IEEE P802.11
Wireless LANs

|  |
| --- |
| Proposed Draft Text for Sensing Meausrement Instance: General |
| Date: 2022-01-24 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Cheng Chen | Intel Corporation |  |  | cheng.chen@intel.com |
|  |  |  |  |  |

Abstract

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

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Added references to related motion text regarding TB sensing measurement instance and non-TB sensing measurement instance. Added “in a TBD frame” after “The Dialog Token field”.

## Current SFD text related to this topic:

### 7.1.4 Sensing measurement instance

**7.1.4.1 General**

In a sensing measurement instance of a WLAN sensing procedure, sensing measurements are performed (Motion 15, 20/1851r4; Motion 29, 21/1543r1).

The Measurement Instance ID may be used to identify the sensing measurement instance that utilizes attributes of the same Measurement Setup ID (Motion 24, 21/0644r4).

The Dialog Token field may be a possibility to contain both the Measurement Setup ID and the Measurement Instance ID (Motion 24, 21/0644r4).

More than one sensing responder may participate in a sensing measurement instance (Motion 16, 20/0145r5; Motion 29, 21/1543r1).

## Other SFD text related to this topic:

**7.1.4.2 TB sensing measurement instance**

(Motion 25c, 21/0990r2) A TB sensing measurement instance includes a polling phase, an NDPA sounding phase, and a TF sounding phase. The order of the NDPA sounding phase and of the TF sounding phase is TBD.

* Note: This is for HE and/or EHT STAs. Methods to support other STAs are TBD.

**7.1.4.3 Non-TB sensing measurement instance**

(Motion 39, 21/1433r2) A non-TB sensing measurement instance is defined as follows:

* One non-AP STA is the sensing initiator and one AP is the sensing responder.
* Once the non-AP STA obtains a TXOP, it initiates a non-TB sensing measurement instance by transmitting an NDPA frame to the AP followed by an Initiator-to-Responder (I2R) NDP after SIFS. SIFS after the I2R NDP, the AP shall transmit a Responder-to-Initiator (R2I) NDP to the non-AP STA.
* If the non-AP STA is only the sensing transmitter, then the NDPA frame should configure the R2I NDP to be transmitted with minimum possible length with one LTF symbol.
* If the non-AP STA is only the sensing receiver, then the NDPA frame should configure the I2R NDP to be transmitted with minimum possible length with one LTF symbol.
* The details of the NDPA frame are TBD.
* I2R/R2I NDP formats are TBD.

## Proposed Spec Text Contribution

*Editor: Include the text below in Clause 7 of TGbf’s SFD*

**7.1.4 Sensing measurement instance**

**7.1.4.1 General**

In a sensing measurement instance of a WLAN sensing procedure, sensing measurements are performed. A sensing measurement instance has the following variants:

* Trigger-based (TB) sensing measurement instance described in 7.1.4.2,
* Non-Trigger-based (Non-TB) sensing measurement instance described in 7.1.4.3.

The Measurement Instance ID may be used to identify the sensing measurement instance that utilizes attributes of the same Measurement Setup ID. The Dialog Token field in a TBD frame may be a possibility to contain both the Measurement Setup ID and the Measurement Instance ID.

More than one sensing responder may participate in a sensing measurement instance.