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2 | REVISION REQUEST |
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5 DATE: 22 September 2023
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10 REQUESTED REVISION:
11 STANDARD: IEEE Std 802.3-2022
12 CLAUSE NUMBER: 99.4.7.7
13 CLAUSE TITLE: State diagrams
14

15 PROPOSED REVISION TEXT:
16
17 Add a pRX_DV(TRUE) function call after the DISCARD function call in the
18 DISCARD_KEEP_S state.
19

20 RATIONALE FOR REVISION:
21
22 If the Receive Processing state diagram (see Figure 99-6) is in the
23 CHECK_FOR_RESUME state, it is waiting for the next mPacket of a preempted
24 packet. If, however, it receives a preemptable packet start (SMD-S)
25 instead, and the keepSafterD variable is true, it will transition to the
26 DISCARD_KEEP_S state. The keepSafterD variable set true indicates the
27 implementation can process the start of a packet while discarding an
28 errored packet.
29

30 Entering the DISCARD_KEEP_S state will call the DISCARD function which
31 forces an FCS error (issues 32 PLS_DATA.indication to the pMAC to
32 transfer an invalid FCS value) and then calls the pRX_DV function with
33 the parameter FALSE. This will issue a PLS_DATA_VALID.indication
34 primitive with the DATA_VALID_STATUS parameter set to DATA_NOT_VALID to
35 the pMAC which will cause the pMAC to terminate the incoming packet and
36 issue a MA-DATA.indication to the MAC client.
37

38 The state diagram will then transition to the REPLACE_SMD state through
39 the arrow to 'A' out of the DISCARD_KEEP_S state. The REPLACE_SMD state
40 has the action pRX_DATA(SFD). This will call the pRX_DATA function with
41 the parameter SFD issuing eight PLS_DATA.indication primitives to the
42 pMAC to transfer an SFD.
43

44 The problem is that while a PLS_DATA_VALID.indication primitive with the
45 DATA_VALID_STATUS parameter set to DATA_NOT_VALID was issues to the MAC
46 due to the DISCARD function called in the DISCARD_KEEP_S state, there is
47 no subsequent PLS_DATA_VALID.indication primitive issued with the
48 DATA_VALID_STATUS parameter set to DATA_VALID. The pMAC will therefore
49 not receive the SFD or the subsequent content of the packet.
50

1 IMPACT ON EXISTING NETWORKS:
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3 None. An implementation obeying IEEE Std 802.3-2022 Figure 99-6 would not
4 receive the start of a packet while discarding an errored packet, even if
5 it set the keepSafterD variable is set to TRUE (which is meant to
6 indicate the implementation can process the start of a packet while
7 discarding an errored packet). With this change, an implementation would
8 be able to receive the start of a packet while discarding an errored
9 packet when the keepSafterD variable is set to TRUE. Since, however, the
10 ability to process the start of a packet while discarding an errored
11 packet and implementation option, this change will have no impact on
12 existing networks.

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15 |Please attach supporting material, if any |  
16 |Submit to:- David Law, Chair IEEE 802.3 |  
17 |and copy:- Adam Healey, Vice-Chair IEEE 802.3 |  
18 | |  
19 |At:- E-Mail: stds-802-3-maint-req@ieee.org |  
20 | |  
21 | +----- For official use -----+ |  
22 | | REV REQ NUMBER: 1419 | |  
23 | | DATE RECEIVED: 22 September 2023 | |  
24 | | EDITORIAL/TECHNICAL | |  
25 | | ACCEPTED/DENIED | |  
26 | | BALLOT REQ'D YES/NO | |  
27 | | COMMENTS: | |  
28 +-----+  
29 | For information about this Revision Request see - |  
30 |http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1419 |  
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