender.
- This means it is possible to have a host design that contains two AUIs (one in an Extender and one in the PHY) that would not support an 800GBASE-ER1/ER1-20 PHY, but which would support all other 802.3dj PHYs.
- This contribution is proposing to change the FLR allocation for the 800GBASE-ER1/ER1-20 PHY to be consistent with all other 802.3dj PHYs, such that there are no restriction on which hosts an 800GBASE-ER1/ER1-20 PHY can be deployed in.
- This is essentially option #3 in brown\_3dj\_04a\_2503

# Straw polls TF-3 and TF-4 from March Plenary

Straw poll TF-3 and TF-4 showed consensus for adopting option 2 in brown\_3dj\_04a\_2503.

Implement option #2 as shown in slides 18 and 24 with editorial license.

Straw Poll TF-3 (pick one) and TF-4 (chicago)

For addressing 800GBASE-ER1 frame loss ratio budget I support the following option as outlined in brown\_3dj\_04a\_2503:

A: option 1

B: option 2

C: option 3

D: option 4

E: option 5

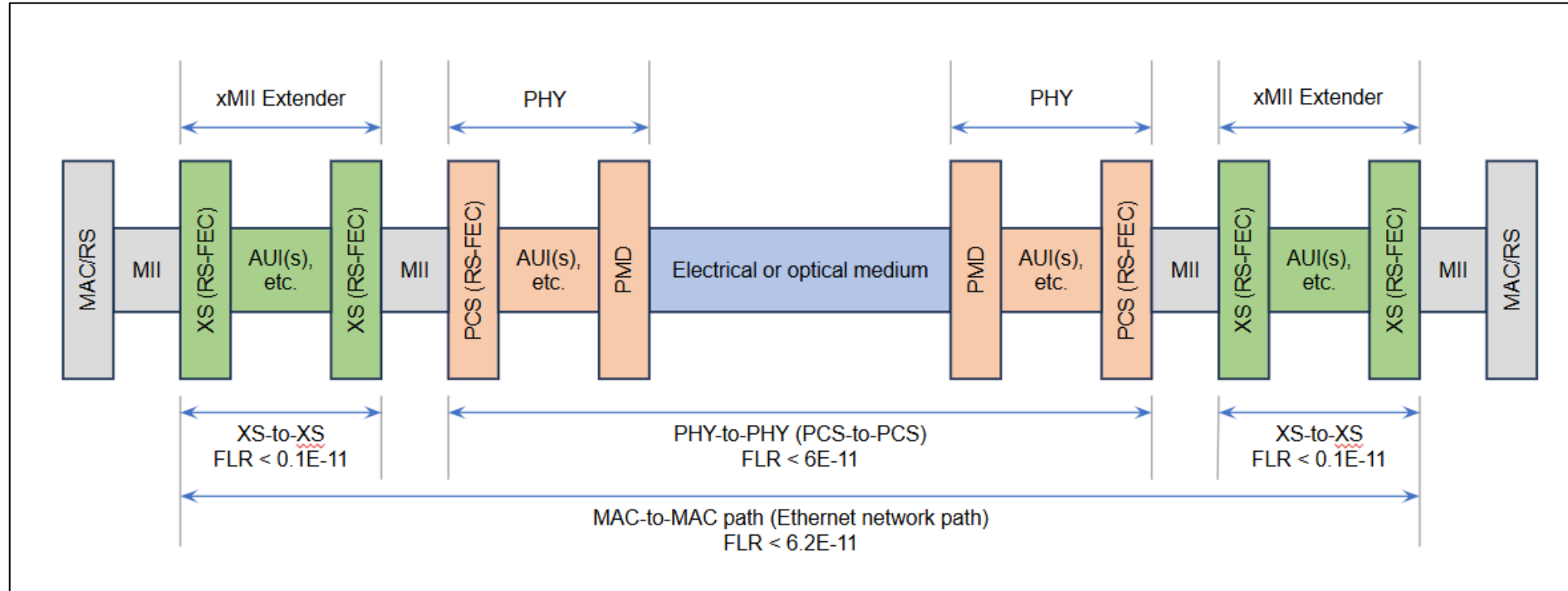
F: abstain

TF-3: A: 2 B: 27 C: 1 D: 2 E: 8 F: 24

TF-4: A: 2 B: 31 C: 3 D: 4 E: 16 F: 23

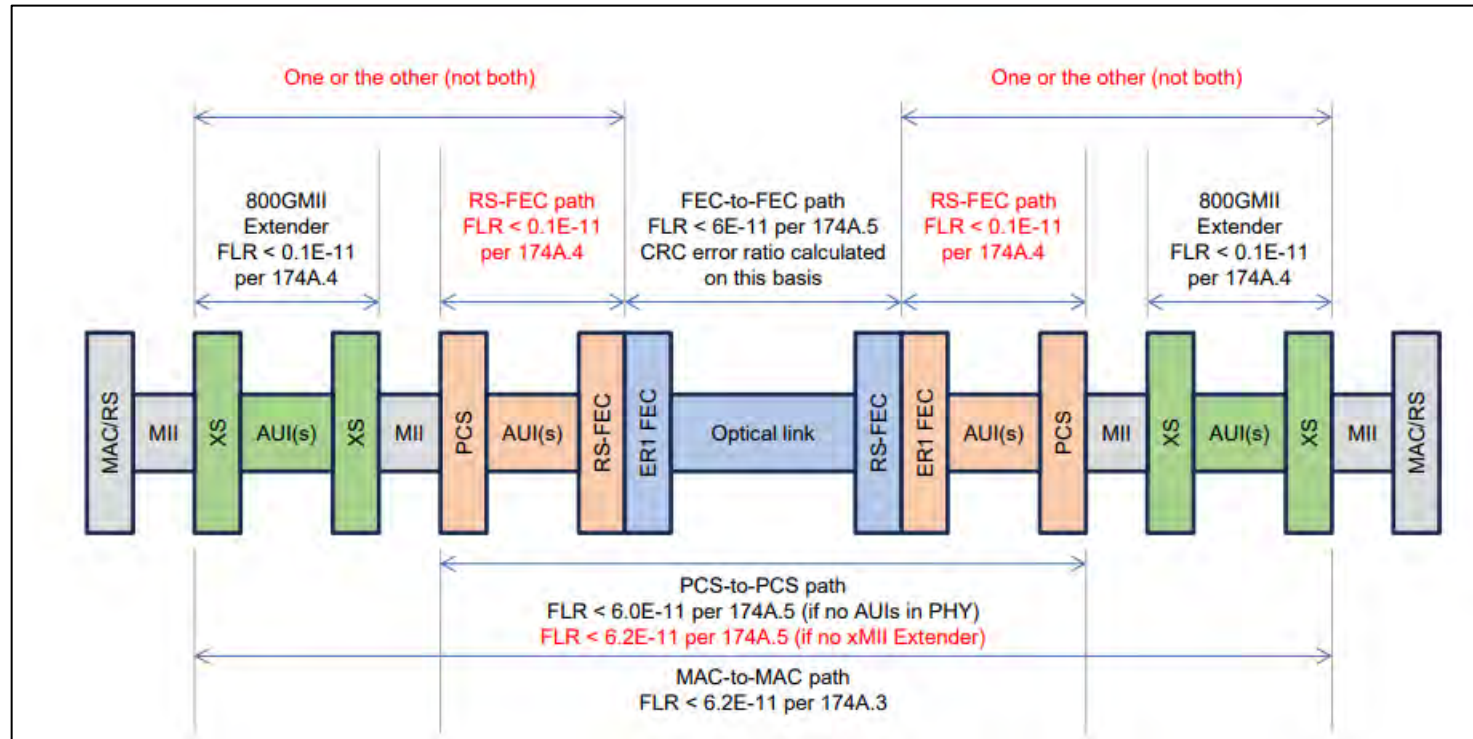
# FLR allocation

(all PHYs excluding 800GBASE-ER1/ER1-20)



- FLR allocation supports AUIs in both xMII Extender and PHY
- FLR allocation for PHY-to-PHY < 6E-11

