IEEE P802.11
Wireless LANs

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| Proposed Draft Text for Sensing measurement setup termination |
| Date: 2022-02-14 |
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Abstract

This document includes proposed draft text for the “Sensing measurement setup termination” sub-clause as defined in TGbf’s SFD.

**Revision history:**

* r0: Initial version.
* r1: Revised based on Ali’s comments.The format of Measurement Setup Termination frame is added.

**Current SFD text related to this topic:**

### 7.1.5 Sensing measurement setup termination

(Motion 35, 21/1701r1) The following holds for sensing measurement setup termination:

* The device keeps active the established sensing measurement setup identified with the Measurement Setup ID until it is terminated.
* Termination of the sensing measurement setup identified with the Measurement Setup ID by one device does not impact the activity of this sensing measurement setup of another device(s)/session(s).
* Termination of the sensing measurement setup identified with one Measurement Setup ID does not impact the device/session activity of another sensing measurement setup with a different Measurement Setup ID.
* The sensing initiator and/or the sensing responder may initiate termination of the sensing measurement setup.
* A handshake between the sensing initiator and the sensing responder and/or expiration of the predefined inactivity time may terminate the sensing measurement setup. (Detailed protocol is TBD.)
* The sensing initiator and the sensing responder may release the resources they allocated to store the setup after the termination of the sensing measurement setup.
* The sensing initiator shall not indicate the Measurement setup ID of the terminated sensing measurement setup in the sensing measurement instances it initiates.
* The sensing initiator may ignore the pending report(s) indicated to belong to the terminated sensing measurement setup.
* The sensing responder should not respond to request/poll/trigger that all sensing measurement setups it indicates are terminated.
* The sensing responder should not transmit the report that indicates the terminated sensing measurement setup.

**Proposed Spec Text Contribution:**

**11.21.X WLAN sensing (SENS) procedure**

*Editor: Insert clause 11.21.X.5 as follows:*

**11.21.X.5 Sensing measurement setup termination**

A sensing STA may initiate termination of one or more sensing measurement setups by transmiting a Sensing Measurement Setup Termination frame with the Measurement Setup IDs of the measurement setups to be terminated to another sensing STA.

Expiration of the predefined inactivity time may terminate the sensing measurement setup. (Detailed protocol is TBD.)

The sensing initiator and the sensing responder should release the resources they allocated to store the sensing measurement setup after the termination of the sensing measurement setup.

If a sensing measurement setup between a sensing initiator and a sening responder is terminated, then the sensing initiator shall not include the sensing responder in any sensing measurement instance corresponding to the terminated sensing measurement setup. The sensing initiator may ignore the pending sensing measurement report(s) indicated to belong to the terminated sensing measurement setup.

If a sensing measurement setup between a sensing initiator and a sening responder is terminated, then the sensing responder should not respond to any sensing NDPA frame or sensing trigger frame transmitted in the sensing measurement instance corresponding to the terminated sensing measurement setups. The sensing responder should not transmit the sensing measurement report that indicates the terminated sensing measurement setup.

**Discussion 1:**

According to SP1 in 11-22/0223r2, the majority of TGbf members supports Opt2: "SBP request/response/termination frames share a same Action field value and are differentiated by an 'SBP subtype' field"

Reference:

*SP1:*

*Which option do you prefer to define the SBP frames?*

*Opt1: "SBP request/response/termination frames with different Action field values"*

*Opt2: "SBP request/response/termination frames share a same Action field value and are differentiated by an 'SBP subtype' field"*

*6 Opt1 / 11 Opt2 / 19 Abstain*

Therefore, This PDT uses the TGbf members’ preference of SBP frames to define the sensing measurement setup frames (e.g., sensing measurement setup request/response frames):

Sensing measurement setup request/response/termination frames share a same Action field value and are differentiated by a 'sensing measurement setup subtype' field.

**Discussion 2:**

According to Motion 53, 11bf shall define **both public and protected action frames**, which include sensing measurement setup request/response, sensing measurement report, **sensing measurement setup termination**, and SBP request/response/termination frames.

Therefore, the following public action frame format and protected dual of public action frame format of Sensing Measurement Setup Termination frame are proposed.

**9.6 Action frame format details**

**9.6.7 Public Action details**

**9.6.7.1 Public Action frames**

***TGbf editor: Please insert the following new row to Table 9-447 (Public Action field values):***

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

|  |  |
| --- | --- |
| Public Action field value | Description |
| <ANA> | Sensing Measurement Setup frame |
| <ANA+1>–255 | Reserved |

***TGbf editor: Please add a new subclause 9.6.7.x (Sensing Measurement Setup frame format) under subclause 9.6.7 as follows.***

**9.6.7.x Sensing Measurement Setup frame format**

The Sensing Measurement Setup frame is used to support sensing measurement setup/termination. The format of the Sensing Measurement Setup frame Action field is shown in Table 9-xxx (Sensing Measurement Setup frame Action field format).

**Table 9-xxx – Sensing Measurement Setup frame Action field format**

|  |  |
| --- | --- |
| Order | Information |
| 0 | Category  |
| 1 | Public Action  |
| 2 | Dialog Token |
| 3 | Sensing Measurement Setup Subtype |
| 4 | Measurement Setup ID Infomation |
| 5 | TBD |

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) and set by the requesting sensing STA.

The Sensing Measurement Setup subtype field is TBD octet(s), and is set to a value from the Table 9-yyy to represent requesting or responding or terminating a Sensing Measurement Setup.

**Table 9-yyy Sensing Measurement Setup Subtype values**

|  |  |
| --- | --- |
| Values | Description |
| 0 | Request |
| 1 | Response |
| 2 | Terminaton |
| TBD | Reserved |

If Sensing Measurement Setup Subtype value is set to 0, the Sensing Measurement Setup frame represents Sensing Measurement Setup Request frame. If Sensing Measurement Setup Subtype value is set to 1, the Sensing Measurement Setup frame represents Sensing Measurement Setup Response frame. If Sensing Measurement Setup Subtype value is set to 2, the Sensing Measurement Setup frame represents Sensing Measurement Setup Termination frame. Other Sensing Measurement Setup Subtype values are reserved.

The Measurement Setup ID Information field/element is TBD.

**9.6.10 Protected Dual of Public Action frames**

***TGbf editor: Please insert the following new row to Table 9-487 (Public Action field values defined for Protected Dual of Public Action frames):***

**Table 9-487 – Public Action field values** **defined for Protected Dual of Public Action frames**

|  |  |  |
| --- | --- | --- |
| Public Action field value | Description | Defined in |
| <ANA> | Protected Sensing Measurement Setup | 9.6.7.x (Sensing Measurement Setup frame format(11bf)) |
| <ANA+1>–255 | Reserved |  |