

# P802.3cy OAM comments

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# Proposal for P802.3cy OAM

- As the laning is being done in the RS, the MultiGBASE-T1 OAM defined in Clause 149 is used with a few changes.
- The following slides show the proposed content of 165.3.9 OAM
- This refers to 149.3.9 wherever possible
- The changes required for 25GBASE-T1 are included

# Comment # 115 – 165.3.9

## **165.3.9 MultiGBASE-T1 operations, administration, and maintenance (OAM)**

The MultiGBASE-T1 PCS level operations, administration, and maintenance (OAM) provides an optional mechanism useful for monitoring link operation such as exchanging PHY link health status and message exchange. When OAM is implemented, behavior is defined in 149.3.9, including the state diagrams in Figure 149–24 and Figure 149–25. The OAM frame data is carried in the OAM 10-bit field described in 165.3.2.2.14 for the normal power data mode and 165.3.6.3 for low power mode.

# Comment #116 – 165.3.9.1

## **165.3.9.1 Definitions**

The definitions for OAM are as defined in 165.3.9.1 for OAM frame, OAM symbol, OAM message, and OAM status.

OAM field: A 10-bit field in each PHY frame reserved for the OAM symbol as described in 165.3.2.2.14 or in each refresh cycle as described in 165.3.6.3.

# Comment #117 – 165.3.9.2

## **165.3.9.2 Functional specifications**

The MultiGBASE-T1 OAM functions are defined in 149.3.9.2 except for the MultiGBASE-T1 OAM frame structure as defined in 165.3.9.2.1.

# Comments #118, #137, & #138 – 165.3.9.2.1

## 165.3.9.2.1 MultiGBASE-T1 OAM frame structure

The MultiGBASE-T1 OAM frame structure is defined in 149.3.9.2.1 with the addition of the behavior with 8x interleaving.

When the PCS frame is operating in interleaved mode of 2x, ~~or~~ 4x, or 8x, the first symbol (OAM<0>) shall be inserted in the first RS frame in the superframe so that the full OAM frame can be packed into eight superframes in the 2x interleaved mode, ~~and~~ into four superframes in the 4x interleaved mode, and into two superframes in the 8x interleaved mode.

When transitioning from Low Power Idle to normal operation, 149.3.9.2.1 defines a method of aligning the OAM frames properly in the RS frames when interleaving is not 1. The following rule shall be followed with 8x interleaving:

8x interleaving -- insert 0 to 7 dummy OAM symbols into the superframe for alignment before continuing.

# Comment #119 – 165.3.9.3

**165.3.9.3 State diagram variable to OAM register mapping**

[See 149.3.9.3.](#)

# Comment #120 – 165.3.9.4.3

## 165.3.9.4.3 PMA Receive function

See 149.3.9.4.3 except for the variables defined below.

### rx\_boundary

This variable is set to TRUE whenever the receive data stream reaches the end of a Reed-Solomon frame and a dummy OAM symbol is not expected per 165.3.9.2.1 during normal power operation in the data mode, or at the end of a received refresh cycle during Low Power Idle operation. This variable is set to FALSE at other times.

#### Values:

FALSE: Receive stream is not at a boundary end.

TRUE: Receive stream is at a boundary end.

### tx\_boundary

This variable is set to TRUE whenever the transmit data stream reaches the start of a PHY frame and a dummy OAM symbol is not transmitted per 165.3.9.2.1 during normal power operation in the data mode, or at the start of a transmit refresh cycle during Low Power Idle operation. This variable is set to FALSE at other times.

#### Values:

FALSE: Transmit stream is not at a boundary end.

TRUE: Transmit stream is at a boundary end.



# Comment #121 – 165.3.9.4.4

## **165.3.9.4.4 Counters**

[See 149.3.9.4.4.](#)

# Comment #122 – 165.3.9.4.5

## **165.3.9.4.5 Functions**

See [149.3.9.4.5](#).

# Comment #123 – 165.3.9.4.6

## **165.3.9.4.6 State diagrams**

[See 149.3.9.4.6.](#)