IEEE 802.3bz
Making link fault signaling optional

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What is the problem?

- 802.3bz requires full implementation of the Clause 46 RS
- Clause 46 requires the implementation of link fault signalling
- The Clause 36 PCS (8B10B) used for SGMII does not support link fault signalling
- There are existing implementations that should be able to connect to 2.5GBASE-T PHYs using the Clause 36 PCS

What needs to use link fault signalling?

- The fast retrain function sends the “link interruption” sequence ordered set to the MAC’s RS to cause it to defer transmission.
- Fast retrain is required for 10G data rates but is optional for 2.5G and 5G.

What is the solution?

- Make link fault signalling optional for 2.5G and 5G data rates.
- Add an extra sentence to the end of the paragraph on page 59, line 13, “For 2.5 Gb/s and 5 Gb/s data rates implementation of link fault signaling as described in 46.3.4 is optional.”
- Bring subclause 46.3.4 into 802.3bz and change the last sentence from:
  - “The RS shall implement the link fault signaling state diagram (see Figure 46–11).”
- To:
  - “The RS shall implement the link fault signaling state diagram (see Figure 46–11) for data rates of 10 Gb/s and above. For 2.5 Gb/s and 5 Gb/s data rates implementation of the link fault signaling state diagram is optional.”