EEE and single lane 25G over SMF

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Does 25G over SMF need an objective for EEE ?

- Yes
  - we need to tell the user that this PMD doesn't break fast-wake EEE (if it's implemented on the host) and say the PMD doesn't support deep sleep mode EEE.

What should the objective be ?

- Support optional Energy Efficient Ethernet operation

    (this is the same as the 802.3by equivalent objective)

What do we specify differently ?

- Nothing much – we say the PMD doesn't get in the way of the fast wake EEE option, and that deep sleep mode isn't supported. This is usually done in the 'overview' sub-section (xxx.1) of a clause, in the table showing associated clauses, and in the text e.g. 25GBASE-SR:

Table 112–1—Physical Layer clauses associated with the 25GBASE-SR PMD

Associated clause	25GBASE-SR
106—RS	Required
106—25GMII[a]	Optional
107—PCS for 25GBASE-R	Required
108—RS-FEC[b]	Required
109—PMA for 25GBASE-R	Required
109A—25GAUI C2C	Optional
109B—25GAUI C2M	Optional
78—Energy Efficient Ethernet	Optional

[a]The 25GMII is an optional interface. However, if the 25GMII is not implemented, a conforming implementation must behave functionally as though the RS and 25GMII were present.
[b]The option to bypass the Clause 108 RS-FEC correction function is not supported.

25GBASE-SR PHYs with the optional Energy Efficient Ethernet (EEE) fast wake capability may enter the Low Power Idle (LPI) mode to conserve energy during periods of low link utilization (see Clause 78). The deep sleep mode of EEE is not supported.

Is there anything else to do ?

- There's usually some text in the front covering page of a draft amendment which summarizes what's included in the draft; for example 802.3by:

IEEE P802.3by/D3.0

Draft Standard for Ethernet Amendment: Media Access Control Parameters, Physical Layers and Management Parameters for 25 Gb/s Operation

Prepared by the

LAN/MAN Standards Committee
of the
IEEE Computer Society

This draft is an amendment of IEEE Std 802.3-2015. This amendment adds Physical Layer (PHY) specifications and management parameters for 25 Gb/s operation over twinaxial copper cabling (25GBASE-CR), electrical backplanes (25GBASE-KR), and multimode fiber (25GBASE-SR). This amendment also specifies a 25 Gigabit Attachment Unit Interface (25GAUI) and optional Energy Efficient Ethernet (EEE). Draft D3.0 is prepared for initial Sponsor ballot. This draft expires 6 months after the date of publication or when the next version is published, whichever comes first.

- If we are just creating a PMD clause, and not changing the 25GAUI clause or any of the electrical interface specs, then we don't need to mention EEE here.
- …. so: No, that's it.