IEEE P802.11  
Wireless LANs

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| Protected Sensing frame replay counters | | | | |
| Date: 2024-03-08 | | | | |
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Abstract

This submission presents a proposed resolution for the following CIDs from LB281 on P802.11bf:

4187

4188

regarding replay sequence counter management for Protected Sensing frames.

The proposed changes are based on Draft P802.11bf\_D3.0.pdf, Draft P802.11REVme\_D5.0.pdf, and submission 11-24/342r1.

Revision history:

R0 – Initial version

## P802.11bf CIDs 4187 and 4188:

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 4187 | 12.5.4.4.4 | 201 | 15 | The Sequence Number field is not protected by CCMP or GCMP. The replay counter must be selected based on protected fields. | Define a new key specifically for Protected Sensing Frames. |
| 4188 | 12.5.2.4.4 | 200 | 37 | The Sequence Number field is not protected by CCMP or GCMP. The replay counter must be selected based on protected fields. | Define a new key specifically for Protected Sensing frames. |

## Discussion:

## Proposed Resolution for CIDs 4187 and 4188:

REVISED. Request the TGbf editor to apply the changes below:

Delete all changes in 12.5.2.4.4 (PN and replay detection).

Delete all changes in 12.5.4.4.4 (PN and replay detection).

Insert the following text as the second paragraph in 11.55.1.2 (Dependencies and timing-related parameters):

A sensing STA shall support QMF and MARC. A sensing STA shall set dot11QMFActivated to true, shall set dot11QosOptionImplemented to true, and shall set dot11MultipurposeAlternateReplayCountersActivated to true.

Insert the following text at the end of 11.55.1.5.1 (General):

A sensing STA shall use MARC for Protected Sensing frames. A sensing STA shall set the FTM/MARC bit in the CCMP header or GCMP header of transmitted Protected Sensing frames. A sensing STA shall use the same MARC Index for all transmitted Protected Sensing frames in a Sensing measurement exchange.

NOTE 1 – The sensing STA may select any MARC Index to use for the Protected Sensing frames that it transmits in a Sensing measurement exchange, subject to the reordering rules in 12.5.2.3.7 (CCM originator processing) and 12.5.4.3.6 (GCM originator processing). The sensing STA does not need to use the same MARC Index across multiple Sensing measurement exchanges.

NOTE 2 – For the Protected Sensing frames that it transmits, a sensing responder may use a different MARC Index than is being used by the sensing initiator.

**References:**

[Draft P802.11bf\_D3.0.pdf](https://grouper.ieee.org/groups/802/11/private/Draft_Standards/11bf/Draft%20P802.11bf_D3.0.pdf)

[Draft P802.11REVme\_D5.0.pdf](https://grouper.ieee.org/groups/802/11/private/Draft_Standards/11me/Draft%20P802.11REVme_D5.0.pdf)