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+-------------------------------------------------------------------+      1
|                  8802-3/802.3 REVISION REQUEST 1163           |      2
+-------------------------------------------------------------------+      3
                                                                           4
DATE:                   30th March, 2005                                   5
NAME:                   Yair Darshan                                       6
COMPANY/AFFILIATION: PowerDsine                                            7
E-MAIL:                 yaird@powerdsine.com                               8
                                                                           9
REQUESTED REVISION:                                                        10
   STANDARD:          IEEE Std. 802.3af-2003                               11
   CLAUSE NUMBER:     33.2.3.1                                             12
   CLAUSE TITLE:      Overview                                             13
                                                                           14
PROPOSED REVISION TEXT:                                                     15
                                                                           16
Clause 33.2.3.1 last paragraph                                             17
                                                                           18
Replace the following text:                                                19
                                                                           20
If a PSE performing detection using Alternative A detects an invalid       21
signature, it should initiate a second detection attempt within 1 second   22
after the beginning of the first detection attempt.                        23
                                                                           24
This ensures that a PSE performing detection using Alternative A will      25
complete a second detection cycle prior to a PSE using Alternative B that  26
might also be present on the same Link Section, and therefore causing the  27
invalid signature, completing its second detection cycle due to the        28
Alternative B detection backoff described above.                           29
                                                                           30
with:                                                                      31
                                                                           32
If a PSE performing detection using Alternative A detects an invalid       33
signature, it should complete a second detection attempt within 2 sec      34
