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To: T10 Committee (SCSI)

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Subject: PPR PCOMP_EN description for fast-320 in SPI-5

1 Overview

On fast-160 transfers precompensation is optional but for fast-320 transfers precompensation is not defined. Therefore the description of the PCOMP_EN bit needs to reflect this change. The text below makes this change.

1.0.0.0.1 PCOMP_EN

The SCSI initiator port that is negotiating for a fast-160 transfer period shall set PCOMP_EN to one to indicate that the SCSI target port shall enable precompensation on all signals transmitted during DT DATA phases (see 4.8, 7.2.2, and 10.7.4.1). The SCSI initiator port shall set PCOMP_EN to zero to indicate that the SCSI target port shall disable precompensation.

The SCSI target port that is negotiating for a fast-160 transfer period shall set PCOMP_EN to one to indicate that the SCSI initiator port shall enable precompensation on all signals transmitted during DT DATA phases (see 4.8, 7.2.2, and 10.7.4.1). The SCSI target port shall set PCOMP_EN to zero to indicate that the SCSI initiator port shall disable precompensation.

Table 1 defines valid combinations of PCOMP_EN and other fields. Ports that have been successfully negotiated to a fast-160 transfer period shall support enabling and disabling precompensation of their drivers. For negotiated transfer periods other than fast-160 the PCOMP_EN bit shall be set to zero.

> NOTE 1 - Unlike other fields and bits in the PPR message the PCOMP_EN bit is not a negotiated value; instead, it instructs the receiving SCSI device as to whether or not precompensation is to be disabled or enabled. Because of this, precompensation may be enabled on one of the SCSI devices and disabled on the other SCSI device at the completion of a successful PPR negotiation.

1.0.1 Negotiable field combinations

Not all combinations of the negotiable fields are valid. Only the combinations defined in table 1 shall be allowed. All other combinations of the listed fields are reserved.

Table 1 - Valid negotiable field combinations

TRANSFER PERIOD FACTOR	REQ/ACK OFFSET	TRANSFER WIDTH EXPONENT	Protocol options								Description
			PCOMP_EN	RTI	RD_STRM	WR_FLOW	HOLD_MCS	QAS_REQ	DT_REQ	IU_REQ	
ignore	00h	00h or 01h	0	0	0	0	0	0	0	0	Use ST DATA IN and ST DATA OUT phases to transfer data with asynchronous transfers
ignore	00h	00h or 01h	0	0	0	0	0	1	0	0	Use ST DATA IN and ST DATA OUT phases to transfer data with asynchronous transfers, and participate in QAS arbitrations
0Ah - FFh	01h - FFh	00h or 01h	0	0	0	0	0	0	0	0	Use ST DATA IN and ST DATA OUT phases to transfer data with synchronous transfers
09h - FFh	01h - FFh	01h	0	0	0	0	0	0	1	0	Use DT DATA IN and DT DATA OUT phases with data group transfers
09h - FFh	01h - FFh	01h	0	0	0	0	0	1	1	0	Use DT DATA IN and DT DATA OUT phases with data group transfers, and participate in QAS arbitrations
0Ah - FFh	01h - FFh	00h or 01h	0	0	0	0	0	1	0	0	Use ST DATA IN and ST DATA OUT phases to transfer data with synchronous transfers, and participate in QAS arbitrations
09h – FFh	01h - FFh	01h	0	0	0 or 1	0 or 1	0	0	1	1	Use DT DATA IN and DT DATA OUT phases with synchronous transfers and information unit transfers
08h	01h - FFh	01h	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0	1	1	Use DT DATA IN and DT DATA OUT phases with paced transfers and information unit transfers
07h	01h - FFh	01h	0	0 or 1	0 or 1	0 or 1	0 or 1	0	1	1	Use DT DATA IN and DT DATA OUT phases with paced transfers and information unit transfers
09h – FFh	01h - FFh	01h	0	0	0 or 1	0 or 1	0	1	1	1	Use DT DATA IN and DT DATA OUT phases with synchronous transfers and information unit transfers, participate in QAS arbitrations, and issue QAS_REQUEST messages to initiate QAS arbitrations
08h	01h - FFh	01h	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	1	1	1	Use DT DATA IN and DT DATA OUT phases with paced transfers and information unit transfers, participate in QAS arbitrations, and issue QAS_REQUEST messages to initiate QAS arbitrations
07h	01h - FFh	01h	0	0 or 1	0 or 1	0 or 1	0 or 1	1	1	1	Use DT DATA IN and DT DATA OUT phases with paced transfers and information unit transfers, participate in QAS arbitrations, and issue QAS_REQUEST messages to initiate QAS arbitrations