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InfoField Exchange Support for Vendor Specific Data

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Problem

1. Latest version of 802.3ch does not offer the ability for the PHY vendors to communicate Vendor Specific data during InfoField Exchange
- ➔ These problems can be addressed through optional support of a Vendor Specific InfoField in the TRAINING state.

Updated Proposed Solution

- To identify the Vendor identity, the updated proposal is to use AutoNeg NEXT pages to communicate OUI without the necessity to go through the whole AutoNeg
- Update text on Page 141, line 50, as follows:
The format of PHY capability bits is Oct10<5> = SlowWakeRequest, Oct10<6> = EEEn, Oct10<7> = OAMen, Oct10<2:1> = InterleaverDepth, and Oct10<4:3> = PrecodeSel.
- Update **Table 149–12** as follows

octet 8								octet 9								octet 10							
0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7
Vendor Specific Data																Reserved	InterleaverDepth	PrecodeSel	SlowWakeReques	EEEn	OAMen		

Updated Proposed Solution

- Allocate the following registers in **Table 45-3** for PHY and Link Partner 16-bit Vendor specific data:

Register Address	Register Name	Subclause
1.2316	PHY Vendor Specific Data	45.2.1.195a
1.2317	Link Partner Vendor Specific Data	45.2.1.195a

- Add Clause **45.2.1.195a** after Clause **45.2.1.195** with following language:

45.2.1.195a Vendor Specific Messages (1.2316/1.2317)

The assignments of bits for the vendor specific data registers are shown in **Table 45–155f**. The values of the bits in these registers are all zeros unless the PHY identifies the link partner is from the same vendor during the AutoNeg phase through communicating OUIs using the NEXT pages

Updated Proposed Solution

- Add **Table 45-155f** to Clause **45.2.1.195a** to include the added registers and associated description

Table 45–155f—Vendor Specific register bit definitions

Bits	Name	Description	R/W
1.2316<15:0>	PHY vendor specific data	16 bits of vendor specific data that PHY sends to its link partner when the link partner is from same vendor	RW
1.2317<15:0>	Link Partner vendor specific data	16 bits of vendor specific data that PHY receives from to its link partner when the link partner is from same vendor	RO

- **45.2.1.195a.1**
 - When both PHY and link partner are from the same vendor, Bits 1.2316.15:0 contain vendor specific data that the PHY may need to communicate to its link partner during the training phase
- **45.2.1.195a.2**
 - When both PHY and link partner are from the same vendor, Bits 1.2317.15:0 contain vendor specific data that the PHY may receive from its link partner during the training phase

Thank you.

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