IEEE P802.11
Wireless LANs

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| Comment Resolution subclause 5.2.3 |
| Date: 2021-08-26 |
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Abstract

This submission resolve the following comments for subclause 31.6 of 802.11bd D2.0:

* 2050, 2066, 2068, 2069, 2130, 2131, 2132, 2134, 2211, 2241, 2242, 2243, 2248, 2250

Revisions:

 R3: updating the comment resolution of 2068, 2241, and 2248 per the feedback received during the discussin

 R4: removing option 1 of CID 2068 and 2241

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 TGax Draft. This introduction is not part of the adopted material.

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

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

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| **CID** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 2050 | 22 | 53 | "The channel width member indicates either 10 MHz or 20 MHz width used to transmit the MSDU as defined in ." The parameter name is channel width and "member" is not needed. It is trying to refer to Table 5-2, but the reference is missing. And a space is missing after the period. | Change to read "The channel width indicates either 10 MHz or 20 MHz width used to transmit the MSDU as defined in Table 5-2. " | RevisedTGbd editor to replace the sentence “The channel width member indicates either 10 MHz or 20 MHz width used to transmit the MSDU as defined in .” with “The channel width member indicates either 10 MHz or 20 MHz width used to transmit the MSDU as defined in Table 5-2.” |
| 2066 | 21 | 42 | The radio environment request/report vector parameters are defined for use in NGV transmission and should also be defined for 60GHz band operation. | P21L41 Replace "This parameter is presentwhen dot11OCBActivated is true and absent otherwise." with"This parameter is presentwhen dot11NGVActivated is true or dot11DMGOptionImplemented is true and dot11OCBActivated is true, and absent otherwise.P23L64 Replace "This parameter is presentwhen dot11NGVActivated is true and absent otherwise." with"This parameter is presentwhen dot11NGVActivated is true or dot11DMGOptionImplemented is true and dot11OCBActivated is true, and absent otherwise.Change the definition of each member in the vectors to support values for 60GHz band. Submission will be provided. |  |
| 2068 | 21 | 41 | "This parameter is presentwhen dot11OCBActivated is true""dot11NGVActivated" instead of "dot11OCBActivated" should be intended. | As in the comment. | RevisedDiscussion: it is necessary for non-NGV STA to use the radio environment request vector. A new MIB variable is defined to indicate whether a non-NGV STA supports radio environment Tx/Rx vector.TGbd to make changes in 11-21/1414R4 under 2068.  |
| 2069 | 22 | 21 | MCS value 15 is not reserved value currently. The other value should be assigned for "decided by MAC layer" case. | P22L21 Propose to replace "15" with "-1". Replace "decide" with "decided". | RevisedTGbd editor to replace the paragraph @P22L18 with “The data rate/NGV-MCS member indicates the data rate of the PPDU carrying the MSDU if the PPDU format hasvalue 0. The data rate can be either 0 (decided by MAC layer), 3, 4.5, 6, 9, 12, 18, 24, or 27 Mb/s as defined in Table 17-4. If the PPDU format has value 1, the data rate/NGV- MCS member indicates the NGV MCS index as defined in 32.5 (Parameters forNGV-MCSs) with an exception that the value 14 means the actual MCS is decided by MAC layer.” |
| 2130 | 21 | 48 | Reads "PPDU format (". Add "non-NGV/NGV)" as in 5.2.4.2 page 24 line 4. | as in comment | Accepted |
| 2131 | 21 | 50 | As on page 22 line 22 the member is "data rate/MCS" replace "data rate" with "data rate/NGV MCS index" | as in comment | RevisedTGbd editor to replace “rate” @P21L50 with “data rate/NGV-MCS”.TGbd editor to replace “data rate/MCS” with “data rate/NGV-MCS” through the subclause. |
| 2132 | 22 | 18 | The paragraph starting on line 18 is addressing two things. First, if Clause 17 Non-NGV PPDU is used, it uses the data rate as no MCS index is defined for Clause 17 10 MHz PPDUs. Second, if an NGV PPDU is used, the data rate is ambiguous see Clause 32.5. Hence a combination of the NGV-MCS Index, channel width and number of spatial streams must be used to specifiy the specific PHY transmission mode. Further Clause 32.5 defines MCS 15. Hence, a different value than "15" needs to be chosen to indicate that the MAC layer decides the actual MCS.Therefore, the paragraph should be changed as follows:The data rate/NGV MCS index member indicates the data rate of the PPDU carrying the MSDU if the PPDU format hasvalue 0. The data rate can be either 0 (decided by MAC layer), 3, 4.5, 6, 9, 12, 18, 24, or 27 Mb/s according to Table 17-4. If the PPDU format has value 1, the data rate/NGV MCS index member indicates the NGV MCS index. The NGV MCS index is defined in 32.5 (Parameters forNGV-MCSs) with an exception that the value 16 means that the actual MCS is decide by MAC layer. | as in comment | RevisedSee CID 2069 |
