IEEE P802.11
Wireless LANs

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| Resolutions for mics CIDs related to DLS/TDLS |
| Date: 2012-09-10 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| James Wang | MediaTek | San Jose, Ca | 4085261899 Ext88109 | james.wang@mediatek.com |

Abstract

This document proposes resolutions for CIDs 6265, 6302, 6160, 6123, 6158, 6159, 6630, and 6631 on TGac D3.0.

## Revision History

r0: Initial revision.

r1: Revised version

r2:Except for cid 6631, other cids have been reviewed and accepted by the group.

r3: revised resolution for CID 6631

## Comments

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| --- | --- | --- | --- | --- |
| 6265 | Brian Hart | 8.5.4.2@89.31 | "AID element of the STA" is a little unclear - an AP assigns an AID value to a STA, not an element. | Better as "The AID element containing the AID of the STA ..." Ditto P89L50. Or am I being too pedantic? |

## Discussion

Agreed with commenter that “AID element containing the AID of the STA” is a better description.

## Proposed changes

*Instruct the editor to revise the tables in P89.*

**Table 8-199—DLS Request frame Action field format**

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| --- | --- | --- |
| **Order** | Information | Notes |
| 10 | AID | The AID element containing the AID of the STA sending the frame is present if dot11VHTOptionImplemented is true. |
| 11 | VHT Capabilities | The VHT Capabilities element is present if thedot11VHTOptionImplemented is true. |

**Table 8-200—DLS Response frame Action field format**

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| **Order** | Information | Notes |
| 10 | AID | The AID element containing the AID of the STA sending the frame is present if dot11VHTOptionImplemented is true. |
| 11 | VHT Capabilities | The VHT Capabilities element is present if thedot11VHTOptionImplemented is true. |

## Proposed resolution

Revise. For comment 6265, see the proposed changes in Doc 11-12-1067-02.

## Comments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 6302 | Brian Hart | 10.22.6.4.5@157.53 | Is it so important that TDLS peer STAs follow the same set of rules twice? | Are we missing a different set of rules? Or can we just delete one dup |
| 6160 | Liwen Chu | 10.22.6.4.5@157.50 | Two issues here:1), there is no CCA rules defined in 10.39.4.2), CCA sensing and NAV assertion in an 20MHz, 40MHz VHT direct link are missing. | fix the problem. |

## Discussion

CCA sensing rules for VHT STA are defined in 10.15.9 “For rules related to a VHT

STA see 9.3.2.5a (VHT RTS procedure), 9.19.2.4 (Multiple frame transmission in an EDCA TXOP) and 9.19.2.8 (EDCA channel access in a VHT BSS). TDLS STA should obey the same rules.

## Proposed changes

*Instruct the editor to revise the following text.*

**10.22.6.4.5 CCA sensing and NAV assertion in an 20MHz, 40MHz, 80 MHz, 160 MHz or 80+80 MHz direct link**

TDLS peer VHT STAs shall follow the CCA rules as defined in

9.3.2.5a (VHT RTS procedure), 9.19.2.4 (Multiple frame transmission in an EDCA TXOP) and 9.19.2.8 (EDCA channel access in a VHT BSS) and the NAV rules as defined in 10.39.4 (NAV assertion in a VHT BSS).

## Proposed resolution

REVISE. For comment 6302 and 6160, see the proposed changes in Doc 11-12-1067-02.

## Comments

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| 6123 | Liwen Chu | 10.22.6.4.2@157.32 | 40MHz is missing from the sentence | Add 40MHz in the sentence. |

## Discussion

The following rule for 40MHz direct link is already included in the subcluase 10.22.6.2.2 of REVmb: “A TDLS peer STA shall not transmit a 20 MHz PPDU in the secondary channel of its 40 MHz direct link.” A VHT STA shall also follow this rule as well. There is no need to include 40MHz direct link.

## Proposed changes

None.

## Proposed resolution

REJECT. A VHT STA shall also follow the rule in 10.22.6.2.2 of REVmb. There is no need to include 40MHz direct link.

