IEEE P802.11  
Wireless LANs

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| Proposed Resolution to CIDs 345, 407, and 411 | | | | |
| Date: 2022-10-06 | | | | |
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Abstract

This document includes proposed resolutions to the following comments received in CC40: 345, 407, 411, 771, and 887.

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 407 | 4.3.21.1 | 17.21 | What the rationale is for sensing to be part of Wireless Network Management? Sensing operations or orthogonal to WNM. | Move the content of 4.3.21 to either 4.5 or its own claue 4 subclause. The latter is preferred. |
| 411 | 11.21.18 | 64.32 | There is no reason for Sensing to be specified as a Wireless Network Management Procedure. Move this clause and all sub-clauses up a level in Clause 11. There is no relationship between this and 11v. | Move this clause and all sub-clauses to their own first level sub-clause of clause 11. |
| 771 | 11.21.18 | 64.32 | The concept of WLAN sensing procedure should cover the baseline WLAN sensing procedure, SBP procedure, and DMG sensing procedure. | Change the title of clause 11.21.18 to "Baseline WLAN sensing procedure" |
| 887 | 11.21 | 64.26 | Somewhere in the spec should indicate subclauses 11.21.18 and 11.21.19 are for 1-7.125 GHz bands, and 11.21.20 is for above 45 GHz bands | as in comment |

**Proposed resolution**: Revised

**Discussion**:

* Sensing was originally defined as part of WNM due to its similarities to fine timing measurement (that is, ranging), which is defined to be part of the WNM service.
* Fine timing measurement was defined as part of WNM because it is an “evolution” of a procedure defined in 11v called timing measurement (used to support clock synchronization for QoS support).
* Thus, the commenter of 407 and 411 is correct in that (1) there is no relationship between sensing and 11v, and (2) moving sensing out of WNM-related clauses is recommended.

**Modifications**:

* Editor –
  + Create a new sub-clause, 11.55, for “Sensing procedures”.
  + Move 11.21.18 (WLAN sensing procedure), 11.21.19 (SBP procedure), and 11.21.20 (DMG sensing procedure) to the new subclauses 11.55.1, 11.55.2, and 11.55.3, respectively.
  + Move the DMG SBP procedure subclause (11.21.20.10) to the new subclause 11.55.4.
    - Note: This modification will change the numbering of all figures and tables in Clause 11 (TGbf draft).
* Editor – Replace the existing draft text in Clause 4, which is currently defined as a subclause under 4.3.21 (Wireless network management), with the following:

**4. General description**

**4.11 Sensing**

Sensing is the use of PHY and MAC features of IEEE 802.11 stations to obtain measurements that may be useful to estimate features such as range, velocity, and motion of objects in an area of interest. Measurements obtained with sensing may be used to enable applications such as presence detection and gesture classification(#111, #370, #412, #134, #324, #581, #802, #817, #801).

Four procedures are defined to enable sensing: WLAN sensing procedure (see 11.55.1 (WLAN sensing procedure)), sensing by proxy (SBP) procedure (see 11.55.2 (SBP procedure)), DMG sensing procedure (see 11.55.3 (DMG sensing procedure)), and DMG SBP procedure (see 11.55.4 (DMG SBP procedure)).

The WLAN sensing procedure allows a non-DMG STA to perform sensing. The SBP procedure enables a non-AP non-DMG STA to request a non-DMG AP to perform sensing on its behalf(#111, #387, #582, #873, #135, #677). Similarly, the DMG sensing procedure allows a DMG STA to perform sensing, and the DMG SBP procedure enables a non-AP DMG STA to request a DMG AP to perform sensing on its behalf.

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 345 | 11.21.18.5 | 67.56 | The concatenation in the naming "11.21.18.5 Sensing measurement instance: General" looks not good. Sub-clauses 11.21.18.6 and 11.21.18.7 do not fit other sub-clauses on this heading level and should be one level down. If the regulation does not allow to have 6 levels of the heading, I propose shifting the WLAN sensing procedure one level up. | Add subclause General under 11.21.18.5 Sensing measurement instance. Bring sub-clauses 11.21.18.6 and 11.21.18.7 one level down. Align the numbering and the text respectively. |

**Proposed resolution**: Revised

**Discussion:** Using the same format of Rev. me’s draft, the next version of 11bf’s draft will use H6 and H7.

**Modifications**:

* Editor – Move 11.21.18 (WLAN sensing procedure), 11.21.19 (SBP procedure), and 11.21.20 (DMG sensing procedure) to 11.55.1, 11.55.2, and 11.55.3, respectively. Move 11.21.20.10 (DMG SBP procedure) to 11.55.4.
  + Note: Same as resolution to CIDs 407, 411, 771, and 887.
* Editor – Create subclause 11.55.1.5 (Sensing Measurement Instance), and move 11.21.18.5 (Sensing measurement instance: General), 11.21.18.6 (TB sensing measurement instance), and 11.21.18.7 (Non-TB sensing measurement instance) to 11.55.5.1 (General), 11.55.5.2 (TB sensing measurement instance), and 11.55.5.3 (Non-TB sensing measurement instance), respectively.