IEEE P802.11Wireless LANs

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| Clause 9.9.1.2 Comment Resolution |
| Date: 2011-05-03 |
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##### This document proposes resolution for the following CIDs:

CIDs 722, 723, 167, 230, 1497, 166, 1279

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| 722 | Kneckt, Jarkko | 9.9.1.2 | 51 | 5 | TR | The sharing of the EDCA TXOP is not using the appropriate terminology, i.e. EDCAF as described in 9.9.1.2a | Use the same language in the introduction as in the normative text. |  |

**Proposed resolution:** Reject. The text describes the different modes for TXOP. It doesn’t describe the access function for EDCAF.

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| 723 | Kneckt, Jarkko | 9.9.1.2 | 51 | 6 | TR | The text: M"in the same AP" seems not to have valid meaning. Clarify the meaning of this statement or delete it. | As in comment. |  |

**Proposed resolution:** Accept.

##### Discussion: The text “in the same AP” indicates that the ACs belong to the same AP. See the text changes to clarify the meaning.

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| 167 | Chu, Liwen | 9.9.1.2 | 51 | 17 | TR | Why is VHT single MPDU excluded here? What is the rule to transmit VHT single MPDU when TXOP limit is 0? | clearify it. |  |

**Proposed resolution:** Accept.

##### Discussion: The text seems to exclude the transmission of VHT Single MPDU when the TXOP limit is zero. Change the text not to exclude it.

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| 230 | Gong, Michelle | 9.9.1.2 | 51 | 17 | TR | The statements says that the transmission rules are for "... A-MPDU that is not a VHT single MPDU…" Why is there a difference in TXOP rules for A-MPDU that is not a VHT single MPDU and a VHT single MPDU? If there is such a difference, what are the TXOP rules for VHT single MPDUs? | Please clarify. |  |

**Proposed resolution:** Duplicate, see 167.

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| 1497 | RISON, Mark | 9.9.1.2 | 51 | 17 | TR | This appears to suggest VHT single MPDUs may not be used if the TXOP Limit is 0 -- why? | Delete the added text. |  |

**Proposed resolution:** Duplicate, see 167.

##### Discussion: The text seems to exclude the transmission of VHT Single MPDU when the TXOP limit is zero. Change the text not to exclude it.

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| 166 | Chu, Liwen | 9.9.1.2 | 51 | 31 | TR | "In addition, a TXOP holder may transmit using a single MU PPDU A-MPDUs intended for different users."For non-VHT PPDU transmimission when TXOP limit is 0, the behavior is clearly defined: you can use RTS/CTS etc. to protect the transmission, you can do beamforming in the transmission. It is not clear the if they are still true in a single MU PPDU transmission. I think they are still true.. | Rewrite the rules of single MU PPDU transmission per non-VHT PPDU transmission when TXOP limit is 0. |  |

**Proposed resolution:** Implemented in D0.4

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| 1279 | Stephens, Adrian | 9.9.1.2 | 51 | 31 | TR | "In addition, a TXOP holder may transmit using a single MU PPDU A-MPDUs intended fordifferent users."I'm not clear about what "in addition" means, but this seems imprecise given the forgoing. | Replace with: "A VHT A-MPDU transmitted subject to this rule may be extended with A-MPDUs intended for other users, provided that this does not extend the duration of the PPDU, and subject to the MU Context rules in 7.4a.3." |  |

**Proposed resolution:** Implemented in D0.4

##### Discussion: The proposed resolution seems to be adequate to extend the SU PPDU rules to MU PPDU.

There are ~~two~~three modes of EDCA TXOP defined, the initiation of the EDCA TXOP, the sharing of the

EDCA TXOP, and the multiple frame transmission within an EDCA TXOP. An initiation of the TXOP occurs

when the EDCA rules permit access to the medium. A sharing of the EDCA TXOP occurs after an AC (the

primary AC) of an AP has obtained the right to access to the medium and decided to share the TXOP with

other ACs (secondary ACs) that belong to the same AP. A multiple frame transmission within the TXOP occurs when an

EDCAF retains the right to access the medium following the completion of a frame exchange sequence, such

as on receipt of an ACK frame.

The TXOP limit duration values are advertised by the AP in the EDCA Parameter Set element in Beacon and

Probe Response frames transmitted by the AP.

A TXOP limit value of 0 indicates that the TXOP holder may transmit or cause to be transmitted (as responses)

the following within the current TXOP and using SU PPDUs:

a) A single MSDU, MMPDU, A-MSDU, or A-MPDU at any rate, subject to the rules in 9.6 (Multirate support)

b) Any required acknowledgments

c) Any frames required for protection, including one of the following:

1) An RTS/CTS exchange

2) CTS to itself

3) Dual CTS as specified in 9.2.0b.8 (Dual CTS protection)

d) Any frames required for beamforming as specified in 9.17 (Sounding PPDUs)

e) Any frames required for link adaptation as specified in 9.16.2 (Scheduled PSMP)

f) Any number of BlockAckReq and BlockAck frames