IEEE P802.11  
Wireless LANs

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| **TGbf CC40 CR for CIDs for Sensing Measurement Setup – Part 1** | | | | |
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Abstract

This submission proposes resolutions for following 13 CIDs received for TGbf CC40:

182, 415, 147, 754, 181, 416, 535, 782, 810, 811, 218, 586, 836

Revisions:

* Rev 0: Initial version of the document.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbf Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbf Draft (i.e., they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbf Editor” are instructions to the TGbf editor to modify existing material in the TGbf draft. As a result of adopting the changes, the TGbf editor will execute the instructions rather than copy them to the TGbf Draft.***

**List of CIDs**

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 182 | Mahmoud Kamel | 11.21.18.1 | 64.60 | It is stated that A STA acting as a sensing initiator may be neither a sensing transmitter nor a sensing receiver. This may be true for TB sensing measurement instances, but this is not the case for non-TB sensing measurement instances. | Add a text to specify that in non-TB measurement instances the initiator cannot be neither a sensing transmitter nor a sensing receiver. | Revised  The cited paragraph uses “may” statement which means that it can also cover the roles in non-TB case commented. However, to provide more information, the revised text added a NOTE.  **TGbe editor, please make changes as shown in doc 11-22/1402r0 tagged as CID 182** |
| 415 | Assaf Kasher | 11.21.18.4 | 67.40 | How are the roles of of the sensing responders determiend in a sensing setup? | Indicate which fields are used to control that. | Rejected  How to control fields corresponding to the cited paragraph was already referred by the text “see 9.4.2.317 (Sensing Measurement Parameters element))” which describes them. |
| 147 | Mahmoud Kamel | 11.21.18.4 | 67.21 | "Otherwise, the sensing responder shall set the Status Code field to TBD in the Sensing Measurement Setup Response frame". It is not clear if the TBD in this sentence indicates the case when the responder rejects the requested sensing measurement setup or it rejects the parameters of the requested sensing measurement setup. | Define the TBD in this sentence and state clearly the case. Also, differentiate between the case when the responder is rejecting the requested measurement setup request or rejecting the parameters of the requested measurement setup | Revised  Incorporate the changes as shown in 11-22/1245r5.  **Note to the Editor:**  The identified statement was revised during CC40 in the approved document 11-21/1245r5. No further changes are required for the resolution of this CID in this document. |
| 754 | Alireza Raissinia | 11.21.18.4 | 67.44 | Change the text "whether the sensing responder shall send or not send Sensing Measurement Report frames" to | whether the sensing responder shall optionally send Sensing Measurement Report frames' | Accepted  **TGbe editor, please make changes as shown in doc 11-22/1402r0 tagged as CID 416** |
| 181 | Mahmoud Kamel | 9.4.2.317 | 33.37 | It is not clear if the Sensing Transmitter subfield and the Sensing Receiver subfield can be both set to 0. The specs should explicitly indicate that this setting is not allowed since the responder cannot be neither a transmitter nor a receiver | Add a text to specify that the case where both the Sensing Transmitter subfield and the Sensing Receiver subfield be set to 0 is not allowed. One suggestion to such text would be "The Sensing Transmitter subfield and the Sensing Receiver subfield cannot be both set to 0 in the same Sensing Measurement Setup" | Revised  Agree in principle with the commenter. The revised text provides that it is invalid to set both of subfields to 0 at the same time.  **TGbe editor, please make changes as shown in doc 11-22/1402r0 tagged as CID 181** |
