**IEEE P802.11
Wireless LANs**

|  |
| --- |
| **CC36 Comment Resolution for Some CIDs for 35.7.4.1****Restricted TWT / Channel Access** |
| **Date:** 2021-11-27 |
| **Author(s):** |
| **Name** | **Affiliation** | **Address** | **Phone** | **email** |
| Chunyu Hu | Meta | 1180 Discovery Wy, Sunnyvale, CA |  | chunyuhu07@gmail.com |
| Muhammad Kumail Haider | Meta |  |  |  |
| Chitto Ghosh | Meta |  |  |  |
| Binita Gupta | Meta |  |  |  |
| Morteza Mehrnoush | Meta |  |  |  |
| Payam Torab | Meta |  |  |  |
| Sunhee Baek | LGe |  |  | sunhee.baek@lge.com |
| Abdel Karim Ajami | Qualcomm |  |  | aajami@qti.qualcomm.com |

**Abstract**

This submission proposes resolutions for the following CIDs (4) for TGbe CC36:

4157, 4434, 6950, 4723

~~7430~~, ~~5274~~, , ,

Revisions:

* Rev 0: Initial version of the document
* Rev 1: deferred 7430 and 5274 at Sunhee’s request.
* Rev 2: revise per Sunhee’s comment to simplify changes.
* Rev 3: revise text per Abdel’s comment to revert to use MIB as correction.

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 TGbe Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

