IEEE P802.11
Wireless LANs

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|  Comment Resolution of Clause 31.2.2 |
| Date: 2020-09-01 |
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|  |  |  |  |  |

Abstract

This submission proposes comment resolution of CID 25, 82, 157, 232, 233, 234.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revised based on comments during teleconference on Sep 4.
* Rev 2: Revised based on the discussion results on the primary channel (in green)

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 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.***

**Discussion:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 25 | 23.32 | 31.2.2 | Add MLME primitive and/or MIB to turn 20MHz fallback to primary 10MHz on and off. | Add MLME primitive and/or MIB to turn 20MHz fallback to primary 10MHz on and off. | RevisedAgree in principle. Parameters for 20MHz channel access in an NGV STA is added to MA-UNITDATA.request primitiveTGbd editor to make changes in 11-20/1383r0 under CID 25 |
| 82 | 22.56 | 31.2.2 | The NGV STA doesn't decide anything, it is told by higher layers what the OCB primary channel is. The text should make this clear. | As in comment. | RevisedAgree in principle. The sentence is modified to be designated by the upper layer.TGbd editor to make changes in 11-20/1383r0 under CID 82 |
| 157 | 23.20 | 31.2.2 | Conflicting statements."If the medium of the OCB primary channel is determined to be busy, the backoff counter is next decremented after [...].""If the medium is determined to be busy in the OCB secondary channel [...], the backoff counter is next decremented after [...]."Strictly speaking, if at the same time both primary and secondary channel are busy, the two sentences provide different, conflicting instructions about when the backoff counter must be decremented again. | Alternative 1:"If the medium of the OCB primary channel is determined to be busy \*\*\*and the the OCB secondary channel is determined to be idle\*\*\*, the backoff counter is next decremented after [...]."Alternative 2:"If the medium of the OCB primary channel is determined to be busy, the backoff counter is \*\*\*at the earliest\*\*\* decremented after [...].""If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is not known, the backoff counter is \*\*\*at the earliest\*\*\* decremented after [...].""If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is known, the backoff counter is \*\*\*at the earliest\*\*\* decremented after [...]." | RevisedAgree in principle. When the both primary and secondary channels are busy, the backoff counter is decremented if the medium is idle for the longer period from the end of the immediately preceding medium-busy event. The conflicting sentences are modified.TGbd editor to make changes in 11-20/1383r0 under CID 157 |
| 232 | 22.58 | 31.2.2 | fill TBD | as in comment | RevisedAgree in principle. Parameters for 20MHz channel access in an NGV STA is added to MA-UNITDATA.request primitiveTGbd editor to make changes in 11-20/1383r0 under CID 232 |
| 233 | 23.15 | 31.2.2 | add "what" shall decrement a backoff counter | as in comment | RevisedAgreed in principleThe NGV STA decrements the backoff counter.TGbd editor to make changes in 11-20/1383r0 under CID 233 |
| 234 | 23.32 | 31.2.2 | fill TBD | as in comment | RevisedSee CID 25.TGbd editor to make changes in 11-20/1383r0 under CID 25 |

**Propose:**

* 1. MAC data service specificaiton

5.3.1 Radio Environment Request Vector

TGbd editor: add the following element in radio environment request vector

* …
* primary channel and channel width,
* fallback enabled(#CID 25),
* transmit power level.

TGbd editor: Insert the following texts after the last paragraph

When the channel width indicates 20 MHz, the primary channel in the primary channel and channel width element indicates the OCB primary channel. (CID 232)

The fallback enabled element indicates whether the transmission of 10 MHz PPDU in the OCB primary channel is allowed in an NGV STA while the NGV STA performs channel access to transmit 20 MHz NGV PPDU. This parameter optionally presents when dot11NGVActivated is TRUE and absent otherwise. (#CID 25)

* 1. Operation in 5.9 GHz band

31.2.2 Channel scanning and transmission methods for 20 MHz OCB transmission

**TGbd Editor: *modify the 2nd paragraph of 31.2.2 as follows***

~~An NGV STA transmitting a 20 MHz NGV PPDU shall decide the~~ The (#CID 82) OCB primary channel ~~which~~ is designated by ~~the upper layer in <TBD> primitives~~ the primary channel and channel width element of radio environment request vector in MA-UNITDATA.request primitive. (CID 232)

**TGbd Editor: *modify as follows from 4th paragraph***

If the medium of the OCB primary channel is determined to be busy and the medium of the OCB secondary channel is determined to be idle (CID 157), an NGV STA shall perform the random backoff procedure as described in 10.3.4.3 (Backoff procedure for DCF) after the 20 MHz medium ~~of the OCB primary channel~~ remains idle for a period for AIFS from the end of the immediately preceding medium-busy event. If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is not known, an NGV STA performs the backoff procedure described in 10.3.4.3 (Backoff procedure for DCF) after the 20 MHz medium remains idle for a period of EIFS (10.3.2.3.7 (EIFS)) from the end of the immediately preceding medium-busy event. If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is known, an NGV STA performs the random backoff procedure described in 10.3.4.3 (Backoff procedure for DCF) after the 20 MHz medium remains idle for a period of AIFS from the end of the immediately preceding medium-busy event.

When an NGV STA transmitting a 20 MHz NGV PPDU performs the random backoff procedure, the NGV STA (CID 233) shall decrement a backoff counter once per interval of aSlotTime (a backoff slot) while the medium sensing results of the two contiguous 10 MHz channels are determined to be idle. If the medium status of either OCB primary channel or OCB secondary channel is determined to be busy at any time during a backoff slot, then the backoff counter shall not be decremented for that slot. If the medium of the OCB primary channel is determined to be busy and the medium of the OCB secondary channel is determined to be idle, the backoff counter is next decremented after the 20 MHz medium has been determined to be idle for the duration of an AIFS plus aSlotTime. If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is not known, the backoff counter is next decremented after the 20 MHz medium has been determined to be idle for the duration of an EIFS plus aSlotTime. If the medium is determined to be busy in the OCB secondary channel and the duration of channel busy is known, the backoff counter is next decremented after the 20 MHz medium has been determined to be idle for the duration of an AIFS plus aSlotTime.

If an NGV STA is unable to transmit a 20 MHz NGV PPDU because the OCB secondary channel is sensed busy and upper layer allows the transmission of 10 MHz PPDU by fallback enabled element of radio environment request vector in MA-UNITDATA.request (CID 25, 234) ~~TBD MLME~~ promitive ~~and/or MIB access~~ during the medium access procedure for 20 MHz NGV PPDU transmission, it may transition to the medium access procdure to transmit a 10 MHz PPDU on the OCB primary channel.