| 416 | Assaf Kasher | 11.21.18.4 | 67.40 | What happens if both the transmitter and receiver fields are set to 0 in the sensing measurement ? | indicate the behavior in this case or define it is invalid. | Revised  Agree in principle with the commenter. The revised text provides that it is invalid to set both of subfields to 0 at the same time.  **TGbe editor, please incorporate the changes as shown in 22/1402r0 under CID 181** |
| 535 | Dong Guk Lim | 11.21.18.4 | 67.21 | Add the description for Deny or Reject case -DENIED\_SENSING\_MEASUREME NT\_SETUP | As in comment | Rejected  We don’t need further descriptions since “Otherwise” means that the sensing responder does not accept the requested parameters. However, for the preferred case as a special one, we added the requirements to provide the preferred parameters. |
| 782 | Dibakar Das | 11.21.18.4 | 67.09 | Define the frame format of Sensing Measurement Setup Request and Sensing Measurement Setup Response frames in clause 9. | As in comment. | Rejected  We already had the formats of Sensing Measurement Setup Request frame in 9.6.7.49 (Sensing Measurement Setup Request frame format) and Sensing Measurement Setup Response frame in 9.6.7.50 (Sensing Measurement Setup Response frame format). |
| 810 | James Yee | 11.21.18.4 | 67.34 | What does 'determined' mean? Why is it 'determined' if it is part of a 'Request' that can be rejected? | Please clarify. | Rejected  Essentially, the paragraph means that the roles have to be determined (negotiated) only during measurement setup phase not other phases. If the request is rejected, the sensing initiator can try to request the roles later during another sensing measurement setup as well |
| 811 | James Yee | 11.21.18.4 | 67.43 | Does "sensing receiver or sensing trans- mitter and sensing receiver to the sensing responder" exclude "sensing transmitter" as the only role? | Please clarify. | Rejected  The answer for the comment is “Yes”. The sensing responder as a sensing transmitter doesn’t need to report anything. Therefore, the case is not covered from the next sentence “it also defines whether the sensing responder shall send  or not send Sensing Measurement Report frames in sensing measurement instances that result from the sensing  measurement setup” |
| 218 | Claudio da Silva | 9.4.2.317 | 33.58 | The condition should be made on the Sensing Transmitter/Receiver subfields within the field. | Replace "If the sensing initiator is a sensing receiver, it is reserved." with "The subfield is reserved when the Sensing Receiver subfield is set to 0." | Revised  Agree in principle with the commenter. The text was revised according to the proposed changes.  **TGbe editor, please make changes as shown in doc 11-22/1402r0 tagged as CID 218** |
| 586 | Chaoming Luo | 9.4.2.317 | 33.58 | "If the sensing initiator is a sensing receiver, it is reserved." is not accurate, because if the sensing initiator is a sensing receiver and transmitter, Measurement Report Type shall be set. | Change to "If the sensing responder is not a sensing receiver, it is reserved" Add a note "If the Sensing Measurement Report subfield is set to 0, how the receiver transmit the measurment report to the initiator is out of scope" | Revised  Agree in principle with the commenter. The text was revised according to the proposed changes.  However, the proposed Note as informative is not necessary for this part.  **TGbe editor, please incorporate the changes as shown in doc 11-22/1402r0 tagged as CID 218** |
| 836 | Chris Beg | 9.4.2.317 | 33.58 | The second sentence is not complete, as there are other cases not covered when the measurement report type subfield can be ignored. The measurement report type subfield should be considered meaningful only when the sensing measurement report subfield bit is set to 1. | Change text to:  "If the Sensing Measurement Report subfield is 0, then the Sensing Measurement Report Type subfield is reserved." | Revised  The condition of setting Sensing Measurement Report subfield is not needed because when Sensing Receiver subfield is set 0, it is reserved.  Instead, the text was revised to make it clear by using the condition of setting Sensing Receiver subfield  **TGbe editor, please incorporate the changes as shown in doc 11-22/1402r0 tagged as CID 218** |

