Status of 802.3ap Document

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Status

Split the 1 clause document into 6 segments:

- Annex 28E - Auto Negotiation for Backplane Ethernet
- Changes to Clause 45 – Management Interface (MDIO)
- Clause 69 – Intro to Ethernet Backplanes
- Clause 70 - 1000BASE-KX
- Clause 71 - 10GBASE-KX4
- Clause 72 - 10GBASE-KR

Posted partial draft 0.7 on Tuesday, 4 January 2005 for 14 day review period.

Reviuw period closed on Tuesday, 18 January 2005 at 11:59 p.m. (Pacific Time).

Comment Stats

- **5 People responded with comments**
- **49 comments received:**
  - 8 Technical Required
  - 25 Technical
  - 16 Editorial
- **Comments by Clause:**

	TR	T	E
Clause 28E	23	5	8	10
Clause 70	13	1	8	4
Clause 72	05	0	4	1
Clause 45	04	2	2	0
Clause 71	02	0	2	0
Clause 69	02	0	1	1

Big ticket items

- **Text for Interconnect Characteristics (subclause 69.3)**

- **Text for Clause 72 (10GBASE-KR)**

- **Overlap of Clause 45 registers with "an" and "aq".**
  – Breakout meeting proposed for Monday evening

Clause 45 Problem Areas

- **Comment #'s 32, 33, and 48.**

- **Currently, 3 projects are simultaneously proposing changes to clause 45.**
  - 10GBASE-T, 10GBASE-LRM, and Backplane Ethernet

- **PMA/PMD Control Register 2 (1.7)**

- **10G PMA/PMD Extended Ability Register (1.11)**

- **Register placement for Auto-Negotiation, Start-Up Protocol support (1.110 and above).**

PMA/PMD Control 2

Table 45–7 — 10G PMA/PMD control 2 register bit definitions

Bit(s)	Name	Description	R/W[a]
1.7.15:3	Reserved	Value always 0, writes ignored	R/W
1.7.2:0	PMA/PMD type selection	2 1 0 1 1 1= 10GBASE-SR PMA/PMD type 1 1 0= 10GBASE-LR PMA/PMD type 1 0 1= 10GBASE-ER PMA/PMD type 1 0 0= 10GBASE-LX4 PMA/PMD type 0 1 1= 10GBASE-SW PMA/PMD type 0 1 0= 10GBASE-LW PMA/PMD type 0 0 1= 10GBASE-EW PMA/PMD type 0 0 0= ~~Reserved~~ 10GBASE-CX4 PMA/PMD type	R/W

[a]R/W = Read/Write

Dawe suggested remedy (comment #33)

1.7.x					TYPE
4	3	2	1	0	
1	1	0	0	0	10GBASE-KR
1	0	0	0	0	10GBASE-KX4
0	1	1	1	0	10GBASE-LRM
0	1	0	0	0	10GBASE-T

10G PMA/PMD Ext. Ability Register

Table 45–11 — 10G PMA/PMD Extended Ability register bit definitions

Bit(s)	Name	Description	R/W[a]
1.11.15:1	Reserved	Ignore on read	RO
1.11.0	10GBASE-CX4 ability	1 = PMA/PMD is able to perform 10GBASE-CX4 0 = PMA/PMD is not able to perform 10GBASE-CX4	RO

[a]RO = Read Only

Dawe suggested remedy (comment #32)

1.11.2	1 = PMA/PMD is able to perform 10GBASE-KR 0 = PMA/PMD is not able to perform 10GBASE-KR
1.11.4	1 = PMA/PMD is able to perform 10GBASE-KX4 0 = PMA/PMD is not able to perform 10GBASE-KX4
1.11.1	1 = PMA/PMD is able to perform 10GBASE-T 0 = PMA/PMD is not able to perform 10GBASE-T
1.11.3	1 = PMA/PMD is able to perform 10GBASE-LRM 0 = PMA/PMD is not able to perform 10GBASE-LRM

New Registers

- **New registers have been allocated in MMD 1 to support Auto-Negotiation.**

  – These registers overlap will those allocated by "an".

- **Additional registers may need to be allocated to support start-up.**

- **Non-overlapping regions should be allocated for use by the respective projects.**

  – Consider allocating a new MMD for auto-negotiation?

IEEE P802.3ap Draft 0.7, Table 45-2

1.120 through 1.199	Backplane Ethernet Registers as defined in subclause 45.2.1.59
1.200 through 1.32 767	Reserved

IEEE P802.3an Draft 1.2, Table 45-3

1.110 through 1.128	Reserved
1.129	10GBASE-T status
1.130	10GBASE-T THP setting
1.132	10GBASE-T TX power level setting
1.133 through 1.32 767	Reserved

Other Issues…

- **Is auto-negotiation mandatory or optional?**

- **1000BASE-KX transmit disable, loopback enable, and transmit/receive fault.**

- **Alignment between 1000BASE-CX and 1000BASE-KX.**

- **Signal Detect definition.**