IEEE P802.11
Wireless LANs

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| Comment Resolutions for 11bd D1.0 Clause 32.4 |
| Date: 2021-01-01 |
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Abstract

This submission provisions with resolutions to the following 7 CIDs related to clause 32.4 of IEEE P802.11bd D1.0 in WG LB 251, including suggested spec text modification to IEEE P802.11bd D1.0 to TGbd editor:

* CIDs: 1006, 1330, 1331, 1332, 1469, 1593 and 1838

Revisions:

* R0, comment resolutions initial draft.
* R1, update referred URL and add note for CID 1593

Interpretation of a Motion to Adopt

A motion or majority supported straw poll to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbd Draft. When the baseline spec draft is an unapproved version, a majority supported straw poll to approve this submission means that the editing instructions and any changed or added material are actioned in the unapproved TGbd Draft. This introduction is not part of the adopted material.

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

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

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| **CID** | **Pg/Ln** | **Clause** | **Comment** | **Proposed Changed** | **Resolution** |
| 1593 | 82.53 | 32.4.11.4 | Change "minimum" to "maximum." | As in the comment. | **Accepted****Discussion:**The addressed context is in sub-clause 32.3.11.4 (Receiver minimum input level). And the comment requests to change the title of the sub-clause from “Receiver minimum input level” to “Receiver maximum input level”. The comment is correct that “minimum” should be a typo in D1.0 since it is not in consistence with the content of this sub-clause.Note, it’s duplicate CID to CID 1680 |
| 1469 | 91.51 | 32.4.1 | dot11PHYType cannot be set to ngv | Add ngv to the dot11PHYType enumeration | **Revised****Discussion:**Agree on the comment. The value range of dot11PHYType is defined in Annex C. A value of “ngv” needs to be added to the definition of dot11PHYType. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1469 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0005-01-00bd-cr-d1-0-clause-32-4.docx> |
| 1330 | 92.22 | 32.4.1 | As per Table 32-22, there exists dot11NGVDCMImplemented. The MIB for dot11NGVDCMImplemented is missing in Annex C and the main body. | Please add the description of dot11NGVDCMImplemented in Annex C and also in the main body. | **Revised****Discussion:**Agree on the comment. The MIB parameter dot11NGVDCMImplemented needs to be defined in Annex as a standalone parameter and in dot11PhyNGVTable as a member parameter. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1330 as in [https://mentor.ieee.org/802.11/dcn/21/11-21-0005-01-00bd-cr-d1-0-clause-32-4.docx](https://mentor.ieee.org/802.11/dcn/21/11-21-0005-00-00bd-cr-d1-0-clause-32-4.docx) |
| 1331 | 92.24 | 32.4.1 | As per Table 32-22, dot11NGVMidambleRxMaxNSS exists but it is missing in Annex C and the main body. | Add the description of dot11NGVMidambleRxMaxNSS in Annex C and also in the main body. | **Revised****Discussion:**Agree on the comment. The MIB parameter dot11NGVMidambleRxMaxNSS needs to be defined in Annex as a standalone parameter and in dot11PhyNGVTable as a member parameter. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1331 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0005-01-00bd-cr-d1-0-clause-32-4.docx> |
| 1332 | 92.26 | 32.4.1 | As per Table 32-22, dot11NGVDYN20MAllowed exists but it is missing in Annex C and the main body. | Add the description of dot11NGVDYN20MAllowed in Annex C and in the main body. | **Revised****Discussion:**Agree on the comment. The MIB parameter dot11NGVDYN20MAllowed needs to be defined in Annex as a standalone parameter and in dot11PhyNGVTable as a member parameter. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1332 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0005-01-00bd-cr-d1-0-clause-32-4.docx> |
| 1006 | 92.47 | 32.4.1 | Annex C MIB missing scripts for MIBs in Table 32-22 NGV PHY MIB attributes. Add scripts to Annex C. | As commented | **Revised****Discussion:**Agree on the comment. The MIB parameter dot11PhyNGVTable should be defined in Annex C. **TGbd Editor:** Please implement the proposed spec text modification as part of resolution to CID 1006 as in <https://mentor.ieee.org/802.11/dcn/21/11-21-0005-00-00bd-cr-d1-0-clause-32-4.docx> |
| 1838 | 93.15 | 32.4.3 | N\_(sym,init) in Equatoin 32-40 can be given by Equation 21-62 with m\_STBC = 1. | add the condition about m\_STBC to have N\_(sym,init). E.g. "Equation (21-62)" should be "Equation (21-62) with m\_STBC=1" | **Accepted****Discussion:**Agree on the comment. The added condition provides a clearer clarification when referring to equation (21-62). |
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*------------------****Proposed Spec Text Modifications for CID 1469/1330/1331/1332/1006****------------------*

