IEEE 802.3dk D3.0 Bidirectional 100Gb/s Optical Access PHYs Initial Sponsor ballot comments

Cl 135 SC 135.5.7.2 P44 L24 # [-9

Brown, Matthew Alphawave Semi

Comment Type TR Comment Status R

The wording on the last sentence is awkward as the exception is on the PMA not the stated requirement.

I would further challenge with this optional (permitted) functionality is worth including in this standard. If it is optional then the receiver cannot count on it and must assume desired performance must be achievable without it. The precoding is conventionally not mandatory on the receiver since the need is dependent on the receiver architecture; and the transmitter precoding state is set based on the need of the receiver. If optional output precoding is retained then some explanation about how it is coordinated between distantly located terminals will be coordinated.

SuggestedRemedy

Change the last sentence to:

"A PMA that is not connected to the service interface of a 100GBASE-BRx PMD shall provide 1/(1+D) mod 4 precoding capability on each output lane. A PMA that is connected to the service interface of a 100GBASE-BRx PMD may provide 1/(1+D) mod 4 precoding capability on each output lane."

Alternately, consider leaving the the base standard text as is.

Response Status U

REJECT.

In the base standard text, the optional functionality is for input. The current text in the IEEE P802.3dk draft doesn't change the functionality. The IEEE P802.3dk draft adds an exception for 100GBASE-BRx to the output capability.

For 100GBASE-BRx PHYs, the precoding ability registers are defined in 45.2.1.145a. The main users are service providers who have control over which PMDs are used, and they can manage this outside of IEEE Std 802.3.

C/ 168 SC 168.3.2 P56 L28 # [-16

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status A

The subclause 168.3.2 contains the following requirement: "If the PMD service interface is physically instantiated so that the Skew at SP5 can be measured, then the Skew at SP5 shall be less than 145 ns." The corresponding PICS entry SC3 is marked as optional, while it should be marked as conditional mandatory.

SuggestedRemedy

The instantiation of the PMD service interface should be specified in text as an optional requirement, and that requirement should serve as a condition to the measured skew requirement.

Response Status W

ACCEPT IN PRINCIPLE.

Change the status of item SC3 in 168.11.4.1 to conditional mandatory with editorial license.

C/ 168 SC 168.11.4.2 P76

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status R

PICS F1 and M1 are missing the Value/Comment

SuggestedRemedy

Copy the relevant requirements from specification body

Response Status W

REJECT.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.

Cl 168 SC 168.11.4.2 P76 L30 # [-18

L 28

I-17

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status R

There appears no optional requirement in subclause 168.1 that would correspond to PICS F2

SuggestedRemedy

Remove the PICS entry

Response Status W

REJECT.

The PICS F2 corresponds to the last sentence in 168.1: "to the medium through the MDI and optionally with the management functions that may be accessible through the management interface defined in Clause 45, or equivalent."

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Cl 168 SC 168.11.4.2 P76 L33 # [-19

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status A

The general convention in 802.3 is that every mandatory or optional requirement should have its corresponding PICS entry. But this is not done in this draft. For example, there are two mandatory requirements in 168.1.1, but only a single PICS entry (F3) for both. Overall, clause 168 contains 50 mandatory requirements ("shall") and 6 optional requirements ("should"). However, there are only 28 mandatory or conditional mandatory PICS entries and 15 optional or conditional optinal PICS entries.

SuggestedRemedy

Review all the PICS entries and revise as needed to ensure one-to-one correspondence with the indivitual mandatory and optional requirements given in the specification body.

Response Status W

ACCEPT IN PRINCIPLE.

In general, there could be a many-to-one mapping of requirements to PICS entries. Therefore, they do not have to have the same numbers.

Review the draft and ensure that every requirement is covered by one PICS.

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status R

SC 168.11.3

PICS TP1 and TP2 do not have corresponding requirements in the body of subclause 168.5.1

P**75**

L75

I-20

SuggestedRemedy

C/ 168

Remove PICS entries or add the necessary requirements to 168.5.1.

Response Status W

REJECT.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 160, since the 100GBASE-BRx PHY share the similar block diagram with Clause 160.

Cl 168 SC 168.5.2 P58 L3 # [-21

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status A

The subclause 168.5.2 contains three mandatory requirements. Only the second and third requirements have corresponing PICS entries. The first requirement has no PICS entry.

SuggestedRemedy

Add PICS for the following requirement: "The PMD Transmit function shall convert the symbol stream requested by the PMD service interface messages PMD:IS UNITDATA 0.request into an optical signal."

Response Status W

ACCEPT IN PRINCIPLE.

Add an PICS item for "The PMD Transmit function shall convert the symbol stream requested by the PMD service interface messages PMD:IS_UNITDATA _0.request into an optical signal." in 168.11.4.2 before F4 with editorial license.

C/ 168 SC 168.11.4.2 P76 L42 # [-22

Kramer, Glen Broadcom Corporation

Comment Type TR Comment Status R

PICS entries F6 and F7 both correspond to a single requirement in text

SuggestedRemedy

Combine both PICS entries into one entry. Makre the Value/Comment field read: "Converts the optical signal received from the MDI into a symbol stream for delivery to the PMD service interface using the message PMD:IS UNITDATA 0.indication"

Response Status W

REJECT.

IEEE P802.3dk needs to be consistent with existing clauses, such as IEEE Std 802.3 Clause 140, since the 100GBASE-BRx PHY specification references Clause 140.