DATE: 30th March, 2005
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REQUESTED REVISION:
STANDARD: IEEE Std. 802.3af-2003
CLAUSE NUMBER: 33.2.3.1
CLAUSE TITLE: Overview

PROPOSED REVISION TEXT:
Clause 33.2.3.1 last paragraph

Replace the following text:
If a PSE performing detection using Alternative A detects an invalid signature, it should initiate a second detection attempt within 1 second after the beginning of the first detection attempt.

This ensures that a PSE performing detection using Alternative A will complete a second detection cycle prior to a PSE using Alternative B that might also be present on the same Link Section, and therefore causing the invalid signature, completing its second detection cycle due to the Alternative B detection backoff described above.

with:
If a PSE performing detection using Alternative A detects an invalid signature, it should complete a second detection attempt within 2 sec after the beginning of the first detection attempt.

This allows that a PSE performing detection using Alternative A will complete a detection cycle within reasonable number of attempts prior to a PSE using Alternative B that might also be present on the same Link Section, and therefore causing the invalid signature, completing its second detection cycle due to the Alternative B detection backoff described above.

Add figure 33C.12.1-a and 33C.12.1-b to 33C.1.11

RATIONALE FOR REVISION:
See attached figures 33C.12.1 for illustration of the problem and its solution.

The old text containing the word "beginning" in PSE alternative A is an error due to the fact that the intent per the current text was to initiate new detection cycle, with a time delay after the 1st attempt in
order to ensure success in the second attempt at the worst case conditions.

According to the current text, detection may be completed at the 3rd detection attempt (or even with more attempts if PSE alternative A is using detection timing shorter than PSE that using alternative B) and not in the 2nd attempt.

The revision that is proposed above, fix the confusion, allow the use of the current timing, allows completing detection in the 2nd attempt with flexible delay time and not limiting the number of attempts done by PSE A until completing the detection prior to PSE B initiating its 2nd attempt.

The specification in this paragraph has no effect on compliance, it just fix a recommendation that can not be implemented with the current wording

IMPACT ON EXISTING NETWORKS:

No impact.

+----------------------------------------------------------------------+
| Please attach supporting material, if any                            |
| Submit to:- Bob Grow, Chair IEEE 802.3                              |
| E-Mail: Bob.Grow@intel.com                                         |
| +------- For official 802.3 use -----------+                       |
| REV REQ NUMBER: 1163                                                |
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For information about this Revision Request see -
http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1163
PSE Alternative B: 2 sec minimum before attempting new detection cycle

PSE alternative A

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

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

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 seconds 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:
1. A2 ends within 2 seconds after the beginning of A1 for any A1 duration