200G 850nm VCSEL measurement updates

Roberto Rodes, Coherent

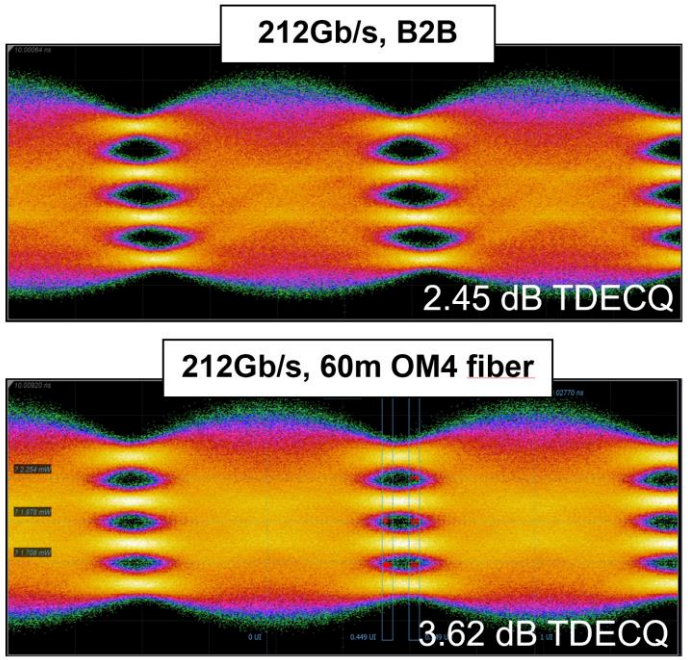
Chris Kocot, Coherent

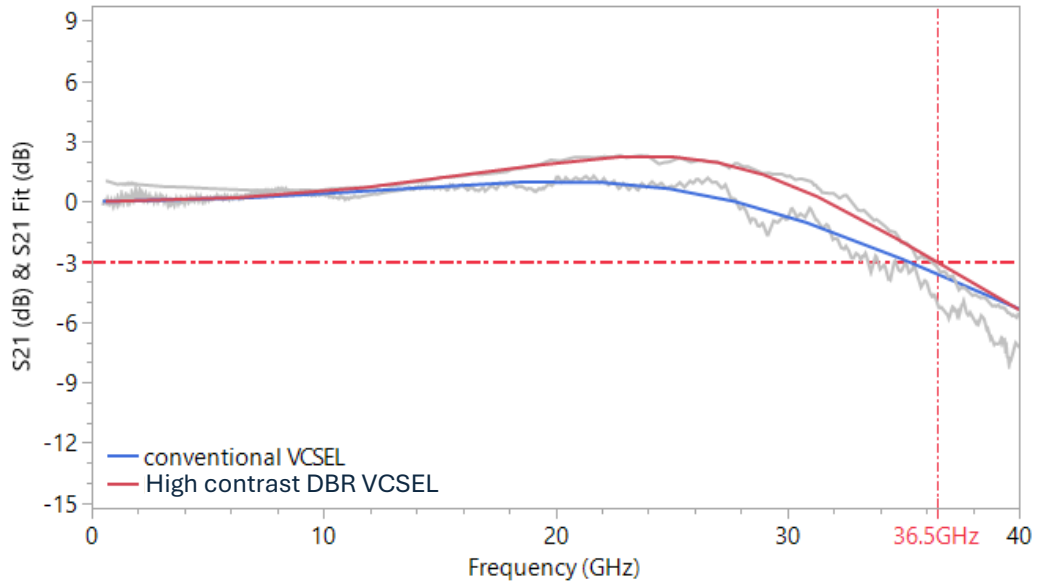
Introduction

- In the September Interim, the IEEE 802.3 200GMMF SG adopted the objectives of MMF length up to at least 30 and 50m

- This presentation shows an update on experimental measurements of 850nm VCSEL over 60m of worst case OM4 fiber

850nm experimental results over 60m OM4





- 60m OM4 with EMB of 4700MHz/km
- Reference equalizer with 25 taps FFE, no DFE
- TDECQ Target SER of 2e-3. Higher intrinsic noise in the equipment made it impossible to measure TDECQ after fiber at 4.8e-4
- Future work will try to lower test noise to use lower target SER to align with .3dj

Conclusion

- While higher-grade fiber is desirable to enhance performance margin and reach, initial measurements with worst-case OM4 indicate that 50 m transmission can still be achieved with existing fiber at 850 nm.