IEEE P802.11
Wireless LANs

|  |
| --- |
| Resolutions for Instance Comments in CC40 - Part 1 |
| Date: 2022-08-02 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Cheng Chen | Intel |  |  | cheng.chen@intel.com |
|  |  |  |  |  |

Abstract

This submission proposes resolutions to editorial comments submitted in CC40. The text used as reference is D0.2.

CIDs: 131 161 432 163 309 ~~345~~ 400 564 ~~566~~ 660 760 885

Revision history:

R0: Original version

R1: Made changes to the resolutions of the following CIDs:

* CID 345, 566: Reassign it to the Editor.
* CID 161, 432: Add definition for “availability window”.
* CID 564: Revise the resolution based on comments received at the TGbf call.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 131 | 11.21.18.7 | 71.61 | If either I2R or R2I NDP is not needed, isn't there a more efficient way to reduce airtime usage? | See comment |

**Proposed resolution**: Rejected

**Discussion**: We have talked about the need to include both I2R NDP and R2I NDP in a non-TB sensing measurement instance extensively in DCN1433r3. Moreover, the comment fails to identify a specific issue to be addressed and the proposed change is not actionable.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 161 | 11.21.18.6.1 | 69.33 | "availability period" is not defined in the draft or in the 802.11 specs. | Define the "availability period" term or use a more commonly used term. |
| 432 | 11.21.18.6.1 | 69.33 | "during the availability period" - what is an "availability period", where was is discussed in reference to sensing, when is it negotiated? | define "availability period" or point to where it is defined |

**Proposed resolution**: Revised

**Discussion**: We can use the “availability window” that is defined in 802.11az spec.

**Modifications**: Editor – Modify the following pages/lines as indicated:

In the polling phase, an AP sends a Sensing Polling Trigger frame to one or more STAs that are assigned to be polled in the TB sensing measurement instance and expected to participate during the availability window, and the polling phase shall be the first exchange in all TB sensing measurement instances for the measurement setup.

Add the following paragraph in 11.21.18.6:

An availability window is a period of time during which the AP and one or more STAs are scheduled to participate in TB sensing measurement instance(s).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 163 | 11.21.18.6.1 | 69.41 | "The AP shall send a Sensing Polling Trigger frame to one or more STAs and shall allocate each RU in thePolling Trigger frame to only one STA". This sentence is confusing and may convey a meaning that is not intended. This sentence is one example where "each" may be used interchangeably with "every". In this case, the sentence may read as every RU in the Polling Trigger frame shall be allocated to only one STA. Also, this sentence may mandate that all RUs shall be allocated which is not the case if the number of STAs is less than the number of RUs. | Change the sentence to "The AP shall send a Sensing Polling Trigger frame to one or more STAs and allocate one different RU to each STA " |

**Proposed resolution**: Revised

**Discussion**:

1. The sentence says “The AP…shall allocate each RU in the Polling Trigger frame to only one STA.” So, there is no mandate that the AP shall use all RUs.
2. If one RU is allocated to more than one STA, we will not be able to identify which of the STAs respond with a CTS-to-self, which violates the intention of the polling phase.

**Modifications**: Editor – Modify the following pages/lines as indicated:

The AP shall send a Sensing Polling Trigger frame to one or more STAs and allocate each RU indicated in the Polling Trigger frame to only one STA.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 309 | 11.21.18.6.2 | 69.52 | "In the NDPA sounding phase, the AP, which is a sensing transmitter, sends NDP to one or more STAs to perform sensing measurement."Should the NDP be an I2R NDP? | Change NDP to I2R NDP |

**Proposed resolution**: Accepted

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 400 | 11.21.18.6.1 | 69.35 | In a TB sensing measurement instance, it is unclear why the Polling phase is mandatory not optional. | Clarify the importance of the Polling phase for a TB sensing measurement instance |

**Proposed resolution**: Rejected.

**Discussion**: We have talked about the importance of the polling phase in a TB sensing measurement instance extensively in DCN990r2. Moreover, the comment fails to identify a specific issue to be addressed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 564 | 11.21.18.7 | 71.54 | It is not clear whether the bandwidth for the transmission of the I2R NDP and R2I NDP is the same. | Add the text to indicate that the same bandwidth is used for the transmission of I2R NDP and R2I NDP in non-TB sensing measurement. |

**Proposed resolution**: Revised.

**Discussion**: Agree with the commenter that the bandwidth for I2R NDP and R2I NDP should be the same bandwidth. Moreover, they should use the same bandwidth with the Sensing NDPA too.

**Modifications**: Editor – Revise the following paragraph in 11.21.18.7:

A non-AP STA, acting as a sensing initiator, shall initiate a non-TB sensing measurement instance by transmitting a Sensing NDP Announcement frame addressed to the AP, followed by an Initiator-to-Responder (I2R) NDP after SIFS. The non-AP STA shall transmit the I2R NDP with the same bandwidth as the PPDU carrying the Sensing NDP Announcement frame. In response to the correctly received Sensing NDP Announcement frame addressed to itself, SIFS after the I2R NDP, the AP shall transmit a Responder-to-Initiator (R2I) NDP to the non-AP STA. The AP shall transmit the R2I NDP with the same bandwidth as the PPDU carrying the Sensing NDP Announcement frame.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 660 | 11.21.18.7 | 71.50 | The sentence just says the Non-TB Sensing applies for the scenario that non-AP STA is the initiator and AP is the sensing responder | As there is currently Mobile AP defined in 802.11 and there may be more peer-to-peer technology in further 802.11, there should be at least a note to allow the Non-TB Sensing can be applied when (Mobile)-AP is the initiator and/or STA is the responder |

**Proposed resolution**: Rejected

**Discussion**:

1. The concept of Mobile AP was only introduced in 802.11be as part of a specific form “NSTR mobile AP MLD”.
2. We have agreed that the non-AP STA-to-non-AP STA sensing will be taken care of by the responder-to-responder (R2R) sensing as one optional scenario in a TB sensing measurement instance.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 760 | 11.21.18.6.1 | 69.44 | change the word 'can' to 'may' as this is normative text | As per comment |

**Proposed resolution**: Accepted

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 885 | 11.21.18.6.3 | 70.13 | Is the initiator always the intended sensing receiver? If not, it is better not to call the NDP as R2I NDP. | Just call it "NDP" |

**Proposed resolution**: Rejected

**Discussion**: The 1st paragraph of this section clearly says:

In the TF sounding phase, the AP, which is a sensing receiver, solicits NDP transmissions from one or more STAs to perform sensing measurement.

So, in the TF sounding phase, the AP is always the intended receiver of the R2I NDP transmission.

## SP

Do you support the proposed resolutions to the following CIDs and incorporate the text changes into the latest TGbf draft: CID 131 161 432 163 309 345 400 564 566 660 760 885?

Y/N/A