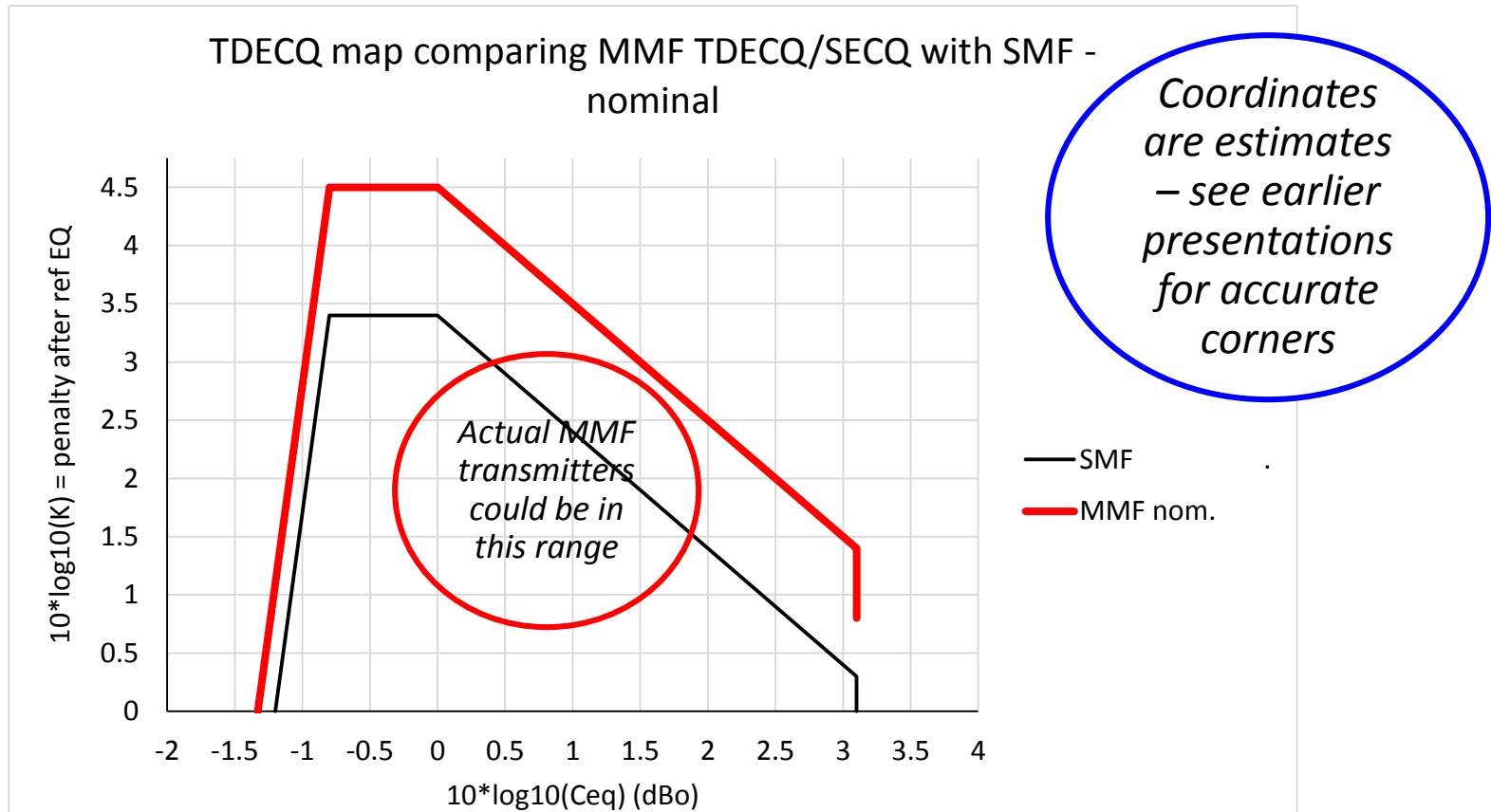


MMF TDECQ / SECQ discrepancies

Piers Dawe

Mellanox

TDECQ map comparing MMF TDECQ/SECQ with SMF - nominal

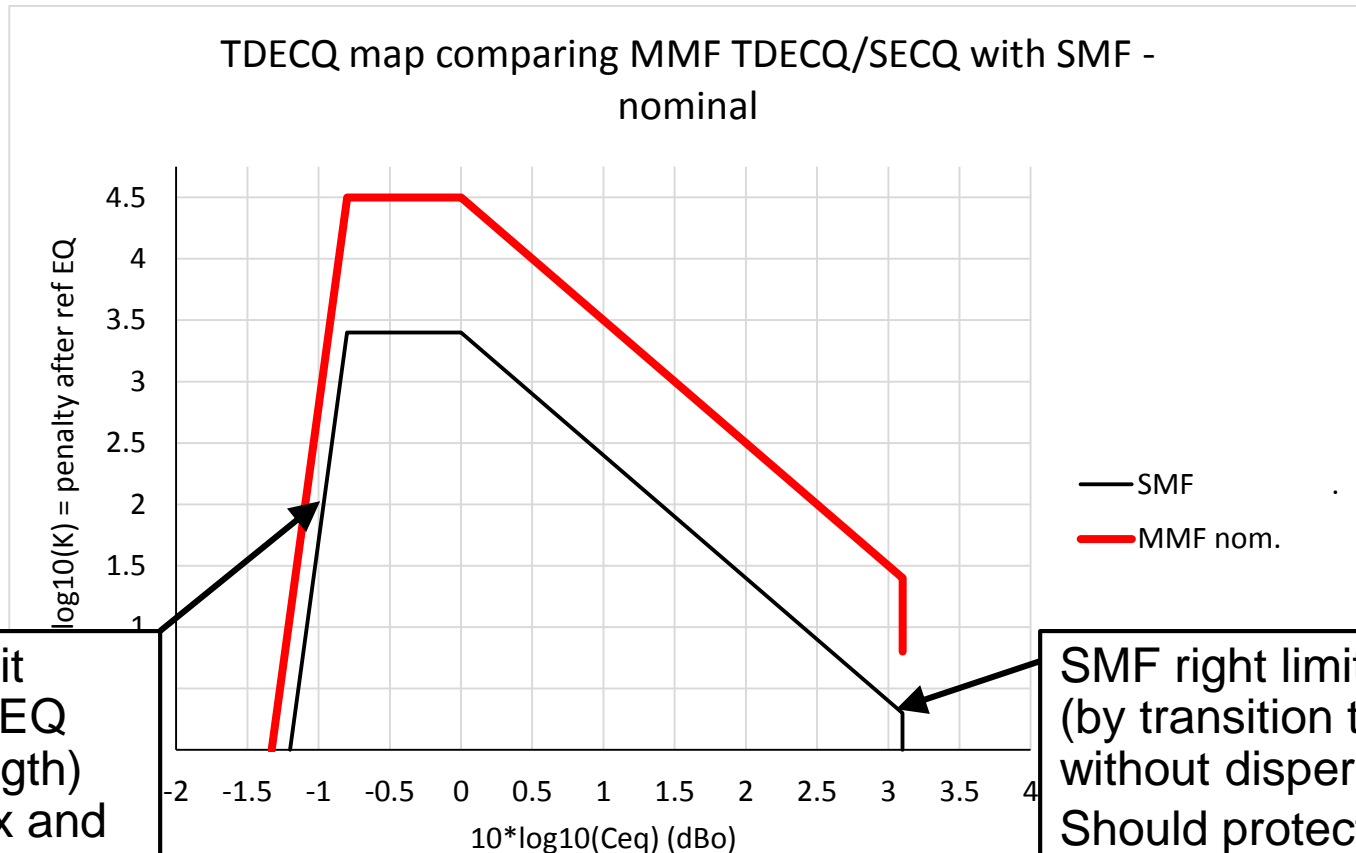


MMF TDECQ limit (4.5 dB) is much higher than highest SMF (3.4 dB)

Determines top and diagonal limits

Nominal left and right limits are also the same – but it's not that simple

