### IEEE P802.11 Wireless LANs

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| **11ax D4.0 sounding comments** | | | | |
| Date: 2019-07-11 | | | | |
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Abstract

This document contains proposed resolutions for TXOP duration-based RTS/CTS related comments on 802.11ax draft 4.0 (5 CIDs).

* CID List here: 20303, 20633, 20634, 20657, 21521

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| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | P.L | Clause | Comment | Proposed changes | Proposed resolution |
| 20303 | kaiying Lv | 295.35 | 26.2.1 | If the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which a non-AP HE STA is associated is equal to a zero value, then the non-AP HE STA shall set zero to the value of the TXOP Duration RTS Threshold subfield, because value zero means the RTS should be always used for TXOP transmission as defined in "dot11TXOPDurationRTSThreshold OBJECT-TYPE" in Annex C (P705L33) | Change the sentence to "The non-AP HE STA shall set dot11TXOPDurationRTSThreshold to the value of the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which the non-AP HE STA is associated" | Revised:  Changed the value range to {1..1023} in Annex C.  Text changes are under CID 20303 |
| 20633 | Mark RISON | 295.34 | 26.2.1 | "If the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which a non-AP HE STA is associated is equal to a nonzero value, then the non-AP HE STA shall set dot11TXOPDurationRTSThreshold to the value of the TXOP Duration RTS Threshold subfield. Other- wise, the non-AP HE STA shall not update dot11TXOPDurationRTSThreshold." -- this means the threshold can't be 0, because even if it's 0 in the assoc rsp it will be ignored and the MIB default of 1023 (disabled) will apply | At 705.21 change "(0..1023)" to "(1..1023)" | Revised:  Changed in Annex C for the value range to (1..1023) in Annex C.  Text changes are under CID 20633 |
| 20634 | Mark RISON | 295.34 | 26.2.1 | "If the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which a non-AP HE STA is associated is equal to a nonzero value, then the non-AP HE STA shall set dot11TXOPDurationRTSThreshold to the value of the TXOP Duration RTS Threshold subfield. Other- wise, the non-AP HE STA shall not update dot11TXOPDurationRTSThreshold." -- this means the threshold can't be 0, because even if it's 0 in the assoc rsp it will be ignored and the MIB default of 1023 (disabled) will apply | Change the cited text at the referenced location to "If the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which a non-AP HE STA is associated is equal to a nonzero value, or when the non-AP HE STA receives an HE Operation element in a (Re)Association Response frame, then the non-AP HE STA shall set dot11TXOPDurationRTSThreshold to the value of the TXOP Duration RTS Threshold subfield. Other- wise, the non-AP HE STA shall not update dot11TXOPDurationRTSThreshold." | Revised:  Changed in Annex C for the value range to (1..1023) in Annex C.  Text changes are under CID 20634 |
| 20657 | Mark RISON | 237.49 | 10.3.5 | "If dot11RTSThreshold is 0, all MPDUs shall be delivered with the use of RTS/CTS." is not true if dot11TXOPDurationRTSThreshold is present and < 1023 | Delete the cited text at the referenced location | Revised:  Add text to describe that this is only applied when TXOP duration threshold is either not present or its value is 1023.  Text changes are under CID 20657 |
| 21521 | Yongho Seok | 295.36 | 26.2.1 | "If the TXOP Duration RTS Threshold subfield in the most recently received HE Operation element sent by the AP to which a non-AP HE STA is associated is equal to a nonzero value,..." Please add some NOTE for explaining that the the TXOP Duration RTS Threshold subfield value 0 is used for an individualized TXOP Duration RTS Threshold. | As in comment. | Revised:  Please see the text changes under CID 21521 |

**Revision log:**

R1: initial.

**Discussion:**

Value zero of TXOP Duration RTS threshold would cause many confusions as the commenters had indicated in their commands. Change the MIB variable dot11TXOPDurationRTSThreshold allowed value range to {1..1023} to exclude value zero to eliminate the ambiguities. And make necessary text changes accordingly in subclauses 10.3.5 and 26.2.1.

***TGax editor: within TGax D4.0, in subclause 10.3.5, modify the text as shown:***

Page 237.49 change as shown:

If dot11TXOPDurationRTSThreshold is 1023, and If dot11RTSThreshold is 0, all MPDUs shall be delivered with the use of RTS/CTS. (CID 20657)

***TGax editor: within TGax D4.0, in subclause 26.2.1, modify the text as shown:***

Page 295.30 change as shown:

An HE AP may set the TXOP Duration RTS Threshold subfield of HE Operation element it transmits to a value ~~less than 1023~~ in the range {1..1023} to enable TXOP duration-based RTS/CTS exchanges of its associated STAs.

(CID 20303, 20633, 20634, 21521)

***TGax editor: within TGax D4.0, in subclause C.3, modify the text as shown:***

Page 705.20 change as shown:

dot11TXOPDurationRTSThreshold OBJECT-TYPE

SYNTAX Unsigned32 (~~0~~1..1023)

UNITS "32 microseconds"

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"This is a control variable. It is written by an external management entity or by the MAC of a non-AP HE STA upon receiving an HE Operation element from the HE AP with which it is associated. Changes take effect as soon as practical in the implementation. This attribute indicates the duration of the transmission or TXOP above which an RTS/CTS handshake is performed. ~~Value zero means the RTS should be always used for TXOP transmission.~~ Value 1023 means this feature is disabled"

DEFVAL { 1023 } ::= { dot11HEStationConfigEntry 10}

(CID 20303, 20633, 20634, 21521)