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2 | REVISION REQUEST |
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4 DATE: June 23, 2025
5 NAME: Natalie Wienckowski
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9 REQUESTED REVISION:
10 STANDARD: 802.3-2022
11 CLAUSE NUMBER: CLAUSE NUMBER: 97, 149, & 165
12 CLAUSE TITLE: Physical Coding Sublayer (PCS), Physical Medium
13 Attachment (PMA) sublayer, and baseband medium, type 1000BASE-T1,
14
15 PROPOSED REVISION TEXT: 97.1.2, 2nd paragraph, 4th sentence
16
17 Change: To maintain a bit error ratio (BER) of less than or equal
18 to 10⁻¹⁰, the 1000BASE-T1 PHY adds 396 bits of Reed-Solomon forward
19 error correction (RS-FEC) parity to each group of 45 80B/81B blocks
20 (containing 450 octets of GMII data).
21
22 To: A 1000BASE-T1 PHY adds 396 bits of Reed-Solomon forward
23 error correction (RS-FEC) parity to each group of 45 80B/81B blocks
24 (containing 450 octets of GMII data).
25
26 PROPOSED REVISION TEXT: 149.1.3, 1st paragraph, 6th sentence
27
28 Change: To maintain a bit error ratio (BER) of less than or equal to
29 10⁻¹², the 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 PHYs add 340 bits
30 of Reed-Solomon forward error correction (RS-FEC) parity to each group
31 of 50 64B/65B blocks.
32
33 To: The 2.5GBASE-T1, 5GBASE-T1, and 10GBASE-T1 PHYs add 340 bits of
34 Reed-Solomon forward error correction (RS-FEC) parity to each group
35 of 50 64B/65B blocks.
36
37 PROPOSED REVISION TEXT: 165.1.3, 1st paragraph, 6th sentence
38
39 Change: To maintain a frame loss ratio (FLR) equivalent to a bit
40 error ratio (BER) of less than or equal to 10⁻¹², a 25GBASE-T1
41 PHY adds 900 bits of Reed-Solomon forward error correction (RS-FEC)
42 parity to each group of 130 64B/65B blocks.
43
44 To: A 25GBASE-T1 PHY adds 900 bits of Reed-Solomon forward error
45 correction (RS-FEC) parity to each group of 130 64B/65B blocks.
46
47 RATIONALE FOR REVISION:
48
49 Description of the purpose of the additional RS-FEC is inconsistent
50 in parallel clauses, is unnecessary for the overview, and may lead
51 the reader to incorrect conclusions that the RS-FEC is primarily for
52 traditional coding gain in gaussian (or other stationary) noise
53 environments, when it is designed for automotive EMC and impulse
54 noise. Suggest that the overview stick to explaining the operation
55 and avoid potentially oversimplifying the purpose of elements in the
56 design.
57

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2 IMPACT ON EXISTING NETWORKS: None
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5 |Please attach supporting material, if any
6 |Submit to:- David Law, Chair IEEE 802.3
7 |and copy:- Adam Healey, Vice-Chair IEEE 802.3
8 |
9 |At:- E-Mail: stds-802-3-maint-req@ieee.org
10 |
11 | +----- For official use -----+
12 | | REV REQ NUMBER: 1499
13 | | DATE RECEIVED: 29 May, 2026
14 | | EDITORIAL/TECHNICAL
15 | | ACCEPTED/DENIED
16 | | BALLOT REQ'D YES/NO
17 | | COMMENTS:
18 +-----+
19 | For information about this Revision Request see -
20 | http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1499
21 +-----+