***TGbd Editor: please insert following proposed modification to the end of Annex C in IEEE P802.11bd D1.0 as part of resolution to CID 1469, 1330, 1331, 1332 and 1006 respectively.***

**Annex C**

**(normative)**

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

**C.3 MIB Detail**

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*Change dot11PHYType as follows: [CID 1469]*

dot11PHYType OBJECT-TYPE

SYNTAX INTEGER {

fhss(1),

dsss(2),

irbaseband(3),

ofdm(4),

hrdsss(5),

erp(6),

ht(7)

dmg(8),

vht(9),

tvht(10),

s1g(11),

cdmg(12),

cmmg(13),

ngv(17)}

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a status variable.

It is written by the PHY.

This is an 8-bit integer value that identifies the PHY type supported by the attached PLCP and PMD. Currently defined values and their corresponding PHY types are:

FHSS 2.4 GHz = 01, DSSS 2.4 GHz = 02, IR Baseband = 03, OFDM = 04, HRDSSS = 05, ERP = 06, HT = 07, DMG = 08, VHT = 09, TVHT = 10, S1G = 11, CDMG = 12, CMMG = 13, NGV = 17"

::= { dot11PhyOperationEntry 1 }

***Insert the following after end of the dot11 TVHT Transmit Beamforming Config TABLE:*** *[CID 1006/1330/1331/1332]*

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

-- \* dot11 Phy NGV TABLE

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

dot11PhyNGVTable OBJECT-TYPE

SYNTAX SEQUENCE OF Dot11PhyNGVEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Entry of attributes for dot11PhyNGVTable. Implemented as a table indexed

on ifIndex to allow for multiple instances on an Agent."

::= { dot11phy 31 }

dot11PhyNGVEntry OBJECT-TYPE

SYNTAX Dot11PhyNGVEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"An entry in dot11PhyNGVEntryTable. ifIndex - Each IEEE Std 802.11

interface is represented by an ifEntry. Interface tables in this MIB

module are indexed by ifIndex."

INDEX {ifIndex}

::= { dot11PhyNGVTable 1 }

Dot11PhyNGVEntry ::=

SEQUENCE {

dot11CurrentChannelWidth INTEGER,

dot11CurrentPrimaryChannel Unsigned32,

dot11CurrentSecondaryChannel Unsigned32,

dot11NGVDCMImplemented TruthValue,

dot11NGVMidambleRxMaxNSS INTEGER,

dot11NGVDYN20MAllowed TruthValue,

}

dot11CurrentChannelWidth OBJECT-TYPE

SYNTAX INTEGER { cbw10(0), cbw20(1) }

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a status variable.

Written by the PHY.

This attribute indicates the operating channel width."

DEFVAL { cbw10 }

::= { dot11PhyNGVEntry 1 }

dot11CurrentPrimaryChannel OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a status variable.

It is written by the PHY.

This attribute indicates the operating channel. If 10/20 MHz OCB is currently in use then this attribute indicates the primary channel."

::= { dot11PhyNGVEntry 2 }

dot11CurrentSecondaryChannel OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a status variable.

It is written by the PHY.

This attribute indicates the channel number of the secondary channel. If 10/20 MHz OCB is not currently in use, this attribute value shall be 0."

::= { dot11PhyNGVEntry 3 }

dot11NGVDCMImplemented OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a capability variable.

Its value is determined by device capabilities.

This attribute, when true, indicates that the non-AP STA implementation supports DCM. This capability is disabled otherwise."

::= { dot11PhyNGVEntry 4 }

dot11NGVMidambleRxMaxNSS OBJECT-TYPE

SYNTAX INTEGER (0, 1)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a capability variable.

Its value is determined by device capabilities.

This attribute specifies the maximum number of spatial streams supported for reception when a midamble is present in the Data field, equal to 0 for 1 spatial stream, and equal to 1 for 2 spatial streams."

DEFVAL { 0 }

::= { dot11PhyNGVEntry 5 }

dot11NGVDYN20MAllowed OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This is a capability variable.

Its value is determined by device capabilities.

This attribute, when true, indicates that the NGV STA implementation supports dynamic 20 MHz operation. This capability is disabled otherwise."

::= { dot11PhyNGVEntry 5 }

------------- ***End of proposed changes for resolution to CID 1469/1330/1331/1332/1006****--------------*

**References:**

1. **IEEE P802.11bd/D1.0, Oct 2020.**