IEEE P802.11
Wireless LANs

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| Proposed Draft Text for Sensing Meausrement Instance: General |
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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”.
* Rev 2: Added several co-authors.
* Rev 3: Revised based on comments received at Feb. 8th TGbf call.

## 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.

## Other motion text related to this topic:

Motion 54: Measurement Setup ID is set by Sensing Initiator, the tuple <Sensing Initiator’s MAC address, Measurement Setup ID> is used to identify a specific Measurement Setup.

How the SBP Requesting STA identifies the sensing measurement setup ID is TBD.

## Proposed Spec Text Contribution

*Editor: Include the text below in Clause 11 of TGbf D0.1*

**11.1.4 Sensing measurement instance**

**11.1.4.1 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 11.1.4.2,
* Non-Trigger-based (Non-TB) sensing measurement instance described in 11.1.4.3.

The Measurement Instance ID may be used to identify the sensing measurement instance that utilizes attributes of the same tuple <Sensing Initiator’s MAC address, Measurement Setup ID>.

Editor’s Note: 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 TB sensing measurement instance.