IEEE P802.11
Wireless LANs

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| Specification Framework for TGbf |
| Date: 2021-04-28 |
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Abstract

This document provides the framework from which the draft TGbf amendment will be developed. The document provides an outline of each the functional blocks that will be a part of the final amendment. The document is intended to reflect the working consensus of the group on the broad outline for the draft specification. As such it is expected to begin with minimal detail reflecting agreement on specific techniques and highlighting areas on which agreement is still required. It may also begin with an incomplete feature list with additional features added as they are justified. The document will evolve over time until it includes sufficient detail on all the functional blocks and their inter-dependencies so that work can begin on the draft amendment itself.

# Revision history

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| --- | --- | --- |
| **Revision** | **Date** | **Changes** |
| 0 | March 19, 2021 | Initial draft version. Includes motions up to and including the 802.11 March 2021 plenary meeting. |
| 1 | April 28, 2021 | Includes feedback received on r0 of the document, as well as motions accepted after the March 2021 plenary meeting and before the May 2021 interim meeting. |

# Definitions, acronyms, and abbreviations (Clause 3, [1])

## Definitions

## Abbreviations and acronyms

|  |  |
| --- | --- |
| SENS | WLAN Sensing |
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# General description (Clause 4, [1])

[Editor’s note: 4.3 Components of the IEEE 802.11 architecture, 4.3.19 Wireless network management]

# Layer management (Clause 6, [1])

[Editor’s note: 6.3 MLME SAP interface]

# PHY service specification (Clause 8, [1])

# Frame formats (Clause 9, [1])

[Editor’s note: 9.3 Format of individual frame types]

[Editor’s note: 9.4 Management and extension frame body components]

[Editor’s note: 9.6 Action frame format details]

# MAC sublayer functional description (Clause 10, [1])

# MLME (Clause 11, [1])

[Editor’s note: 11.21 Wireless network management procedures]

## 7.1 WLAN sensing (SENS) procedure

### 7.1.1 Overview

A sensing procedure allows a STA to perform WLAN sensing and obtain measurement results. A sensing session is an instance of a sensing procedure with associated operational parameters of that instance (Motion 8, 20/1849r4).

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

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

A sensing session is composed of one or more of the following phases: setup phase, measurement phase, reporting phase, and termination phase (Motion 15, 20/1851r4).

More than one sensing responder may participate in the measurement phase and reporting phase (Motion 16, 20/0145r5).

A sensing session may be comprised of multiple burst instances (Motion 14, 21/0145r4).

### 7.1.2 Setup phase

In the setup phase of a sensing session, 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).

The 11bf amendment shall define an optional negotiation process in the sensing setup phase for a sensing initiator and sensing responder(s) to exchange and agree on operational parameters associated with a sensing session (Motion 17, 20/0370r1).

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

### 7.1.3 Measurement phase

In the measurement phase of a sensing session, sensing measurements are performed (Motion 15, 20/1851r4).

### 7.1.4 Reporting phase

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

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

### 7.1.5 Termination phase

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

# Sensing measurement types

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

# PHY (sub-7 GHz)

## 9.1 HT PHY specification (Clause 19, [1])

### 9.1.1 HT PHY service interface

## 9.2 VHT PHY specification (Clause 21, [1])

### 9.2.1 VHT PHY service interface

## 9.3 HE PHY specification (Clause 27, [2])

### 9.3.1 HE PHY service interface

## 9.4 EHT PHY specification (Clause 36, [3])

### 9.4.1 EHT PHY service interface

# PHY (60 GHz)

## 10.1 DMG PHY specification (Clause 20, [1])

## 10.2 EDMG PHY specification (Clause 28, [4])

# References

[1] Draft IEEE P802.11-REVme/D0.0

[2] Draft IEEE P802.11ax/D8.0

[3] Draft IEEE P802.11be/D0.4

[4] Draft IEEE P802.11ay/D7.0