TDECQ map comparing MMF TDECQ/SECQ with SMF - nominal



SMF left limit defined (by EQ cursor strength) for both max and min dispersion
Protects receiver from range of possible signals

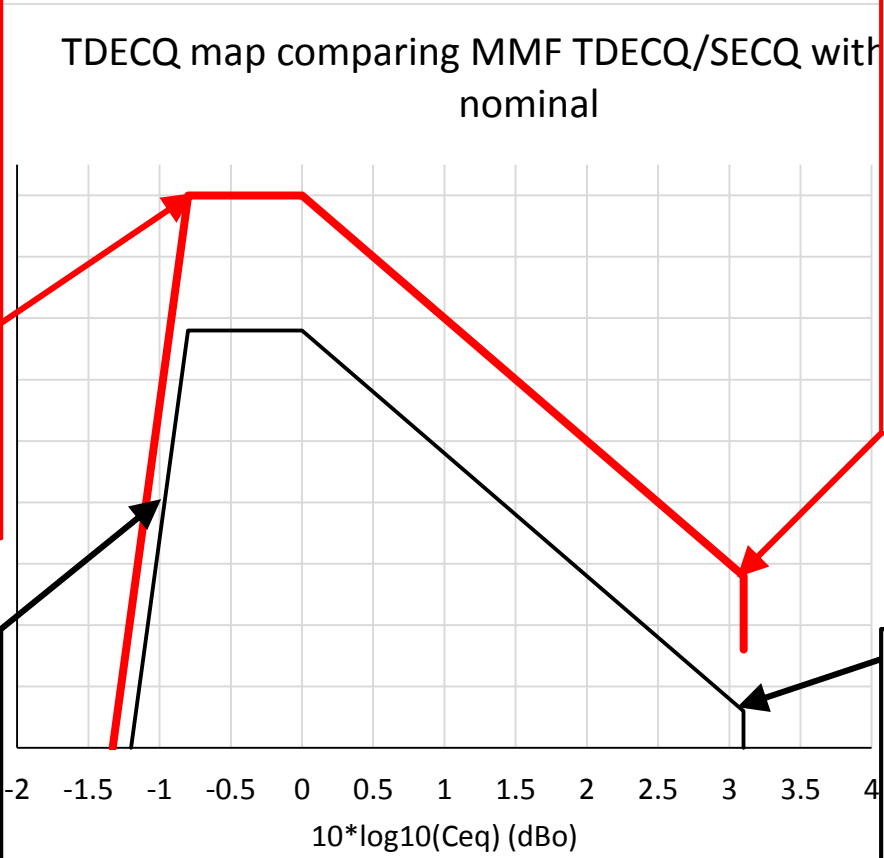
limit (4.5 dB) is much higher than high
mines top and diagonal limits
and right limits are also the same – bu

