MMDs, delay specs and loopback to support physical partitioning options

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Multiple PMA locations

- Four PMAs in three separate packages to be managed
- Four PMAs, FEC and PMD (in three packages) sharing one MMD number!
- Nine separate vendors contributing to delay, skew and dynamic skew FEC chip Module Module MAC/PCS ASIC Loopback/0 Loopback 2 Loopback 1 **PMA PMA** PMA PCS MAC **FEC** o medium PMD 10:20 20:10 20:10 10:10 To controller MDIO bus "hidden" PMA sublayers Could be module with 10:4 PMA inside MMD 3 MMD 1

Addressing options

- Either
 - Keep device 1 as the PMD
 - A new MMD number for the PMA nearest the PMD
- Or
 - Have device 1 as the PMA nearest the PMD
 - A new MMD number for the PMD
- Or
 - Keep device 1 for PMD and all PMAs
 - Use a subordinate address for PMAs not co-packaged with PMD or other PMAs
- Either
 - Several more MMD numbers for other PMAs, or registers within the PMA to declare what kind it is, and facing which way (e.g. 20:10 or 10:20)
- Or
 - Indirect method; use a subordinate address so all PMAs share one primary address
- See comment 368 where two options are shown; one in SuggestedRemedy, other in Proposed Response

Delay, skew and Dynamic Skew

- Specify skew and Dynamic Skew separately for PMA and PMD sublayers, each direction separately
- If continue to specify delay, do it properly
 - Sublayer by sublayer
 - Each direction separately
 - See gustlin_0x_1108 and several comments
- Dynamic Skew is known as Relative Wander in OIF CEI and SFI-5.1