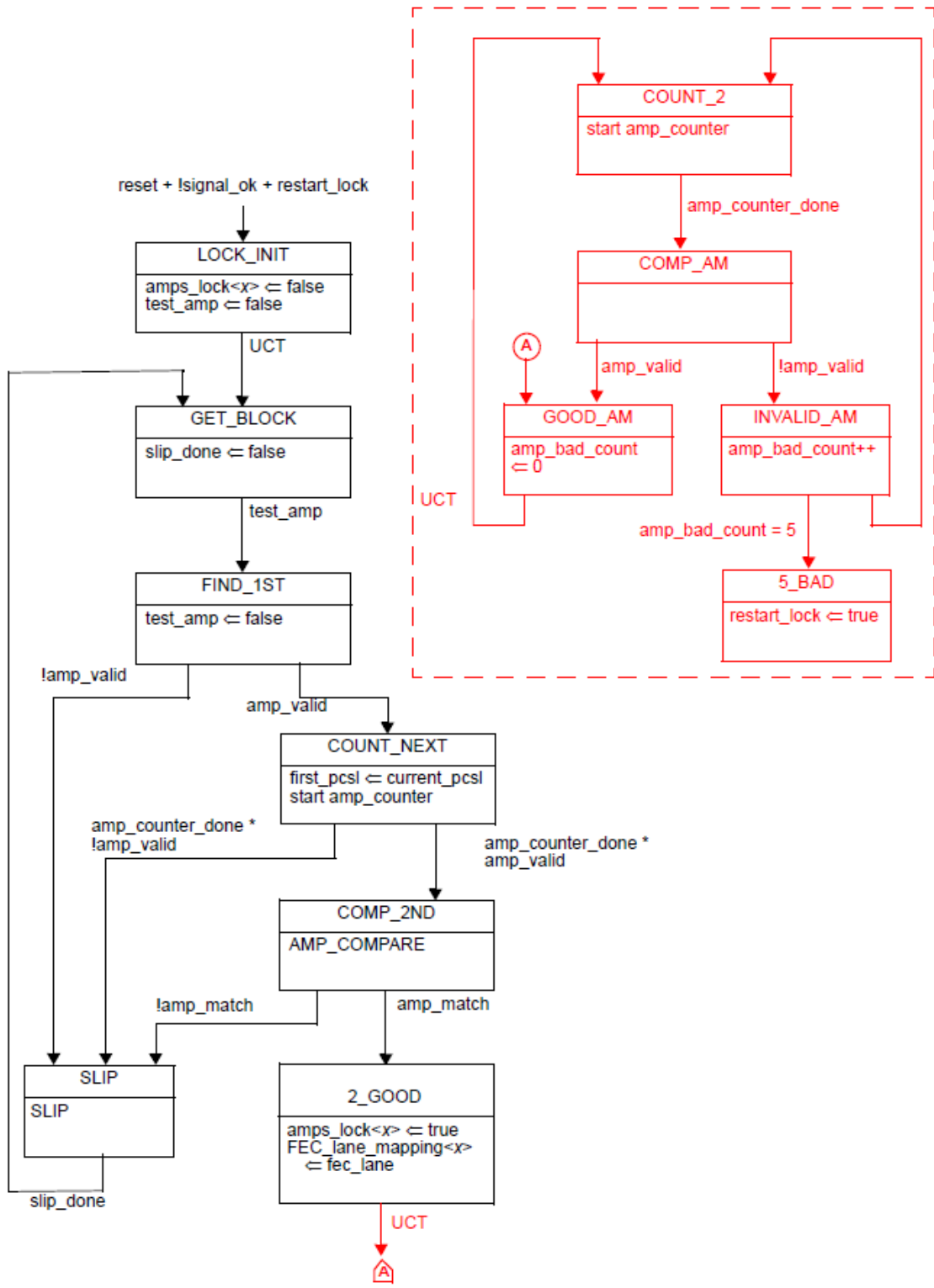


1 +-----+
2 | 8802-3/802.3 REVISION REQUEST |
3 +-----+
4 DATE:9/27/2016
5 NAME:Mark Gustlin
6 COMPANY/AFFILIATION:Xilinx
7 E-MAIL:mgustli@xilinx.com
8
9 REQUESTED REVISION:
10 STANDARD: 802.3-2015
11 CLAUSE NUMBER: 91
12 CLAUSE TITLE: Reed-Solomon Forward Error Correction (RS-FEC) sublayer
13 for 100GBASE-R PHYS
14
15 PROPOSED REVISION TEXT:
16
17 Proposal is to modify the FEC synchronization state diagram to add
18 a check for correct AMs after lock is achieved.
19 This protects against the AMs moving (for example in an OTN Network)
20 and this state diagram not noticing and remaining in lock.
21 Similar changes were made to 802.3bs in draft 2.1 due to
22 comment #67 against draft 2.0.
23
24 Add the following sentence at the end of the description for the
25 restart_lock variable definition in clause 91:
26 "It is also set to true when 5 Alignment Markers in a row fail to match
27 (5_BAD state) if the optional states are supported in the FEC
28 synchronization process."
29
30 Add this new variable in clause 91:
31 "amp_bad_count
32 Counts the number of consecutive alignment markers that don't match the
33 expected values for a given FEC lane if the optional states are supported
34 in the FEC synchronization process."
35
36 See the attached supporting material for the proposed changes to the
37 State diagram.
38
39 Add the following PIC:
40 SD6, FEC synchronization enhancement, 91.5.4.3, Check AMs after
41 synchronization is achieved per Figure 91-8, O, Yes[] No[]
42
43
44 RATIONALE FOR REVISION:
45 This improves the robustness of a the RS-FEC sublayer when used in an
46 application that includes an OTN network (or similar).
47 See http://www.ieee802.org/3/bs/public/16_09/gustlin_3bs_01_0916.pdf for
48 more background.
49
50
51 IMPACT ON EXISTING NETWORKS:
52 No impact, this is added as an optional part of the standard.
53
54
55
56

```
1 +-----+
2 | Please attach supporting material, if any
3 | Submit to:- David Law, Chair IEEE 802.3
4 | and copy:- Adam Healey, Vice-Chair IEEE 802.3
5 |
6 | At:- E-Mail: stds-802-3-maint-req@ieee.org
7 |
8 | +----- For official 802.3 use -----+
9 | | REV REQ NUMBER: 1299
10 | | DATE RECEIVED: 3rd August, 2016
11 | | EDITORIAL/TECHNICAL
12 | | ACCEPTED/DENIED
13 | | BALLOT REQ'D YES/NO
14 | | COMMENTS:
15 +-----+
16 | For information about this Revision Request see -
17 | http://www.ieee802.org/3/maint/requests/revision\_history.html#REQ1299
18 +-----+
19
```



NOTE 1—States inside the dotted box and transition A are optional

Figure 91-8—FEC synchronization state diagram