IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | LB 276 CR for CID 3126 | | | | | | Date: 2023-10-30 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Mahmoud Kamel | InterDigital |  |  | mahmoud.kamel@interdigital.com | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

Abstract

This submission proposes resolutions for CID 3126 in subclause 11.55.1.2 in P802.11bf D2.0.

NOTE – Set the Track Changes Viewing Option in the MS Word to “All Markup” to clearly see the proposed text edits.

**Revision History:**

R0: Initial version

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3126 | 11.55.1.2 | 135.21 | "A sensing STA shall support N\_b (see Table 9-127h (Sensing  Measurement Report Control field definition)) values of 8 and  10 in the Sensing Measurement Report frame.""  It is an extra burden on devices to implement both Nb 8 and 10,  if the accuracy a STA can provide is 8 bit, then that should be enough." | Change to "A sensing STA shall mandatorily support the value of N\_b=8  (see Table 9-127h (Sensing Measurement Report Control field definition))  in the Sensing Measurement Report frame." | **Revise**  TGbf editor: please incorporate changes shown in 11-23/1862r0. |

**Option 1: is mandatory and is optionally supported**

***TGbf editor: please make the following change in subclause 11.55.1.2, P135L21 in 11bf D2.1.***

A sensing STA shall support and may support (see Table 9-127h (Sensing Measurement Report Control field definition)) in the Sensing Measurement Report frame.

***TGbf editor: please make the following change in subclause 9.4.2.321, P76L29 in 11bf D2.1.***

*In Figure 9-1002bi—(Sensing field format), add a new bit in the Sensing field at B71 and name it*

***TGbf editor: please insert the following text in subclause 9.4.2.321, P77L64 in 11bf D2.1.***

The field is set to 1 to indicate that the value of quantization bits of 10 is supported in the Sensing Measurement

Report frame; and it is set to 0 otherwise.

|  |  |  |  |
| --- | --- | --- | --- |
| * Sensing Measurement Report Control field definition | | | |
| Field | Size (bits) | Definition | Meaning |
| Presence and Control Bitmap | 8 | Includes fields to indicate presence of optional fields in the Sensing Measurement Report Control field, or other control bits | The fields of the Presence and Control Bitmap field are specified in Figure 9-189h (Presence and Control Bitmap field format) |
| BW | 3 | Bandwidth | Set to a value that corresponds to the bandwidth as defined in Table 9-127j (BW field format). |
|  | 3 | Indicates the number of transmit antennas | Set to the number of transmit antennas  minus 1. |
|  | 3 | Indicates the number of receive antennas | Set to the number of receive antennas  minus 1. |
|  | 1 | Indicates the number of bits for each CSI value | Set to 0 for  equal to 8. Set to 1 for  equal to 10.  NOTE: is optionally supported. |
|  | 1 | Indicates the subcarrier grouping setting | Set to 0 to indicate a subcarrier grouping of  except when there are five or more transmit antennas and the bandwidth is greater than or equal to 160 MHz.  Set to 0 to indicate a subcarrier grouping of  when there are five or more transmit antennas and the bandwidth is greater than or equal to 160 MHz.  Set to 1 to indicate a subcarrier grouping of .  NOTE:  is optionally supported. |

**Option 2: Only is supported**

***TGbf editor: please make the following change in subclause 11.55.1.2, P135L21 in 11bf D2.1.***

A sensing STA shall support (see Table 9-127h (Sensing Measurement Report Control field definition))

value of 8 in the Sensing Measurement Report frame.

***TGbf editor: please make the following change in subclause 11.55.1.4, P141L42 in 11bf D2.1.***

***TGbf editor: please make the following change in subclause 9.4.1.73.2.2, P52L54 in 11bf D2.1.***

c) Each real and imaginary part of the CSI is scaled and quantized to bits using Equation (9-5c) and

Equation (9-5d), respectively.