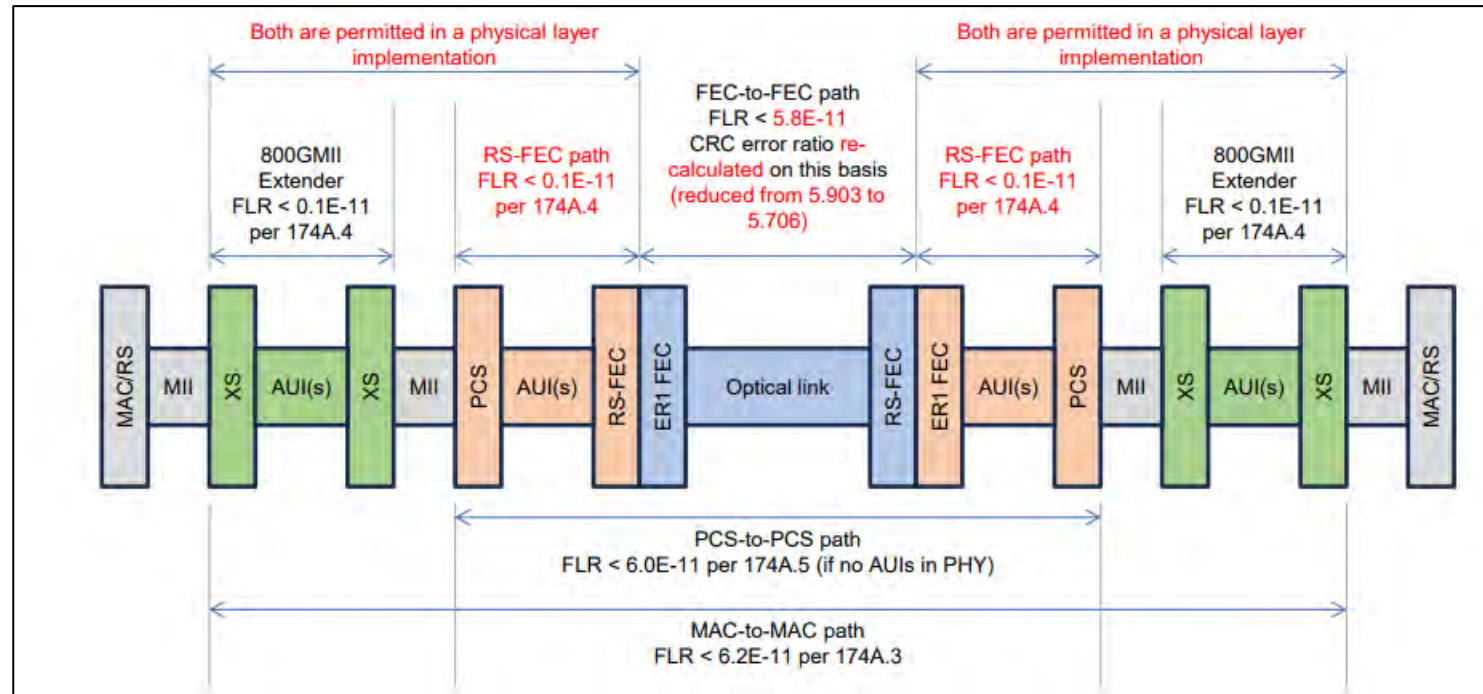
# FLR allocation for 800GBASE-ER1/ER1-20 (option #2 of brown\_3dj\_04a\_2503)



- FLR allocation only supports AUIs in either xMII Extender or PHY
- FLR allocation for PHY-to-PHY is different in the two cases

If an ER1/ER-20 module (with C2M AUI in the PHY) is plugged into a host with an 800GMII extender, FLR budget is broken

# FLR allocation for 800GBASE-ER1/ER1-20 (option #3 of brown\_3dj\_04a\_2503)



- Consistent with all other 802.3dj PHYs
- Single FLR allocation for PHY-to-PHY of <  $6E-11$
- Need to reduce ER-1 FEC-to-FEC FLR from  $6E-11$  to  $5.8E-11$  (minor)

