

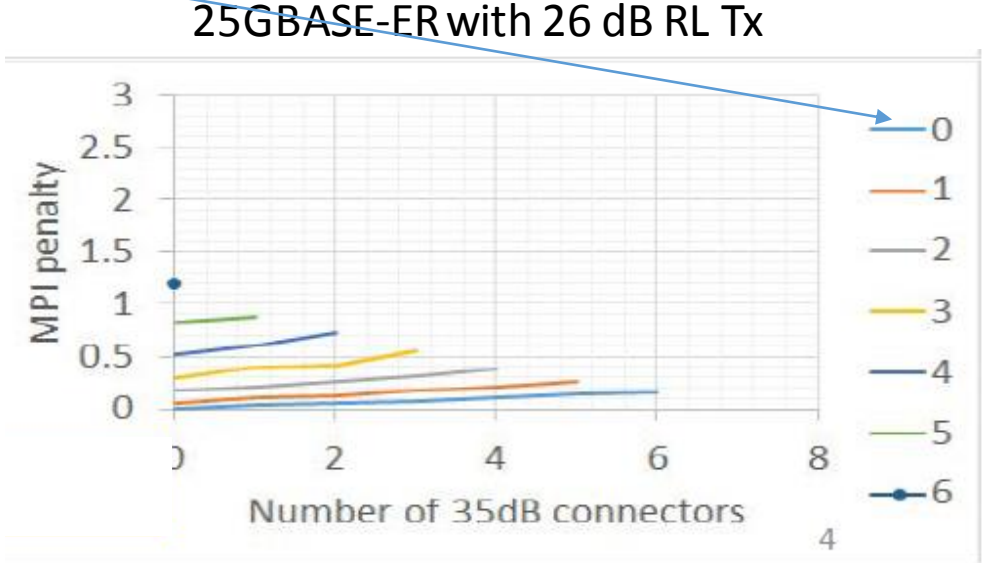
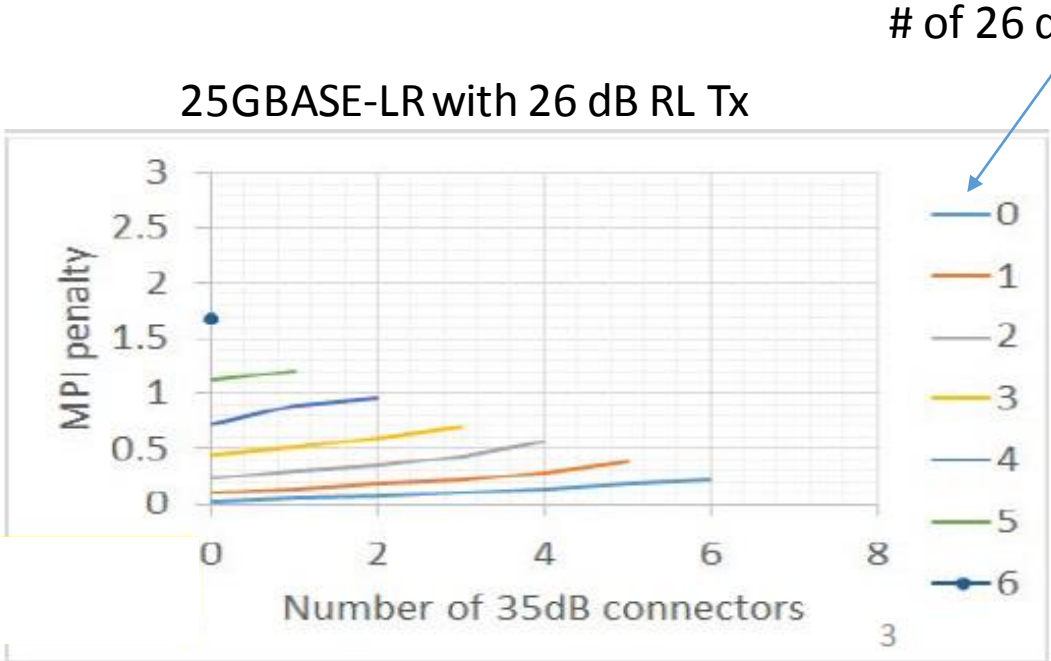
Comments # r01-9, r01-10
802.3cc Proposed changes for
MPI penalty

10-July-2017

Berlin, Germany

Background

- At the 802.3cc ad hoc on June 14th Jonathan King presented data on the MPI penalty for various combinations of -26 dB and -35 dB RL connectors: http://www.ieee802.org/3/cc/public/adhoc/170614/king_01_25gsmf_061417.pdf



Background (continued)

- The discussion at the ad hoc brought out some data points on the application needs for 25GBASE-LR and –ER PMDs:
 - Need to operate over the same cable plant used for 10GBASE-LR
 - 10GBASE-LR has ~ 0.5 dB of reflection penalty captured in TDP due to having both Tx and Rx reflectance of -12 dB.
 - For –LR it is not preferred to make users measure channel insertion loss or connector return loss.
 - Users could count how many 26 dB and how many 35 dB connectors they have.
 - Triple-link configurations with 3 each of 26 dB and 35 dB connectors is the worst case application we should support (~ 0.7 dB MPI penalty)

Comment # r01-09, 25GBASE-LR changes

- Table 114-6:
 - Tx reflectance from -12 to -26 dB
- Table 114-7:
 - Rx sensitivity (OMA) (max) from -11.3 to -12 dBm
 - Stressed sensitivity (OMA) (max) from -8.8 to -9.5 dBm
- Table 114-8:
 - Power budget (for max TDP) from 9 to 9.7 dB
 - Max discrete reflectance from -26 to “See Table 114-xxx”
 - Allocation for penalties (for max TDP) from 2.7 to 3.4 dB
- New Table 114-xxx:

Number of <-26 dB RL connectors	Maximum number of <-35 dB RL connectors
0	6
1	5
2	4
3	3
>3	Not supported

Comment # r01-10, 25GBASE-ER changes

- Table 114-6:
 - Tx reflectance from -12 to -26 dB
- Table 114-8:
 - Channel insertion loss (max) from 15 or 18, to 15 or 18 – value from Table 114-yyy
 - Max discrete reflectance from -26 to “See Table 114-yyy”
- New Table 114-yyy:

		# 35 dB RL connectors						
		0	1	2	3	4	5	6
# 26 dB RL conn.	0	0	0	0	0.1	0.1	0.1	0.2
	1	0.1	0.1	0.1	0.2	0.2	0.3	
	2	0.2	0.2	0.3	0.3	0.4		
	3	0.3	0.4	0.4	0.6			
	4	0.5	0.6	0.7				
	>4	Not supported						