To: T-10/SPI-4 Working Group
From: Richard Moore
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Subject: Disabling Precompensation

In Table 55 of SPI-4 rev 0, byte 7 bit 7 of the PPR message is labeled P_EN. The text states that P_EN is "precompensation enabled" and is set to zero to cause the device receiving the PPR message to disable precompensation on all signals transmitted during DT DATA phases. When set to one, the device receiving the PPR message shall enable precompensation during DT DATA phases. Additionally, the text states that P_EN shall be set to zero for negotiated transfer periods greater than 6.25 ns.

The specification amounts to a prohibition against using precompensation on devices that negotiate to transfer rates slower than Fast-160. Furthermore, if there are legacy (SPI-3) devices that implement precompensation, they do not comply with the P_EN requirements since they are unaware of the P_EN bit.

To remedy this problem, we propose that the following change be incorporated into SPI-4:

Add the phrase "for negotiated transfer periods equal to 6.25 ns" to the first sentence after Table 57.