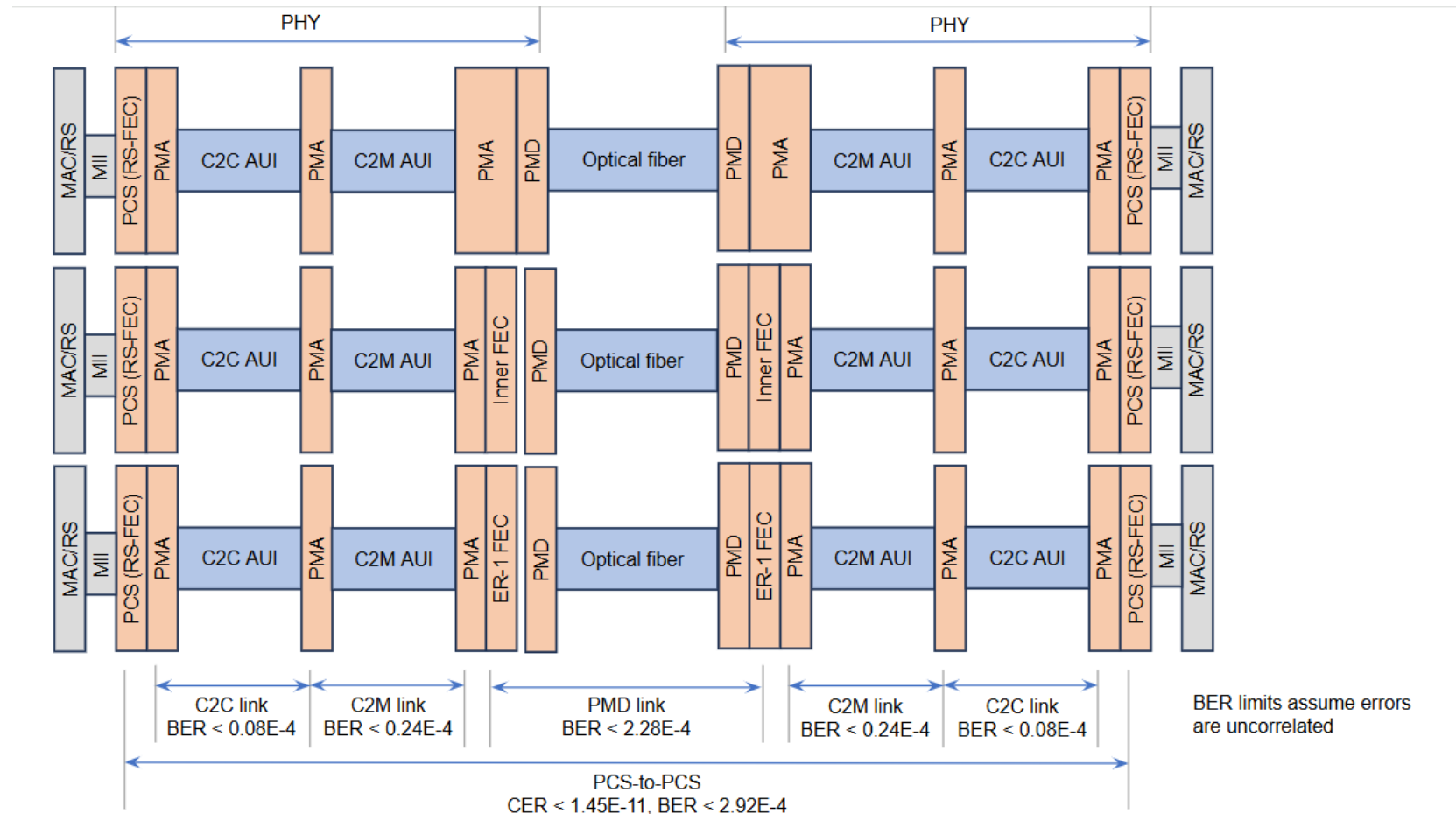
Ensures that all 800GBASE-ER1/ER1-20 solutions are plug-and-play with all potential hosts

# Proposal

- Update the draft to implement option #3 of [https://www.ieee802.org/3/dj/public/25\\_03/brown\\_3dj\\_04a\\_2503.pdf](https://www.ieee802.org/3/dj/public/25_03/brown_3dj_04a_2503.pdf)

# Further Consideration

- Presume we would need to also update the proposed figure on slide 10 of brown\_3dj\_03a\_2507 to include ER1/ER1-20, something like the following:





Thanks