Clause 73 Message Page 10

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Clause 73 Message Page 10 Background

- Message Page 10 is defined in Annex 73A and 45.2.7.13a in 8023az-D1-1.PDF but the complete details in regards to bit definitions are missing. This presentation provides more details.

- In a Clause 73 message next page there are 32 bits of unformatted code field and in a Clause 73 unformatted next page there are either 32 or 43 bits of unformatted code field and we should try to utilize them efficiently.

- Bits [15:11] are used for NP, ACK, MP, ACK2 and T respectively and bits [10:0] are used for the message code field in the message page. For unformatted next pages, these 11 bits are additional unformatted code field bits.

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Clause 73 Message Page 10

- Next page exchange commences after the base page exchange if either local or link device requests such transfers.

- EEE Technology Next Page (MP10) and unformatted next page(s) may or may not be the first message page after the base page. Other message page(s) and their respective unformatted next page(s) may precede or follow it.

- MP10 and unformatted next pages need not be the last message page of the auto negotiation process.

Auto-negotiation Registers

- **Message Page:**
  - EEE advertisement [48:1] = {16′b0, 7.60.15:0, MP10}
  - lp EEE advertisement [48:1] = {16′b0, 7.61.15:0, MP10}

- **Unformatted next page:**
  - EEE wake timer requirement [48:1] = {32'b0, NP, 3'b0, 7.64.11:0}
  - lp EEE wake timer requirement [48:1] = {32'b0, NP, 3'b0, 7.65.11:0}

- **Register 7.64:**
  - This register defines the EEE wake timer requirement for all the three backplane PHYs.
  - Next slide shows the bit definitions for this register.
  - Information taken from pillai_02_011209.

- **Register 7.65:**
  - This register shows the LP wake timer requirement.

Table 45-147-EEE timer requirement register (Register 7.64) bit definitions

Bit(s)	Name	Description	R/W
7.64.15:12	Reserved	Ignore on read	RO
7.64.11:8	10GBASE-KR wake timer	4 through F – Reserved 3 – 40 training frames 2 – 35 training frames 1 – 30 training frames 0 – 26 training frames	R/W
7.64.7:4	10GBASE-KX4 wake timer	4 through F – Reserved 3 – 18usec 2 – 15usec 1 – 11usec 0 – 8usec	R/W
7.64.3:0	1000BASE-KX wake timer	4 through F – Reserved 3 – 20usec 2 – 17usec 1 – 13usec 0 – 10usec	R/W

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