| 2134 | 22 | 35 | "number of repetitions" member does not define all allowed values. In the TXVECTOR N\_PPDU\_REP has allowed values from 0 to 3. Hence rephrase the subclause "where the value 15 means it is up to MAC layer to decide " to "where the values can be in the range 0 to 3 or 15. The value 15 means it is up to MAC layer to decide" | as in comment | Accepted |
| 2211 | 21 | 32 | How is the new parameter to MA-UNITDATA primitives (req and ind) handled at the top of the 802.11 stack? At the very least, there need to be changes to 802.1AC (WG 11 will need to liaise with 802.1), and the mapping of the Standard MAC SAP to 802.11 SAP, to clarify how this parameter is handled. More likely, somewhere in the stack this is going to get the "implementation dependent matter" treatment for how this really works. In which case, it could be an "implementation dependent matter" within 802.11 scope, and we don't need to disrupt the MAC SAP or the (sub)layers above 802.11. | Remove the radio environment request vector paramter to both MA-UNITDATA.request and MA-UNITDATA.indication, and change this function to a local/implementation matter how the 802.11bd PHY is managed for this operational attributes. For example, this could be a PLME interface change, and the SME is responsible for the appropriate management. | RejectedDiscussion: the radio environment request vector parameter is used by the MAC for PPDU transmission. Different MSDUs may have different Tx parameters that are known by the up layer. |
| 2241 | 21 | 42 | There is a discrepancy between whether use of the radio environment request vector in MA-UNITDATA primitive extensions in Clauses 5.2.3 and 5.2.5 are linked to the dot11OCBActivated or dot11NGVActivated MIB parameters. Inclusion of the radio environment request vector in the MA-UNITDATA.request is if and only if dot11OCBActivated is true. By contrast, inclusion of the same vector in the MA-UNITDATA-STATUS-indication primitive is if and only if dot11NGVActivated is true. I believe the condition for inclusion should be the same in both cases, i.e. based on dot11NGVActivated. | Change "dot11OCBActivated is true" to "dot11NGVActivated is true" | Revised.Discussion: it is necessary for non-NGV STA to use the radio environment request vector. A new MIB variable is defined to indicate whether a non-NGV STA supports radio environment Tx/Rx vector.TGbd to make changes in 11-21/1414R4 under 2241.  |
| 2242 | 22 | 51 | The primary channel indicator in the radio environment request vector (Clause 5.2.3) and in the radio environment status vector (Clause 5.2.4) is only meaningful if the channel width indicator is set to 1 (indicating 20 MHz as per Table 5-2). That dependency on the channel width indicator should be included in the description of the primary channel indicator. The primary channel indicator should be absent if the channel width is not 20 MHz. Indicating the dependency is consistent with the indication of the dependency of the fallback member on the channel width. | Add the following sentence to the pirmary channel indicator text: "This member is present when dot11NGVActivated is true and when channel width member is 20 MHz and is absent otherwise." | Accepted. |
| 2243 | 23 | 22 | The fallback member is described as optional when the channel width is 20 MHz. The fallback member should be mandatory in that case. Also, the fallback member should be present only when dot11NGVActivated is true, but the text incorrectly ties it to dot11OCBActivated | Reword the final sentence of the fallback member paragraph to read: "This member is present when dot11NGVActivated is true and when the channel width member is 20 MHz and is absent otherwise." | Accepted |
| 2248 | 23 | 26 | The transmit power level of the radio environment request vector should be in dBm, not in dBm/10 MHz. It si not a power spectral density. | In the paragraph for the transmit power level member, change "dBm/10 MHz" to "dBm" in four places. [Editorial]: Also, in the second sentence of the paragraph, insert a comma between "MSDU" and "in units of" | RevisedDiscussion: Generally agree with the commenter that the name and the description are not consistant. Since the Tx BW can be either 10MHz or 20MHz, the power spectral density is used in the name.TGbd editor to change “transmit power level” to “transmit power spectral densirty” in  **5.2.3.2, 31.5** |
| 2250 | 22 | 46 | The description of the frequency band parameter in clauses 5.2.3 and 5.2.4 should indicate what parameter values are valid. It is not clear what this parameter is intended to convey. | Add a sentence indicating what other values besides 0 are valid and what frequency band each value corresponds to. Apply the same change to line 26 on page 24 for clause 5.2.4.2. | RevisedTGbd editor to replace the paragraph @ P22L46 with “The frequency band member indicates the band where the MSDU is transmitted where the value 0 means theMAC layer will select the frequency band, and the value 1 means 5GHz band.”TGbd editor to replace the paragraph @ P24L25 with “The frequency band member indicates the band where the MSDU is transmitted where the value 0 means theMAC layer will select the frequency band, and the value 1 means 5GHz band.” |

