IEEE P802.11
Wireless LANs

|  |
| --- |
| **Proposed Resolutions to CID 2719** |
| **Date:** 2016-11-7 |

|  |
| --- |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jing Ma | NICT | 3-4, Hikarino-oka, Yokosuka, 239-0847, Japan |  +81-46-847-5444 | majing@nict.go.jp |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes resolutions for comment CID 2719 related to TGax D0.1.

NOTE- The proposed changes on this document is based on TGax D0.5

Revisions:

* Rev 0: Initial version of the document.

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 D0.5 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax D0.5 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.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Clause Number** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 2719 | 25.9.2 | 63 | 51 | Behavior after the BUSY state needs to be defined. Backoff should continue as if the OBSS PPDU was "not received at all". | Add text; "After the BUSY medium condition is released, the STA should resume its backoff procedure as the PPDU was not received at all (in insertion of IFS)." | RevisedAgree in principle with the comment. Proposed resolution to clarify the behavior including backoff procedure after the BUSY state.TGax editor to make the changes shown in 11-16/xxxx under all headings that include CID2719 |

**Discussion**

Abstract

This document provides resolutions for the following CIDs on Clause 25.9.3. The baseline for this comment resolution document is 802.11ax Draft 0.1.

* CIDs: 705, 706

The commenter pointed out that behavior after the BUSY state including backoff procedure needs to be defined.

**Behavior after the BUSY state has been specified in TG D0.5 as following**

25.10.4 OBSS\_PD-based spatial reuse operation

25.10.4.1 General

(#2386) If the PHY of a STA issues a PHY-CCA.indication with a value equal to BUSY followed by an

RXSTART.indication due to a PPDU reception then the STA’s MAC sublayer may a) issue a PHY-CCARESET.request primitive and b) not update its NAV timers based on frames carried in the PPDU if all the following conditions are met:

— The received PPDU is an Inter-BSS PPDU (see 25.2.1 (Intra-BSS and inter-BSS frame detection))

— The received power level measured from the legacy portion of the PPDU is below the OBSS\_PD level (defined in 25.10.4.2 (Adjustment of OBSS\_PD and transmit power))

— The PPDU is not one of the following:

• A non-HT PPDU that carries an individually addressed Public Action frame where the RA field is equal to the STA MAC address(#Ed)

• A non-HT PPDU that carries a group addressed Public Action frame(#Ed)

(#2664) If the inter-BSS frame is carried in an HE extended range SU PPDU (where power of the L-STF/L-LTF symbols is boosted 3 dB), the received power measured based on the legacy preamble shall be decreased by 3 dB to compensate for the power boost factor when compared to the OBSS PD level.

**The behavior after that the STA’s MAC sublayer issues a PHY-CCARESET.request primitive and not update its NAV timers should be clarified, especially, in case of that the STA may detect other intra-/ inter-BSS PPDU during backoff countdown resumed due to OBSS\_PD-based spatial reuse operation. We suggest add the bellow behavior description to TGax D0.5**

**If an HE STA’s MAC sublayer issues a PHY-CCARESET.request primitive and not updates its NAV timers based on frames carried in the PPDU, the HE STA may continue to count down an existing backoff procedure if the medium condition is not indicated as BUSY. If the HE STA receives another PPDU during the backoff procedure, it shall suspend its backoff countdown if the PHY of the HE STA issues a PHY-CCA.indication with a value equal to BUSY. And if the PHY of the HE STA issues a PHY-CCA.indication with a value equal to BUSY followed by an RXSTART.indication due to the new PPDU reception. Subsequently, the HE STA may conduct the above a) and b) again if all the conditions of OBSS\_PD-based spatial reuse operation described above are met, then the HE STA’s backoff procedure is resumed.**

**Proposed resolution**

***Detailed implementation of the resolution***

Make the following changes to TGax D 0.5.

Revised for CID 2719 discussion and editing instructions in 11-16/1339r2.

***TGax editor: add the following text to the end of section 25.10.4.1 General on page 157 line 33 (#2719):***

(#2719) If an HE STA’s MAC sublayer issues a PHY-CCARESET.request primitive and not updates its NAV timers based on frames carried in the PPDU, the HE STA may continue to count down an existing backoff procedure if the medium condition is not indicated as BUSY. If the HE STA receives another PPDU during the backoff procedure, it shall suspend its backoff countdown if the PHY of the HE STA issues a PHY-CCA.indication with a value equal to BUSY. And if the PHY of the HE STA issues a PHY-CCA.indication with a value equal to BUSY followed by an RXSTART.indication due to the new PPDU reception. Subsequently, the HE STA may conduct the above a) and b) again if all the conditions of OBSS\_PD-based spatial reuse operation described above are met, then the HE STA’s backoff procedure is resumed.