IEEE P802.11
Wireless LANs

|  |
| --- |
| Some clause B4 comment resolutions for LB-254 |
| Date: 2021-11-11 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Joseph LEVY | InterDigital, Inc. | 111 W 35th St., NY, New York | +1 631.622.4239 | joseph.levy@interdigital.com |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This document provides proposed comment resolutions for clause B4 CIDs submitted in response to the 802.11 TGbd D2.0 WG letter ballot #254. CIDs: 2204, 2206, 2207, 2208, 2209, and 2210.

r1: As modified during the 12 October TGbd teleconference.

r2: Updated based on SP and modification to the resolution for CID 2204.

r3: PICs Table updated and edited to address the modified resolution from r2.

The comments are available in: <https://mentor.ieee.org/802.11/dcn/21/11-21-1296-00-00bd-tgbd-lb254-comments.xlsx>.

Status: Highlighting in CID column indicates the status of the discussion on the CID:

Not Discussed (not highlighted)

Discussed additional discussion required (date of discussion(s) is(are) located below CID number)

Discussed / ready for SP (date of discussion(s) is(are) located below CID number)

SP run / ready for Motion (date of the SP is located below the date of discussion)

Motioned (date of Motion is located below the date of the SP)

Resolution Status: Highlighting in the Resolution column indicates:

Yellow highlighted text needs to be discussed

Red highlighted text has been discussed and additional discussion is required

**CIDs for Clause B4 Page 123, lines 22:**

|  |  |  |  |
| --- | --- | --- | --- |
| **CID** | **Comment** | **Proposed Change** | **Resolution** |
| 22042021-11-11 | Comparing Subclause 4.3.17a, Clause 31 and 32 with Annex B several mandatory and optional featues are nto listed in the Tabels in Annex B. Please add entries for mandatory support for coexistence with non-NGV STA, repetitve NON\_NGV\_10 PPDU, LDPC coding, midambles, non-NGV duplicate PPDU, block ACK, extended MAC service interface, NGV capability indication for non-NGV PPDUs, frame aggregation, positioning and ranging features. | as in comment | Revised 1) Coexistence with non-NGV STAs, is provided by NGVM1.1, as it includes all 31.2 requirements and 31.2.1 contains the requirement for Coexistence with non-NGV STAs.2) 31.2.4 contains the requirements for NON\_NGV\_10.3) The LPDC requirement is in clause 32.3.9.4 Coding – hence clause 32.3 should be included in the mandatory PHY features, see changes below. 4) The midambles requirements are in clause 32.3.9 – hence clause 32.3 should be included in the mandatory PHY features, see changes below. 5) There currently is no requirement in the draft that requires an NGV STA to be able to transmit a non-NGV duplicate PPDU. Such a requirement should be added and then referenced, preferably the new requirement will be in clause 32.3. But such an addition is outside the scope of this comment.6) The block ACK requirement for NGV STAs, is provided by NGVM1.1, as it includes all 31.2 requirements and, the block ACK requirements are in 31.2.3. 7) The extended MAC service interface requirements are in clause 6.3.126-6.3.128, these requirements should be added in a new clause. 8) NGV capability indication for non-NGV PPDUs are encoded in the Duration/ID field of the MAC header, and the Duration/Id field requirement is provided by NGVM1.1, as it includes all 31.2 requirements, and the Duration/ID field requirements are in 31.2.1. 9) Frame aggregation is an optional feature defined in clause 31.2.3, hence there is no reason to add it as a mandatory feature.10) Positioning and ranging features are optional as noted in clause 4.2.17a and specified in clause 31.4.1Changes to be made:Insert a mandatory PHY feature, before NGV1.1 and reorder the NGV numbering so that this new feature becomes NGV1.1, With text as shown for the table in B4.38.1 in 11-12-1434 in the new row labeled as NGV1.0 (to be renumbered NGV1.1).Insert a new clause B.4.38.3 NGV Extended MAC Service features, with a new table that includes NGVE1.1 as shown in 11-12/1434. Editorial - Each feature needs to have a top level entry as shown below.  |

**CIDs for Clause B4.6 Page 124, lines 18:**

|  |  |  |  |
| --- | --- | --- | --- |
| **CID** | **Comment** | **Proposed Change** | **Resolution** |
| 22062021-10-12 | Based on comment resolution for CID 1454, it was decided that C2 is not a new transmit power classe and the entry in D2.2 was removed. Hence remove the OF4.1.8. | as in comment | RevisedAgree with commentorOn page 124 remove line 6-24. Removing the editing instructions for Table B.4.6 and all text related to clause B.4.6 from the draft.  |