**Annex C**

(normative)

**ASN.1 encoding of the MAC and PHY MIB**

**C.3 MIB Detail**

***TGbd editor: Please add the following before dot11NGVActivated in Dot11StationConfigEntry: (#2068,2241)***

dot11NONNGVRadioEnvironmentSupported TruthValue,

***TGbd editor: Please add the following MIB variable definition: (#2068,2241)***

dot11NONNGVRadioEnvironmentSupported OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is a control variable. It is written by an external management

entity or the SME. Changes take effect as soon as practical in the implementations.

A non-NGV STA supports the radio environment transmit vector and the radio environment status vector when this attribute is true. This STA also has dot11OCBActivated equal to true."

DEFVAL { false }

::= { dot11StationConfigEntry 203}

**5. MAC service definition**

**5.2.3 MA-UNITDATA.request**

**5.2.3.2 Semantics of the service primitive**

***TGbd editor: Please change the paragraph @ P21 L39 as follows: (#2068,2241)***

The radio environment request vector parameter contains information that allows higher layer entities to

control the PPDU format, encoding, and MPDU handling for NGV transmission. This parameter is present

when dot11NGVActivated is true or dot11NONNGVRadioEnvironmentSupported is true, and absent otherwise.

**5.2.4 MA-UNITDATA.indication**

**5.2.4.2 Semantics of the service primitive**

***TGbd editor: Please change the paragraph @ P23 L62 as follows: (#2068,2241)***

The radio environment status vector parameter provides information to higher layer entities about the current

radio environment and the most recent reception. This parameter shall be present when dot11NGVActivated

is true or dot11NONNGVRadioEnvironmentSupported is true, and absent otherwise.

**5.2.5 MA-UNITDATA-STATUS.indication**

**5.2.5.2 Semantics of the service primitive**

***TGbd editor: Please change the paragraph @ P25 L9 as follows: (#2068,2241)***

The radio environment request vector parameter (see 5.2.3.2 (Semantics of the service primitive)) contains

information that is used by the MAC entity to report the used format, encoding, and MPDU handling for

NGV transmission. This parameter is present when dot11NGVActivated is true or dot11NONNGVRadioEnvironmentSupported is true, and absent otherwise.