IEEE P802.11  
Wireless LANs

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| Proposed Draft Text for Sensing Measurement Report frame (excl. format) | | | | |
| Date: 2022-02-14 | | | | |
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|  |  |  |  |  |

Abstract

This document includes proposed draft text for the “Sensing Measurement Report frame” sub-clause as defined in TGbf’s SFD. The Sensing Measurement Report frame that is defined in the SFD by:

A Sensing Measurement Report frame, which allows a sensing receiver to report sensing measurements, is defined. This frame contains at least the following two fields:

* Measurement report control field: Contains information necessary to interpret the measurement report field.
* Measurement report field: Carries CSI measurements obtained by a sensing receiver.

The format used in the measurement report field is beyond the scope of this contribution.

Baseline documents: Rev. me (D1.0) and 11be (D1.4)

*Insert the following row in Table 9-447 and change the value of the reserved row:*

**9.6.7.1 Public action frames**

**Table 9-447 – Public Action field values**

|  |  |
| --- | --- |
| Public Action field value | Description |
| <ANA> | Sensing Measurement Report |

*Insert the following new subclause at the end of subclause 9.6.7:*

**9.6.7.49 Sensing Measurement Report frame format**

The Sensing Measurement Report frame is an Action No Ack of category Public transmitted to provide WLAN sensing measurements. The format of the Sensing Measurement Report frame Action field is shown in Figure 9-1138a (Sensing Measurement Report frame Action field format).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Category | Public Action | Dialog Token | Sensing Measurement  Report |
| Octets | 1 | 1 | 1 | variable |

**Figure 9-1138a—Sensing Measurement Report frame Action field format**

The Category field is defined in 9.4.1.11 (Action field).

The Public Action field is defined in 9.6.7.1 (Public Action frames).

The Dialog Token field is defined in 9.4.1.12 (Dialog Token field). It is set to a nonzero value chosen by the STA sending the sensing measurement request to identify the request/report transaction.

The Sensing Measurement Report element contains one or more of the Sensing Measurement Report elements described in 9.4.2.317 (Sensing Measurement Report element).

*Insert the following new subclause at the end of subclause 9.4.2:*

**9.4.2.317 Sensing Measurement Report element**

The Sensing Measurement Report element contains a single sensing measurement report. The format of the Sensing Measurement Report element is shown in Figure 9-1002am (Sensing Measurement Report element format). The Sensing Measurement Report element is included in the Sensing Measurement Report frame, as described in 9.6.7.49 (Sensing Measurement Report frame format), and in the Protected Sensing Measurement Report frame, as described in 9.6.35.1 (Protected Sensing Frame Action field). The use of Sensing Measurement Report elements and frames is described in (Clause 11).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Element ID | Length | Element ID Extension | Sensing Measurement Report Type | Sensing Measurement Report Control | Sensing Measurement  Report |
| Octets | 1 | 1 | 1 | TBD | TBD | variable |

**Figure 9-1002am—Sensing Measurement Report element format**

The Element ID, Length, and Element ID Extension fields are defined in 9.4.2.1 (General).

The Sensing Measurement Report Type field is set to a number that identifies the type of sensing measurement report. The Sensing Measurement Report Type values that have been allocated are shown in Table 9-401r (Sensing Measurement Report Type field definition).

**Table 9-401r—Sensing Measurement Report Type field definition**

|  |  |
| --- | --- |
| **Name** | **Sensing Measurement type** |
| 0 | CSI |
| 1-255 | Reserved |

The Sensing Measurement Report Control field contains information necessary to interpret the Sensing Measurement Report field. The format of the Sensing Measurement Report Control field is shown in Figure 9-1002an (Sensing Measurement Report Control field).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | |  |  |  |  |  |
|  | Subfield 1 | | Subfield 2 | … | Subfield N |  |
| Bits: | |  |  |  |  |  |

**Figure 9-1002an – Sensing Measurement Report Control field format**

The subfields of the Sensing Measurement Report Control field are defined in Table 9-401s when the Sensing Measurement Type field is set to 0.

**Table 9-401s—Subfields of the Sensing Measurement Report Control field when the Sensing Measurement Report Type field is set to 0**

|  |  |
| --- | --- |
| **Subfield** | **Description** |
| Subfield 1 | (Description) |
| Subfield 2 | (Description) |
| … |  |
| Subfield N | (Description) |

The Sensing Measurement Report field is used to report sensing measurements obtained by a sensing receiver.

Note: The format of this field is being discussed by a different topic group.

*Insert the following row in Table 9-128 and change the value of the reserved row:*

**9.4.2.1 General**

**Table 9-128 – Element IDs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Element** | **Element ID** | **Element ID Extension** | **Extensible** | **Fragmentable** |
| Sensing Measurement Report (see 9.4.2.317 Sensing Measurement Report element) | 255 | <ANA> | Yes | No |

*Insert the following news row to Table 9-79 while maintaining the numerical order and updating the reserved range:*

**9.4.1.11 Action field**

**Table 9-79 - Category Values**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Code | Meaning | See Subclause | Robust | Group Addressed Privacy |
| <ANA> | Protected Sensing Frame | 9.6.36 | Yes | No |

*Insert the following new subclause at the end of subclause 9.6:*

**9.6.36 Protected Sensing frame details**

**9.6.36.1 Protected Sensing Action field**

A Protected Sensing Frame Action field, in the one octet immediately after the Category field, differentiates the Protected Sensing frame formats. The Protected Sensing Action field values associated with each frame format within the Sensing category are defined in Table 9-623k (Protected Sensing Frame Action field values).

**Table 9-623k Protected Sensing Action field values**

|  |  |
| --- | --- |
| Value | Meaning |
| 0 | Reserved |
| 1 | Protected Sensing Measurement Report frame. It is carried in a Management Action No Ack frame. |
| 2-255 | Reserved |

**9.6.36.2 Protected Sensing Measurement Report frame.**

The Protected Sensing Measurement Report frame is an Action No Ack of category Protected Sensing transmitted to provide WLAN sensing measurements. The format of the Protected Sensing Measurement Report frame is shown in Table 9-623l (Protected Sensing Measurement Report frame format).

**Table 623l - Protected Sensing Measurement Report frame format**

|  |  |  |
| --- | --- | --- |
| Order | Information | Notes |
| 1 | Category | The Category field is defined in 9.4.1.11 (Action field). |
| 2 | Protected sensing | The Protected sensing Action field is defined in 9.6.36.1 (Protected Sensing Action field) |
| 3 | Dialog Token | The Dialog Token field is defined in 9.4.1.12 (Dialog Token field). It is set to a nonzero value chosen by the STA sending the sensing measurement request to identify the request/report transaction. |
| 4 | Sensing Measurement Report | The Sensing Measurement Report field contains one or more of the Sensing Measurement Report elements described in 9.4.2.317 (Sensing Measurement Report element). This field is present if dot11(TBD) is true. This field is not present otherwise. |
| … | … | … |

*Modify “Class 1a frames” text in subclause 11.3.3 (Frame filtering based on STA state) as defined in IEEE P802.11az/D4.0 (lines 13-15, page 113):*

In an infrastructure BSS when PTKSA from PASN authentication exists.

1) Protected Fine Timing frames (9.6.34)

2) Unicast SA Query (11.13) (#5303)

3) Protected Sensing frames (9.6.36)