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2  |                8802-3/802.3 REVISION REQUEST                |
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4  DATE: November 9, 2020
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8
9  REQUESTED REVISION:
10     STANDARD: 802.3cd
11     CLAUSE NUMBER: 120.5.7.2, 135.5.7.2
12     CLAUSE TITLE: Precoding for PAM4 encoded lanes
13
14  PROPOSED REVISION TEXT:
15  Replace the fourth paragraph (added by 802.3cd), which reads:
16
17  "The variables precoder_tx_out_enable_i and precoder_rx_in_enable_i shall
18  be set as determined by the PMD control function on lane i (see
19  136.8.11.7.5). The method by which the PMD control function affects these
20  variables is implementation dependent."
21
22  With the following two paragraphs:
23  "If the PMA is connected to the service interface of a PMD that uses the
24  PMD control function (136.8.11), then precoder_tx_out_enable_i and
25  precoder_rx_in_enable_i shall be set as determined by the PMD control
26  function on lane i. The method by which the PMD control function affects
27  these variables is implementation dependent.
28
29  If the PMA is connected to the service interface of a PMD that supports
30  the PMD control function but training is disabled by the management
31  variable mr_training_enable (see 136.7), or if the PMA is part of a
32  200GAUI-4 C2C link, then precoder_tx_out_enable_i,
33  precoder_rx_in_enable_i, precoder_tx_in_enable_i, and
34  precoder_rx_out_enable_i are set as required by the implementation. The
35  method described in 135F.3.2.1 may be used for 200GAUI-4 C2C."
36
37  In 135.5.7.2, replace the fifth and sixth paragraph, which read:
38
39  "For PMA input and output lanes connected to the PMD service interface of
40  a 50GBASE-CR PMD, 50GBASE-KR PMD, 100GBASE-CR2 PMD, or 100GBASE-KR2 PMD,
41  precoder_tx_out_enable_i and precoder_rx_in_enable_i shall be set as
42  determined by the PMD control function on lane i (see 136.8.11.7.5). The
43  method by which the PMD control function affects these variables is
44  implementation dependent.
45
46  For PMA input and output lanes that are part of a 50GAUI-1 C2C or a
47  100GAUI-2 C2C link, precoder_tx_out_enable_i, precoder_rx_in_enable_i,
48  precoder_tx_in_enable_i, and precoder_rx_out_enable_i are set as required
49  by the implementation. The implementation may use the method described in
50  135F.3.2.1."
51
52  With the following two paragraphs:
53  "If the PMA is connected to the service interface of a PMD that uses the
54  PMD control function (136.8.11), then precoder_tx_out_enable_i and
55  precoder_rx_in_enable_i shall be set as determined by the PMD control
56  function on lane i. The method by which the PMD control function affects
57  these variables is implementation dependent.
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2 If the PMA is connected to the service interface of a PMD that supports
3 the PMD control function but training is disabled by the management
4 variable `mr_training_enable` (see 136.7), or if the PMA is part of a
5 50GAUI-1 C2C or a 100GAUI-2 C2C link, then `precoder_tx_out_enable_i`,
6 `precoder_rx_in_enable_i`, `precoder_tx_in_enable_i`, and
7 `precoder_rx_out_enable_i` are set as required by the implementation. The
8 method described in 135F.3.2.1 may be used for 50GBASE-1 C2C or 100GAUI-2
9 C2C."

10
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12 RATIONALE FOR REVISION:
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14 This change was suggested in comment #221 against D1.0 of P802.3ck. Since
15 this change is in existing text, it was considered out of scope for the
16 project. Therefore a maintenance request is submitted.
17

18 The existing text in Clause 120 was added by 802.3cd to enable setting
19 the precoding in each direction based on the results of the startup
20 (training) protocol for 200GBASE-R PHYs that include the PMD control
21 function. The text in Clause 135 uses similar language for 50GBASE-R and
22 100GBASE-R PHYs.
23

24 However, in both places there is no addressing of the possible case where
25 the training protocol is disabled, and the Clause 120 text does not
26 address 200GAUI-4 C2C where a training protocol is not defined. In these
27 cases, the precoding in each direction and on each side of the link must
28 be set correctly by management instead.
29

30 The revision text suggested above is an attempt to address all PMDs which
31 use training without creating an explicit list. It also addresses setting
32 the precoding controls by management in the AUI-C2C cases.
33

34
35 IMPACT ON EXISTING NETWORKS:
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37 None. This change is practically stating explicitly that correct setting
38 by management is required.
39

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41 |Please attach supporting material, if any|
42 |Submit to:- David Law, Chair IEEE 802.3|
43 |and copy:- Adam Healey, Vice-Chair IEEE 802.3|
44 |
45 |At:- E-Mail: stds-802-3-maint-req@ieee.org|
46 |
47 | +----- For official 802.3 use -----+
48 | REV REQ NUMBER: 1387 |
49 | DATE RECEIVED: 21 December 2020 |
50 | EDITORIAL/TECHNICAL |
51 | ACCEPTED/DENIED |
52 | BALLOT REQ'D YES/NO |
53 | COMMENTS: |
54 +-----+
55 | For information about this Revision Request see - |
56 |http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1387 |
57 +-----+
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