***TGbe editor: The baseline for this document is 11be D1.3.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 4157 | Alfred Asterjadhi | 35.6.4.1 | 298.43 | Use of MIBs makes the terms long. Suggest using r-TWT scheduled STA and r-TWT scheduling AP. Also this sentence seems out of place. Subclause is general but the sentence is saying what an r-TWT scheduled STA (I am guessing that this **does not apply to the AP as well?, clarify**) does outside of an r-TWT SP. Maybe instead of this being general it should be TXOP rules outside of r-TWT SPS. | As in comment. | **Revised**Agree in principle. Revised the title to be “TXOP rules for r-TWT SPs” **TGbe editor please implement changes as shown in this doc tagged by 4157.** |
| 4434 | Arik Klein | 35.6.4.1 | 298.42 | The non-AP EHT STA is only aware to the restricted TWT service periods of which it is a member. Thus, the following sentence shall be revised as proposed:"A non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure the TXOP ends before the start of any restricted TWT service periods if the TXOP is obtained outside of a restricted TWT service period" | Please revise the sentence as follows:"A non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure the TXOP ends before the start of any restricted TWT service periods \*of which it is a member\* if the TXOP is obtained outside of a restricted TWT service period" | Rejected.The current statement is intended in consistent with the passed motion. If only the r-TWT scheduled STA ends its TXOP to avoid stepping on the r-TWT SP start time, then it doesn’t meet the intended purpose of increasing the probability that the r-TWT STA gets hold of the medium when the SP starts. |
| ~~5876~~ | ~~Liangxiao Xin~~ | ~~35.6.4.1~~ | ~~298.43~~ | ~~The non-AP EHT STA that is a member of that restricted TWT service period does not need to end the TXOP before the start of a restricted TWT service period if the TXOP is obtained outside of that restricted TWT service period. The non-AP EHT STA could continue its TXOP for low latency traffic transmission during the R-TWT SP.~~ | ~~A non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure the TXOP ends before the start of a restricted TWT service period if the TXOP is obtained outside of that restricted TWT service period and the non-AP EHT STA is not a member of that restricted TWT service period~~ | ~~Rejected.~~~~A r-TWT scheduled STA may have non latency sensitive traffic as well. In addition, in principle, the latency sensitive traffic marked as belonging to the TID(s) negotiated during the r-TWT setup procedure, should not be delivered outside the SP (despite it may). We also have to consider the SP may have multiple r-TWT member STAs.~~~~Creating too many exceptions only increases the chance that a r-TWT STA not able to grab the medium when SP starts. Prefer to keep current simple rule.~~  |
| ~~6335~~ | ~~Ming Gan~~ | ~~35.6.4.1~~ | ~~298.42~~ | ~~This paragraph is not complete. If this non-AP EHT STA is transmitting low latency traffic, then does this STA still need to stop its TXOP before the start of any restricted TWT service periods~~ | ~~as in the comment~~ | ~~Rejected.~~~~A r-TWT scheduled STA may have non latency sensitive traffic as well. In addition, in principle, the latency sensitive traffic marked as belonging to the TID(s) negotiated during the r-TWT setup procedure, should not be delivered outside the SP (despite it may). We also have to consider the SP may have multiple r-TWT member STAs.~~~~Creating too many exceptions only increases the chance that a r-TWT STA not able to grab the medium when SP starts. Prefer to keep current simple rule.~~ |
| 6950 | Saju Palayur | 35.6.4.1 | 298.40 | Existed normative can be understood as in case TXOP was obtained inside of the restricted TWT service period, the TXOP may end after that restricted TWT of other station start. | make normative more clear | **Revised.**Add text to cover the case mentioned by the commenter. **TGbe editor please implement changes as shown in this doc tagged by 6950.** |
| ~~7430~~ | ~~SunHee Baek~~ | ~~35.6.4.1~~ | ~~298.45~~ | ~~Any EHT STAs schduled to a rTWT SP may be affected by OBSS (e.g., OBSS NAV), which may not guerantee low latency requirements. In this case, we need to handle the case, e.g., althrough OBSS NAV is set, it may ignore/reset it by monitoring transmitted frames of OBSS STAs (e.g., More Data field) or including CF-end frames if OBSS STA intends to stop TXOP by the corresponding rTWT SP detection~~ | ~~As in comment~~ | ~~Rejected.~~~~Agreed with the reasoning however the baseline already covers the OBSS NAV resetting rule (e.g. the CF-end cancelling a TXOP). Even without any restricted SP, a STA has incentive to reset/adjust any NAV to maximize its transmission opportunity allowed by the common rules. No change is needed.~~ |
| ~~5274~~ | ~~Insun Jang~~ | ~~35.3.6.2~~ | ~~298.22~~ | ~~Any EHT STAs schduled to a rTWT SP may be affected by OBSS, e.g., setting to OBSS NAV, which impacts on low latency requirements. In this case, we need to handle the case, e.g., OBSS NAV may be reset by monitoring OBSS STA's transmitted frames (e.g., More Data field = 1 and CF-end frames).~~ | ~~As in the comment~~ | ~~Rejected~~~~Resolution is same as that of CID 7430.~~ |
| ~~8053~~ | ~~Yuchen Guo~~ | ~~35.6.4.1~~ | ~~298.43~~ | ~~What if the obtained TXOP of the non-AP EHT STA is used for low latency transmission? In this case, the non-AP EHT STA may not end its TXOP.~~ | ~~Please clarify~~ | ~~Rejected.~~~~A r-TWT scheduled STA may have non latency sensitive traffic as well. In addition, in principle, the latency sensitive traffic marked as belonging to the TID(s) negotiated during the r-TWT setup procedure, should not be delivered outside the SP (despite it may). We also have to consider the SP may have multiple r-TWT member STAs.~~~~Creating too many exceptions only increases the chance that a r-TWT STA not able to grab the medium when SP starts. Prefer to keep current simple rule.~~ |
| 4723 | Chittabrata Ghosh | 35.6.4 | 298.42 | Setting and resetting of intra-BSS NAV by a STA at the restricted TWT SP start time is missing; it might be better to define specific rules of NAV setting/resetting in this aspect | As in comment | Rejected.Resetting intra-BSS NAV may cause collision for the STAs that have obtained TXOP and the STAs may be legacy STAs. Hence it is preferred not to reset intra-BSS NAV. In addition, the baseline already specifies this (P802.11axD8.0 P383, 26.5.2.5): “*A non-AP STA does not consider the intra-BSS NAV in determining whether to respond to a Trigger frame sent by the AP with which the non-AP STA is associated.”* |

**Discussion:**

(empty)

TGbe editor: please revise the head of the subclause title and the first paragraph as follows:

**35.7.4.1 TXOP rules for r-TWT SPs**

A non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure (#6950) the TXOP ends before the start time of any restricted TWT SPs advertised by the associated AP. ~~the TXOP ends before the start of any restricted TWT service periods if the TXOP is obtained outside of a restricted TWT service period.~~

TGbe editor: please revise the first paragraph as follows:

**35.7.4.2 Quieting STAs during restricted TWT service periods**

An r-TWT scheduling AP (#4157) ~~An EHT AP with dot11RestrictedTWTOptionImplemented set to true~~ may schedule a quiet interval that overlaps with a restricted TWT service period. Each such service interval, referred to as an overlapping quiet interval in this subclause, if scheduled, shall have a duration of 1 TU, and shall start at the same time as the corresponding restricted TWT service period.