**CIDs for Clause B4.38.1 Page 124, lines 42 and 44:**

|  |  |  |  |
| --- | --- | --- | --- |
| CID | Comment | Proposed Change | Resolution |
| 22072021-10-12 | NGV1.1 "10 MHz operation in the 5.9 GHz band" references 32.4 (NGV PLME). Please change the reference to 32.5 (Parameters for NGV-MCSs) as for NGV1.2 | as in comment | Accepted  |
| 22082021-10-12 | NGV 2.1 "NGV-MCS with Index 0-10 and NSS=1" references 32.4 (NGV PLME). Please change the reference to 32.5 (Parameters for NGV-MCSs) as for NGV 2.2 | as in comment | Accepted |
| 22092021-10-12 | NGV 2.1 states "NGV-MCS with Index 0-10 and NSS=1". NGV-MCS 10 is reserved and NGV-MCS 9 is only allowed for 20 MHz PPDU. Hence change the protocol capability to "NGV-MCS with Inde 0-8, 9 (20 MHz only), or 15 and NSS=1". | as in comment | RevisedAgree with commentorChange the protocol capability to: "NGV-MCS with Index=0-8, 9 (20 MHz only), or 15 and NSS=1" |
| 22102021-10-12 | NGV 2.2 states "NGV-MCS with Index 0-9 and NSS=2". NGV-MCS 15 is also allowed and NGV-MCS 9 is only allowed for 20 MHz PPDU. Hence change the protocol capability to "NGV-MCS with Inde 0-8, 9 (20 MHz only), or 15 and NSS=2". | as in comment | RevisedAgree with commentorChange the protocol capability to: "NGV-MCS with Index=0-8, 9 (20 MHz only), or 15 and NSS=2" |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

 **Baseline text from TGbd\_AN\_B.rft D2.1:**

Add a new clause after B.4.32:

* NGV features(#2014)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

* NGV MAC features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Protocol capability | References | Status | Support |
|  | Are the following MAC protocolfeatures supported? |  |  |  |
| NGVM1 | Operating Band |  |  |  |
| NGVM1.1 | NGV operation in the 5.9 GHz band | 31.2 (Operation in the 5.9 GHz band) | CFNGV:M | Yes o No o N/A o |
| NGVM1.2  | NGV operation in the 60 GHz band | 31.3 (Operation in the 60 GHz band) | CFNGV60:M | Yes o No o N/A o |
| NGVM2 | NGV fallback procedure |  |  |  |
| NGVM2.1 | 20 MHz transmission fallback to 10 MHz | 31.2.2 (Channel access and transmission methods for 20 MHz OCB transmission) | CFNGV:O | Yes o No o N/A o |
| NGVM3 | DMG Operation |  |  |  |
| NGVM3.1 | DMG OCB element | 9.4.2.308 (DMG OCB element(#2149)) | CFNGV60:M | Yes o No o N/A o |
| NGVM3.2 | DMG beamforming outside the context of a BSS | 31.3.1 (DMG Beamforming outside the context of a BSS) | CFNGV60:M | Yes o No o N/A o |
| NGVM4 | NGV ranging |  |  |  |
| NGVM4.1 | Support for NGV ranging | 31.4 (NGV ranging) | CFNGV:O | Yes o No o N/A o |

* NGV PHY features

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Protocol capability | References | Status | Support |
|  | Are the following PHY protocolfeatures supported? |  |  |  |
| NGVP1 | Operating Bandwidth |  |  |  |
| NGVP1.1 | 10 MHz operation in the 5.9 GHz band | 32.5 (Parameters for NGV-MCSs) | CFNGV:M | Yes o No o N/A o |
| NGVP1.2  | 20 MHz operation in the 5.9 GHz band | 32.5 (Parameters for NGV-MCSs) | CFNGV:M | Yes o No o N/A o |
| NGVP2 | Modulation and coding schemes (MCS) |  |  |  |
| NGVP2.1  | NGV-MCS with Index 0-10 and *NSS* = 1  | 32.5 (Parameters for NGV-MCSs) | CFNGV:M | Yes o No o N/A o |
| NGVP2.2 | NGV-MCS with Index 0-9 and *NSS* = 2 | 32.5 (Parameters for NGV-MCSs) | CFNGV:O | Yes o No o N/A o |
| NGVP3 | Transmit spectrum masks |  |  |  |
| NGVP3.1 | Spectrum mask, Class A(10 MHz channel spacing) | D.2.3 (Transmit spectrum mask) | CFNGV:O | Yes o No o N/A o |
| NGVP3.2 | Spectrum mask, Class B(10 MHz channel spacing) | D.2.3 (Transmit spectrum mask) | CFNGV:O | Yes o No o N/A o |
| NGVP3.3 | Spectrum mask, Class C(10 MHz channel spacing) | D.2.3 (Transmit spectrum mask) | NGV1.1:M | Yes o No o N/A o |
| NGVP3.4 | Spectrum mask C2, Class C(#2015)(20 MHz channel spacing) | D.2.3 (Transmit spectrum mask) | NGV1.2:M | Yes o No o N/A o |
| NGVP3.5 | Spectrum mask, Class D(10 MHz channel spacing) | D.2.3 (Transmit spectrum mask) | CFNGV:O | Yes o No o N/A o |
| NGVP4 | NGV PPDU Format |  |  |  |
| NGVP4.1 | Midambles | 32.3 (NGV PHY) | CFNGV:M | Yes o No o N/A o |
| NGVP4.2 | LDPC support | 32.3 (NGV PHY) | CFNGV:M | Yes o No o N/A o |

**B.4.38.3 NGV Extended MAC Service features**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Feature | References | Status | Support |
|  | Are the following MLMEfeatures supported? |  |  |  |
| NGVE1 | NGV Extended MAC Service Features |  |  |  |
| NGVE1.1 | Extended MAC service features – MLME; 5.9 GHz Band | 6.3.1266.2.128 | CFNGV:M | Yes  No  N/A  |
| NGVE1.2 | Extended MAC service features – MLME; DMG | 6.3.127 | CFNGV60:M | Yes  No  N/A  |

**References:**