IEEE P802.11  
Wireless LANs

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| SA1 comment resolution for sensing capabilities | | | | |
| Date: July 26, 2024 | | | | |
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Abstract

This submission proposes resolutions to the following Initial SA ballot CIDs.

* 6025, 6202.

The text used as reference is 802.11bf D4.0.

Revisions:

* Rev 0: Initial version of the document.

**Comments:**

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| **CID** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 6025 | 11.55.1.3 | 140.11 | Passive scanning to discover an APs sensing capabilities is not possible since the Sensing Capabilities element is not included in Beacons. | Add Sensing Capabilities element to Beacons as a mandatory element when sensing is enabled at the AP. | **Rejected.**  Passive scanning to discover an AP’s sensing capabilities is achieved by the Extended Capabilities field (Table 9-192) in Beacon frame.  Then, STA can use (Re)Association Request + Response to discover an APs sensing capabilities.  Therefore, when sensing is enabled at the AP, AP’s Beacon doesn’t have to carry Sensing Capabilities element. |
| 6202 | 11.55.1 | 0.00 | From 11.55.1.1 having "Before initiating a sensing procedure, two sensing STAs may exchange their sensing capabilities (see 11.55.1.3 (Sensing capabilities exchange)) to obtain the sensing capabilities of each other." and 11.55.1.3 starting with "To indicate its sensing capabilities, a sensing STA shall include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Response frame, (Re)Association Response frame, (Re)Association Request frame, and Measurement Query frame. A sensing STA may include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Request frame.", I read as the indication of the capabilities is not mandatory and the sensing STA can choose to indicate their capabilities or not. However, in 9.3.3, the frames which have the Sensing Capabilities element have notes saying "The element is defined in 9.4.2.330 (Sensing Capabilities element) and is present if dot11SensingImplemented is true. Otherwise, the element is not present." for that element. It is explained that the element is always present if the STA implements the sensing. So, there is a contradiction between the sections under 9.3.3 and those under 11.55.1. Make them consistent. | Change "Before initiating a sensing procedure, two sensing STAs may exchange their sensing capabilities (see 11.55.1.3 (Sensing capabilities exchange)) to obtain the sensing capabilities of each other." in 11.55.1.1 to "Before initiating a sensing procedure, two sensing STAs shall exchange their sensing capabilities (see 11.55.1.3 (Sensing capabilities exchange)) to obtain the sensing capabilities of each other." And change "To indicate its sensing capabilities, a sensing STA shall include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Response frame, (Re)Association Response frame, (Re)Association Request frame, and Measurement Query frame." in 11.55.1.3 to "A sensing STA shall include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Response frame, (Re)Association Response frame, (Re)Association Request frame, and Measurement Query frame." | **Revised.**  Agree with the proposed changes by commenter.  TGbf Editor make changes specified in 11-24/1348r0.  (<https://mentor.ieee.org/802.11/dcn/24/11-24-1348-00-00bf-sa1-comment-resolution-for-sensing-capabilities.docx>  ) |

**11.55 WLAN sensing**

**11.55.1 Sensing procedure**

**11.55.1.1 Overview**

***TGbf Editor: Please revise clause 11.55.1.1 (Overview) as below.***

…

Before initiating a sensing procedure, two sensing STAs shall (#6202) exchange their sensing capabilities (see 11.55.1.3 (Sensing capabilities exchange)) to obtain the sensing capabilities of each other.

…

**11.55.1.3 Sensing capabilities exchange**

***TGbf Editor: Please revise clause 11.55.1.3 (Sensing capabilities exchange) as below.***

A (#6202) sensing STA shall include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Response frame, (Re)Association Response frame, (Re)Association Request frame, and Measurement Query frame. A sensing STA may include the Sensing Capabilities element (see 9.4.2.330 (Sensing Capabilities element)) in a Probe Request frame.

**SP: Move to approve resolutions to CIDs 6025, 6202,**

**as specified in doc.: 11-24/1348r0 and incorporate the text changes into the latest TGbf draft.**