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| WLAN sensing procedure |
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Abstract

Suggestions to modify the SFD text

## 7.1 WLAN sensing (SENS) procedure

### TGbf editor, modify the text in sub-clauses from 7.1.1 until 7.1.5 (not including) as follows

### **7.1.1 Overview**

A sensing procedure allows a STA to perform WLAN sensing and obtain measurement results. A sensing session is an pairwise agreement between a sensing initiator and a sensing responder to participate in the WLAN sensing procedure. (Motion 8, 20/1849r4).

A sensing procedure is composed of one or more of the following: WLAN sensing procedure setup, WLAN sensing measurement instance , and WLAN sensing termination (Motion 15, 20/1851r4).

The WLAN sensing procedure setup includes the WLAN sensing session setup and the WLAN sensing measurement setup as defined below (7.1.2, 7.1.3)

The WLAN sensing measurement instance includes multiple phases as defined below (7.1.4)

The sensing session and the measurement setup may be terminated as defined in 7.1.5 and 7.1.6 respectively.

More than one sensing responder may participate in the WLAN sensing measurement instance Motion 16, 20/0145r5

(Motion 24, 21/0644r4).

(Motion 24, 21/0644r4).

A sensing initiator is a STA that initiates a WLAN sensing procedure. A sensing responder is a STA that participates in a WLAN sensing procedure initiated by a sensing initiator. A sensing transmitter is a STA that transmits PPDUs used for sensing measurements in a sensing procedure. A sensing receiver is a STA that receives PPDUs sent by a sensing transmitter and performs sensing measurements in a sensing procedure (Motion 9, 20/1849r4).

A STA can assume multiple roles in one sensing procedure (Motion 9, 20/1849r4). In a sensing procedure, a sensing initiator might be a sensing transmitter, a sensing receiver, both or neither(Motion 10c, 21/0147r3).

In a sensing session a sensing responder may be a transmitter, receiver, or both.

A sensing session is pairwise and is identified by MAC addresses and/or associated AID/UID (Motion 23, 21/0644r4).

A sensing initiator may maintain multiple sensing sessions (Motion 23, 21/0644r4).

### **7.1.2 WLAN sensing session setup**

In the WLAN sensing session setup of a sensing procedure, a sensing session is established, and operational parameters associated with the sensing session are determined and may be exchanged between STAs (Motion 15, 20/1851r4).

### **7.1.3 WLAN sensing measurement setup**

**7.1.3.1 General**

An optional negotiation process of the Measurement setup is defined that allows for a sensing initiator and a sensing responder to exchange and agree on operational attributes associated with a sensing Measurement instances (Motion 17, 20/0370r1; Motion 23, 21/0644r4).The operational attributes may include responder’s roles, measurement report types and other operational parameters

The Measurement Setup ID may be used to identify operational attributes of the sensing measurement instances (Motion 24, 21/0644r4).

The type of measurement result reported in a sensing procedure shall be decided by its initiator (Motion 13, 21/0147r3).

More than one type of sensing measurement results may be defined (Motion 12, 21/0147r3).

**7.1.3.2 TB sensing measurement setup**

**7.1.3.3 Non-TB sensing measurement setup**

### **7.1.4 WLAN sensing Measurement instance**

**7.1.4.1 General**

In the measurement instance of a sensing procedure, sensing measurements are performed (Motion 15, 20/1851r4)and the results are reported

WLAN measurement instancephases

**7.1.4.2 TB sensing measurement instance**

**7.1.4.2.1 Polling phase**

**7.1.4.2.2 NDPA sounding phase**

NDP can be used for the channel measurement (e.g. CSI) between sensing transmitter and sensing receiver(s) in sub-7 GHz bands. NDP format for sensing is TBD (Motion 22, 21/1015r1).

**7.1.4.2.3 TF sounding phase**

**7.1.4.2.4 TBD LTF security update phase**

### **7.1.4.2.5 Reporting phase**

In the reporting phase of a sensing procedure, sensing measurement results are reported (Motion 15, 20/1851r4).

Results of measurement performed in a sensing procedure should be obtained by or reported to its initiator (Motion 11, 21/0147r3).

Transmission of the Sensing Measurement Report frame is initiated by an MLME primitive. Both immediate and delayed reporting are acceptable (Motion 21, 21/0908r2).

**7.1.4.3 Non-TB sensing measurement instance**

### TGbf editor, append the text below as follows

**7.1.5 WLAN Sensing measurement setup termination**

The initiator may terminate the agreement of the negotiated attributes identified with the Measurement Setup ID. The termination releases Measurement Setup ID value and the initiator may use it for the new agreement.

The responder may indicate disagreement to keep the negotiated attributes identified with the Measurement Setup ID. In this case, the initiator may renegotiate the agreement or terminate it.

### **7.1.5a WLAN Sensing session Termination phase**

The Initiator and the Responder may terminate the session. In the termination phase of a sensing session, STAs stop performing measurements and terminate the sensing session (Motion 15, 20/1851r4).

References:

1. 11-21-0504-02-00bf-specification-framework-for-tgbf
2. P802.11az/D3.2, July 2021
3. IEEE P802.11ax/D8.0, October 2020

SP2

Do you agree to append to the SFD the text changes presented in the sub-clauses from 7.1.1 till 7.1.4.3 in the document 11-21-1322-01-00bf-WLAN sensing procedure text?

SP3

Do you agree to append to the SFD the text presented in the sub-clauses 7.1.5 and 7.1.5a in the document 11-21-1322-01-00bf-WLAN sensing procedure text?