after the beginning of the first detection attempt.                        35
                                                                           36
This allows that a PSE performing detection using Alternative A will       37
complete a detection cycle within reasonable number of attempts prior to   38
a PSE using Alternative B that might also be present on the same Link      39
Section, and therefore causing the invalid signature, completing its       40
second detection cycle due to the Alternative B detection backoff          41
described above.                                                           42
                                                                           43
Add figure 33C.12.1-a and 33C.12.1-b to 33C.1.11                           44
                                                                           45
                                                                           46
RATIONALE FOR REVISION:                                                     47
                                                                           48
See attached figures 33C.12.1 for illustration of the problem and its      49
solution.                                                                  50
                                                                           51
The old text containing the word "beginning" in PSE alternative A is an    52
error due to the fact that the intent per the current text was to          53
initiate new detection cycle, with a time delay after the 1st attempt in   54
```

order to ensure success in the second attempt at the worst case   1
conditions.   2
                                                                                   3
According to the current text, detection may be completed at the 3rd   4
detection attempt (or even with more attempts if PSE alternative A is   5
using detection timing shorter than PSE that using alternative B) and not   6
in the 2nd attempt.   7
                                                                                   8
The revision that is proposed above, fix the confusion, allow the use of   9
the current timing, allows completing detection in the 2nd attempt with   10
flexible delay time and not limiting the number of attempts done by PSE A   11
until completing the detection prior to PSE B initiating its 2nd   12
attempt.   13
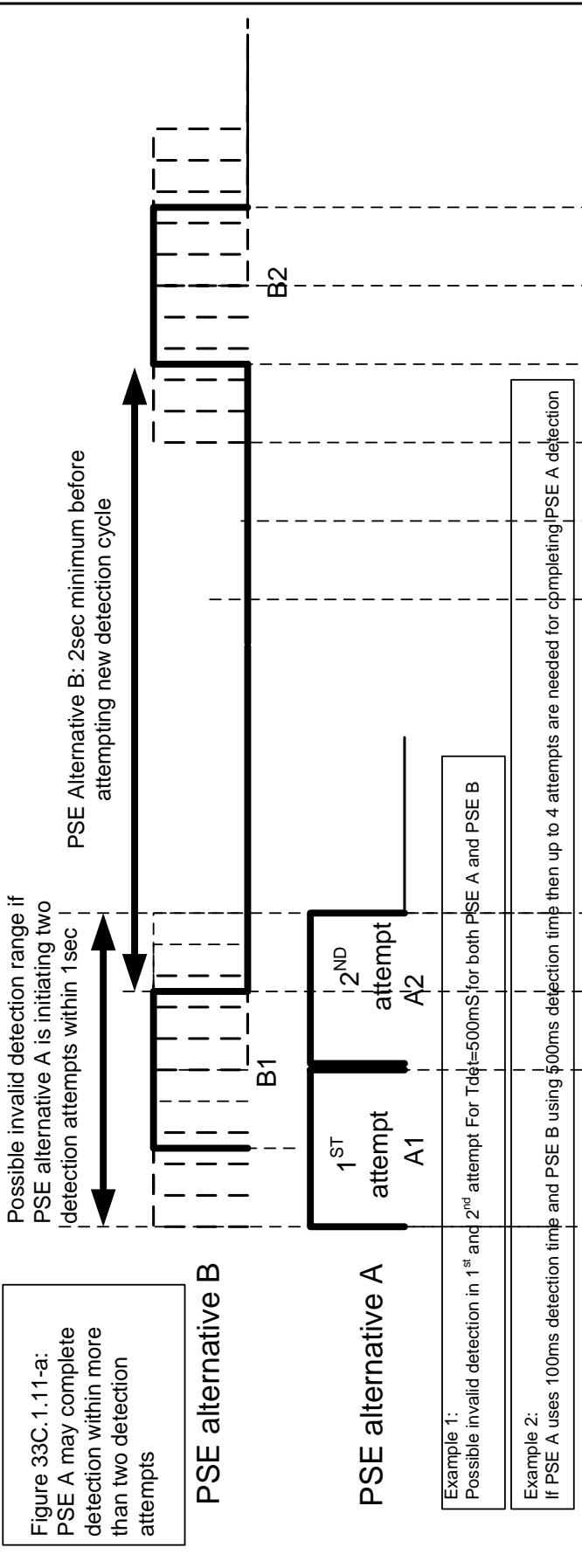   14
The specification in this paragraph has no effect on compliance, it just   15
fix a recommendation that can not be implemented with the current   16
wording   17