**Proposed spec text:**

***TGbf editor: The baseline for this document is 11bf D0.2 and 22/1245r5***

11.21.18 WLAN sensing procedure

11.21.18.1 Overview

***TGbf editor: Please modify the subclause 11.21.18.1 (Overview) as follows:***

A STA acting as a sensing initiator may participate in a sensing measurement instance as a sensing transmitter, a sensing receiver, both a sensing transmitter and a sensing receiver, or neither a sensing transmitter nor a sensing receiver. A STA acting as a sensing responder may participate in a sensing measurement instance as a sensing transmitter, a sensing receiver, or both a sensing transmitter and a sensing receiver.

(#182)NOTE 1—In a TB sensing measurement, a sensing initiator may choose not(#473, #876) to participate in a sensing measurement instance as a sensing transmitter nor sensing receiver but may still initiate the WLAN sensing procedure and optionally obtain sensing measurement reports.

(#182)NOTE 2-In a non-TB sensing measurement, a sensing initiator participates as a sensing transmitter, a sensing receiver, or both.

***TGbf editor: Please modify the subclause 11.21.18.4 (Sensing measurement setup) as follows:***

11.21.18.4 Sensing measurement setup

Sensing measurement setup allows for a sensing initiator and a sensing responder to exchange and agree on operational parameters associated with sensing measurement instance(s).

To perform a sensing measurement setup, a sensing initiator may transmit a Sensing Measurement Setup Request frame to a sensing responder with which it intends to perform a sensing measurement setup

After receiving the Sensing Measurement Setup Request frame, the sensing responder shall transmit a Sensing Measurement Setup Response frame to the sensing initiator which transmitted the Sensing Measurement Setup Request frame, according to the following rules:

— If the sensing responder accepts the requested sensing measurement setup parameters in the received Sensing Measurement Setup Request frame, it shall set the Status Code field to SUCCESS in the Sensing Measurement Setup Response frame.

—Otherwise, the sensing responder shall set the Status Code field to DECLINED\_SENSING\_MEASUREMENT\_SETUP or PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED in the Sensing Measurement Setup Response frame. If the Status Code field is set to PREFERRED\_MEASUREMENT\_SETUP\_PARAMETERS\_SUGGESTED, the sensing responder shall provide its preferred sensing measurement parameters in the Sensing Measurement Setup Response frame.

The sensing responder should transmit the Sensing Measurement Setup Response frame within TBD ms in response to the Sensing Measurement Setup Request frame.

The Measurement Setup ID shall be assigned by a sensing initiator, the tuple <sensing initiator’s MAC address, Measurement Setup ID> is used to uniquely identify a specific sensing measurement setup.

During a sensing measurement setup, the role(s) of a sensing responder shall be determined by a sensing initiator as one of following (see 9.4.2.317 (Sensing Measurement Parameters element)):

— Sensing receiver

— Sensing transmitter

— Sensing transmitter and sensing receiver

If a Sensing Measurement Setup Request frame assigns the role of either sensing receiver or sensing transmitter and sensing receiver to the sensing responder, it also defines whether the sensing responder shall (#754)optionally send Sensing Measurement Report frames in sensing measurement instances that result from the sensing measurement setup.

The assignment of sensing transmitter and/or sensing receiver role(s) of a STA corresponding to a Measurement Setup ID shall be fixed until the sensing measurement setup is terminated.

The assignment of measurement report type of a sensing responder as a sensing receiver corresponding to a Measurement Setup ID shall be fixed until the sensing measurement setup is terminated.

***TGbf editor: Please modify the subclause 9.4.2.317 (Sensing Measurement Parameters element) as follows:***

**9.4.2.317 Sensing Measurement Parameters element**

The Sensing Transmitter subfield is set to 1 to indicate a sensing transmitter role for a sensing responder corresponding to the measurement setup ID; and is set to 0 otherwise.

The Sensing Receiver subfield is set to 1 to indicate a sensing receiver role for a sensing responder corresponding to the measurement setup ID; and is set to 0 otherwise.

(#181) The Sensing Transmitter subfield and the Sensing Receiver subfield shall not be set to 0 simultaneously in the same Sensing Measurement Setup Request frame or if present in the same Sensing Measurement Setup Response frame.

The Sensing Measurement Report subfield is reserved when the Sensing Receiver subfield is set to 0. When the Sensing Receiver subfield is set to 1,

— the Sensing Measurement Report subfield is set to 1 to indicate that the sensing responder sends Sensing Measurement Report frames in sensing measurement instances that result from the sensing measurement setup.

— the Sensing Measurement Report subfield is set to 0 to indicate that the sensing responder does not send Sensing Measurement Report frames in sensing measurement instances that result from the sensing measurement setup.

The Measurement Report Type subfield indicates the type of measurement result reported in sensing measurement instance(s) corresponding to the measurement setup ID. (#218) This subfield is reserved, when the Sensing Receiver subfield is set to 0.