***TGbf editor: please make the following change in subclause 9.4.1.73.3, P53L50 in 11bf D2.1.***

|  |  |  |  |
| --- | --- | --- | --- |
| * Sensing Measurement Report Control field definition | | | |
| Field | Size (bits) | Definition | Meaning |
| Presence and Control Bitmap | 8 | Includes fields to indicate presence of optional fields in the Sensing Measurement Report Control field, or other control bits | The fields of the Presence and Control Bitmap field are specified in Figure 9-189h (Presence and Control Bitmap field format) |
| BW | 3 | Bandwidth | Set to a value that corresponds to the bandwidth as defined in Table 9-127j (BW field format). |
|  | 3 | Indicates the number of transmit antennas | Set to the number of transmit antennas  minus 1. |
|  | 3 | Indicates the number of receive antennas | Set to the number of receive antennas  minus 1. |
|  | 1 | Indicates the subcarrier grouping setting | Set to 0 to indicate a subcarrier grouping of  except when there are five or more transmit antennas and the bandwidth is greater than or equal to 160 MHz.  Set to 0 to indicate a subcarrier grouping of  when there are five or more transmit antennas and the bandwidth is greater than or equal to 160 MHz.  Set to 1 to indicate a subcarrier grouping of .  NOTE:  is optionally supported. |

***TGbf editor: please make the following change in subclause 9.4.1.73.4, P56L54 in 11bf D2.1.***

|  |  |  |
| --- | --- | --- |
| * Sensing Measurement Report information | | |
| Field | Size (bits) | Meaning |
|  | 12 | Scaling factor for receive antenna 1 and transmit antenna 1. |
|  | 12 | Scaling factor for receive antenna 1 and transmit antenna 2. |
| … | … | … |
|  | 12 | Scaling factor for receive antenna 1 and transmit antenna . |
|  | 12 | Scaling factor for receive antenna 2 and transmit antenna 1. |
|  | 12 | Scaling factor for receive antenna 2 and transmit antenna 2. |
| … | ... | … |
|  | 12 | Scaling factor for receive antenna 2 and transmit antenna . |
| … | ... | … |
|  | 12 | Scaling factor for receive antenna and transmit antenna 1. |
|  | 12 | Scaling factor for receive antenna and transmit antenna 2. |
| … | ... | … |
|  | 12 | Scaling factor for receive antenna and transmit antenna . |
| Padding | 0 or 4 | The Padding field is used so that the next field is aligned on an octet boundary. |
|  |  | CSI for receive antenna 1 and transmit antenna 1, for subcarrier |
|  |  | CSI for receive antenna 1 and transmit antenna 2, for subcarrier |
| … | … | … |
|  |  | CSI for receive antenna 1 and transmit antenna , for subcarrier |
|  |  | CSI for receive antenna 2 and transmit antenna 1, for subcarrier |
|  |  | CSI for receive antenna 2 and transmit antenna 2, for subcarrier |
| … | … | … |
|  |  | CSI for receive antenna 2 and transmit antenna , for subcarrier |
| … | … | … |
|  |  | CSI for receive antenna  and transmit antenna 1, for subcarrier |
|  |  | CSI for receive antenna  and transmit antenna 2, for subcarrier |
|  |  | CSI for receive antenna  and transmit antenna , for subcarrier |
|  | 8 | RSSI at receive antenna 1 |
|  | 8 | RSSI at receive antenna 2 |

***TGbf editor: please make the following change in subclause 9.4.1.73.4, P66L52 in 11bf D2.1.***

NOTE—The size of the Sensing Measurement Report information increases with the number of transmit antennas, the

number of receive antennas, the bandwidth and the smaller subcarrier grouping size. The smallest Sensing Measurement Report field is 44 octets, and the

largest Sensing Measurement Report field is 64624 octets.

***TGbf editor: please make the following change in subclause 9.4.1.73.4, P71L64 in 11bf D2.1.***

*In Figure 9-1002bd—(Sensing Measurement Parameters field format), Remove the indicator at bit B26, edit the bit numbers, and increase the number of Reserved bits to 5*

***TGbf editor: please make the following change in subclause 9.4.1.73.4, P73L12 in 11bf D2.1.***

***TGbf editor: please make the following change in subclause 9.4.1.73.4, P73L20 in 11bf D2.1.***

The field is reserved if the Sensing Measurement Report Requested field is set to 0.

SP1:

Do you prefer option 1 or option 2 as a resolution to CID 3126?

Option1/Option2/Abs

SP2:

Do you agree to the resolution provided for CID 3126 in 23/1862r0 to be included in the latest 11bf Draft?

Y/N/A