SMF right limit defined (by transition time) without dispersion
Should protect receiver because effect of chromatic dispersion will be small for slowest signal

TDECQ map comparing MMF TDECQ/SECQ with SMF - nominal

MMF left limit defined (by EQ cursor strength) for 11.2 GHz reference Rx
Doesn't protect receiver from signal after short / high bandwidth optical channels

MMF right limit defined (by transition time) for 13.28... GHz reference Rx
Doesn't protect receiver from signal after long / low bandwidth optical channels



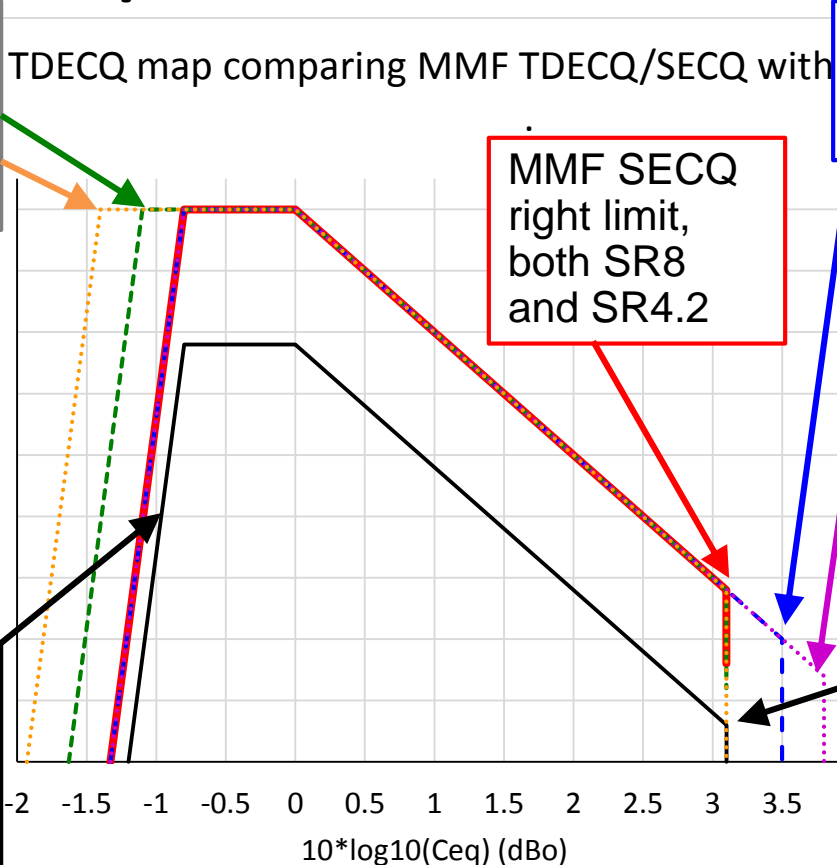
SMF left limit defined (by EQ cursor strength) for both max and min dispersion
Protects receiver from range of possible signals

SMF right limit defined (by transition time) without dispersion
Should protect receiver because effect of chromatic dispersion will be small for slowest signal

limit (4.5 dB) is much higher than high
mines top and diagonal limits
and right limits are also the same – bu

TDECQ map comparing MMF TDECQ/SECQ with SMF - actual

Implied MMF left limits for short / high bandwidth optical channels



Implied MMF right limit for long / low bandwidth SR8 channel (11.2 GHz overall BW)

Implied MMF right limit for long / low bandwidth SR4.2 channel (9 GHz overall BW)

- SMF
- MMF nom.
- - - MMF 11.2 GHz
- - - SR8 13.28...
- ... MMF 9 GHz

SMF left limit defined (by EQ cursor strength) for both max and min dispersion
Protects receiver from range of possible signals

SMF right limit defined (by transition time) without dispersion
Should protect receiver because effect of chromatic dispersion will be small for slowest signal

limit (4.5 dB) is much higher than high
mines top and diagonal limits
and right limits are also the same – but it's not that simple