## Comments

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| --- | --- | --- | --- | --- |
| 6158 | Liwen Chu | 10.22.6.4.3@157.32 | Add the following text to the end of 10.22.6.4.2 "A TDLS peer STA shall not transmit a 40 MHz PPDU in the non-primary 40 MHz channel of its 80 MHz, 160 MHz or 80+80 MHz direct link. A TDLS peer STA shall not transmit a 80 MHz PPDU in the non-primary 80 MHz channel of its 160 MHz or 80+80 MHz direct link." | As in comment |

## Discussion

The commenter is correct in pointing out that a TDLS peer STA should follow the similar rules as in a VHT BSS related to transmission of a 40MHz PPDU and 80MHz PPDU.

## Proposed changes

*Instruct the editor to add the following text at the end of 10.22.6.4.2.*

A TDLS peer STA shall not transmit a 40 MHz PPDU that does not use the primary 40 MHz channel of its 80 MHz, 160 MHz or 80+80 MHz direct link. A TDLS peer STA shall not transmit a 80 MHz PPDU that does not use the primary 80 MHz channel of its 160 MHz or 80+80 MHz direct link.

## Proposed resolution

REVISE. For comment 6158, see the proposed changes in Doc 11-12-1067-02.

## Comments

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| --- | --- | --- | --- | --- |
| 6159 | Liwen Chu | 10.22.6.4.3@157.38 | Scanning requirement should also be followed. | Change to "If a TDLS peer STA chooses to start a wideband direct link, it shall follow the primary channel selection rules as defined in 10.39.2 (Channel selection methods for a VHT BSS) , 10.39.3 (Scanning requirements for VHT STA) and 10.23.14 (Channel usage procedures)." |

## Discussion

If a TDLS peer STA chooses to start a wideband direct link, it shall follow the primary channel selection rules

as defined in 10.39.2 (Channel selection methods for a VHT BSS) and 10.23.14 (Channel usage procedures). Note that the first paragraph of 10.39.2, it already refers to in the 10.39.3 (scanning requirements for VHT STA). There is no need to include the 10.39.3 (Scanning requirements for VHT STA) again.

## Proposed changes

none

## Proposed resolution

REJECT. In the first paragraph of 10.39.2, it already refers to in the 10.39.3 (scanning requirements for VHT STA). There is no need to include the 10.39.3 (Scanning requirements for VHT STA) again

## Comments

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| 6631 | Robert Stacey | 10.22.1@156.23 | Statements at P156L23 and P159L14 contradict each other. Either the STA is permitted to transmit wider than the BSS on the base channel or it is not. | Remove the statement on P156L23 (i.e., STA is not permitted to transmit wider than BSS on the base channel). |

## Discussion

TGac decided that a TDLS direct link could have a larger bandwidth than the BSS to which the TDLS peer STAs are associated, also when the TDLS peer STAs are operating on the base channel (i.e. not on an off-channel). The cited paragraph on P156L23 was added to enable that, but the paragraph on P159L14 should have been removed as part of the edits.

## Proposed changes

*Instruct the editor to delete the following paragraph on P159L14:*

~~Except in the case of a TDLS off-channel direct-link (which is independently constrained by 10.22.6.3) or in the case of , a STA shall not transmit a PPDU with a TXVECTOR parameter CH\_BANDWIDTH indicating a channel bandwidth that is wider than the BSS operating channel width.~~

## Proposed resolution

*Revise - Instruct the editor to delete the following paragraph on P159L14:*

"Except in the case of a TDLS off-channel direct-link (which is independently constrained by 10.22.6.3) or in the case of , a STA shall not transmit a PPDU with a TXVECTOR parameter CH\_BANDWIDTH indicating a channel bandwidth that is wider than the BSS operating channel width."

## Comments

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| 6630 | Robert Stacey | 10.22.1@156.28 | HT BSS is undefined | "A STA associated with an HT or VHT AP shall use as its primary channel the channel indicated by the Primary Channel field in the HT Opeation element." |

## Discussion

The term HT BSS has been used in REVmb but is not defined. In the context of 10.22.1@156.28, the term “HT BSS primary channel” is better described using the text proposed by the commenter.

## Proposed changes

10.22.1 General

*Instruct the editor to modify the sentence in P156L28.*

A VHT STA with a TDLS link that is not an off-channel link, shall use as its

primary channel the channel indicated by the Primary Channel field in the HT Operation element.

## Proposed resolution

REVISE. For comment 6630, see the proposed changes in Doc 11-12-1067-02