                                                                                  18
                                                                                  19
IMPACT ON EXISTING NETWORKS: 20
                                                                                  21
No impact.   22
                                                                                  23
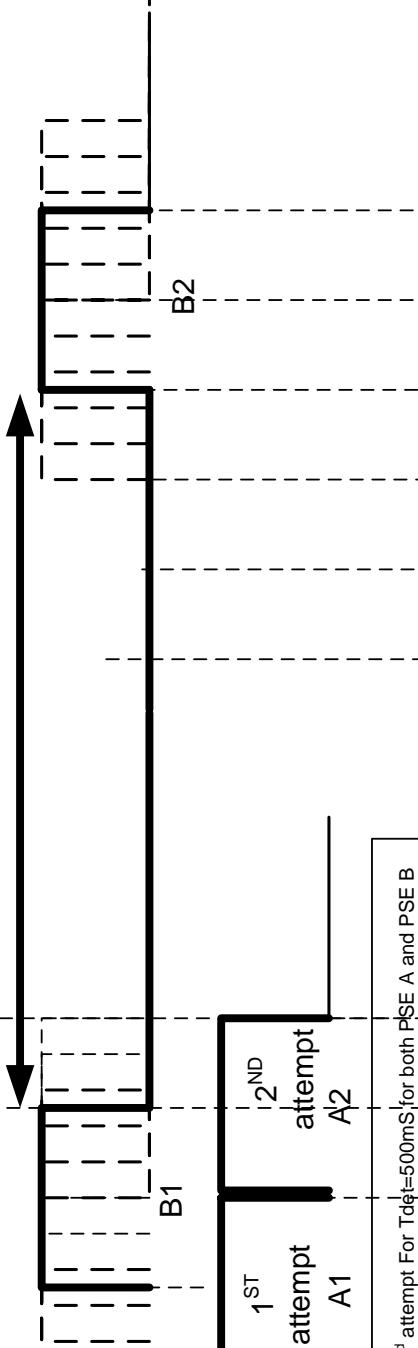   24
+---+   25
| Please attach supporting material, if any | 26
| Submit to:- Bob Grow, Chair IEEE 802.3 | 27
| E-Mail: Bob.Grow@intel.com | 28
| | 29
| +------- For official 802.3 use -----------+ | 30
| | REV REQ NUMBER: 1163 | | 31
| | DATE RECEIVED: 30th March, 2005 | | 32
| | ~~EDITORIAL~~/TECHNICAL | | 33
| | ACCEPTED/DENIED | | 34
| | BALLOT REQ'D YES/~~NO~~ | | 35
| | COMMENTS: 16-Nov-05 Ver: D1.2 Status: B | | 36
+------------+--+------------+   +   37
| For information about this Revision Request see - | 38
|http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1163 | 39
+---+   40
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Figure 33C.1.11-a: PSE A may complete detection within more than two detection attempts

PSE alternative B

PSE alternative A

Possible invalid detection range if PSE alternative A is initiating two detection attempts within 1sec

PSE Alternative B: 2sec minimum before attempting new detection cycle

B1

B2

1ST attempt A1

2ND attempt A2

Example 1:
Possible invalid detection in 1st and 2nd attempt For Tdet=500mS for both PSE A and PSE B

Example 2:
If PSE A uses 100ms detection time and PSE B using 500ms detection time then up to 4 attempts are needed for completing PSE A detection
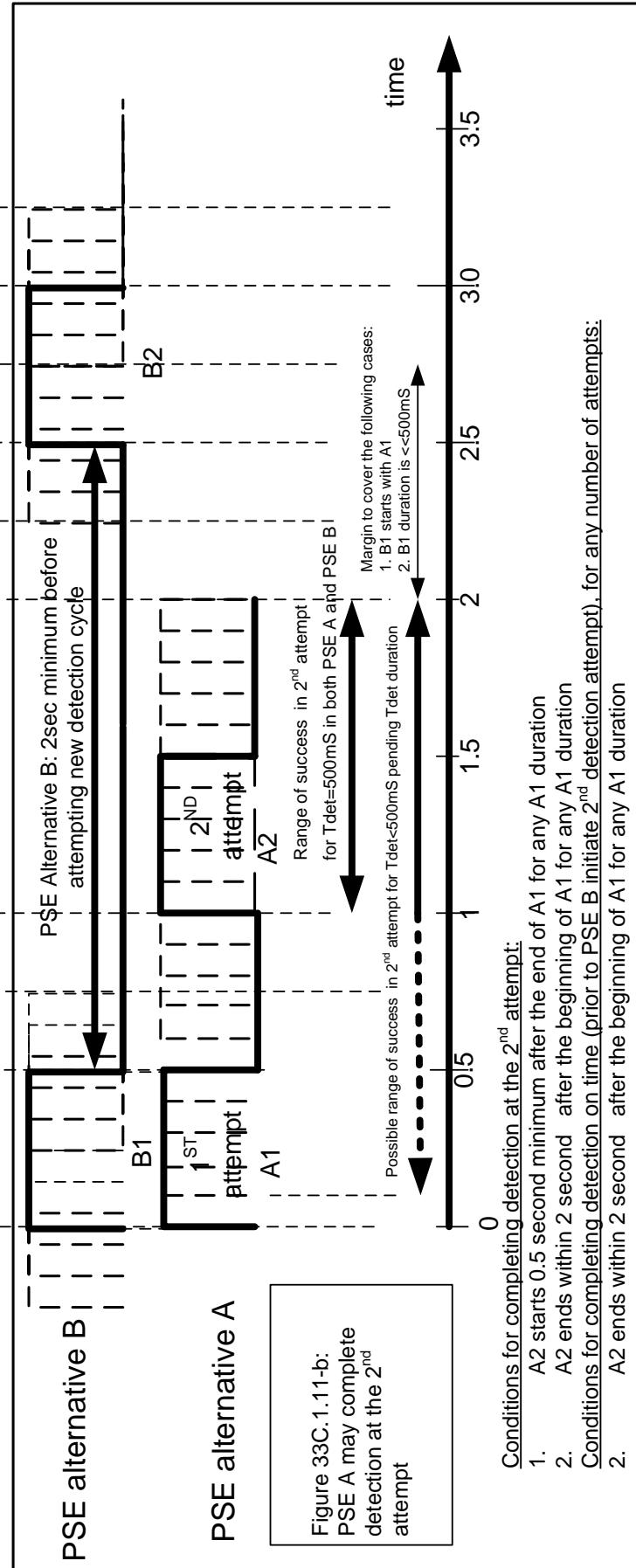
Figure 33C.1.11-b: PSE A may complete detection at the 2nd attempt

PSE alternative B

PSE alternative A

PSE Alternative B: 2sec minimum before attempting new detection cycle

B1

B2

B2

1ST attempt A1

2ND attempt A2

Range of success in 2nd attempt for Tdet=500mS in both PSE A and PSE B

Possible range of success in 2nd attempt for Tdet<500mS pending Tdet duration

Margin to cover the following cases:
1. B1 starts with A1
2. B1 duration is <<500mS

time

0   0.5   1   1.5   2   2.5   3.0   3.5

Conditions for completing detection at the 2nd attempt:
1.   A2 starts 0.5 second minimum after the end of A1 for any A1 duration
2.   A2 ends within 2 second after the beginning of A1 for any A1 duration
Conditions for completing detection on time (prior to PSE B initiate 2nd detection attempt), for any number of attempts:
2.   A2 ends within 2 second after the beginning of A1 for any A1 duration

ISO/IEC 8802-3/IEEE Std.802.3 Revision Request. Subject to change.