IEEE P802.11Wireless LANs

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| Proposed Resolutions for CID-22382 & CID-22383 |
| Date: 2024-02-21 |
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Abstract

This submission proposes the resolution to 11be LB275 CID-22382 and CID-22383.

Revisions:

- R0: comment resolutions initial draft

- R1: Wording changed and added a note

- R2: Change of wording in the note

**Introduction**

This submission proposes the resolution to 11be LB275 CID-22382 and CID-22383, which are copied below for convenience:

**Comment:**

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| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 22382 | Salvatore Talarico | 35.8.4.1 | 624.4 | In Clause 35.8.4.1 the specification grants the R-TWT SP the highest priority and prevents a beacon to be transmitted, in particular, in p624.4 for the NSTR link case. In Clause 11.1.3.2 no limitation is set on transmitting a beacon at the start point of R-TWT SP. How to handle the overlap between a beacon transmission and the start of an R-TWT SP is currently not addressed, and behavior is contradicting along the specification. | The commenter will provide a resolution on it. | Revised.Proposed text is provided which specify that the Beacon transmission priority is higher than the current R-TWT rule, and that among all data frames the QoS data frames of the R-TWT TID(s) are prioritized.TGbe editor, please make the changes tagged by CID 22382 in this document.  |
| 22383 | Salvatore Talarico | 35.8.4.1 | 623.54 | In Clause 35.8.4.1 the specification grants the R-TWT SP the highest priority and prevents a beacon to be transmitted, in particular in p623.54 for the single link case. In Clause 11.1.3.2 no limitation is set on transmitting a beacon at the start point of R-TWT SP. How to handle the overlap between a beacon transmission and the start of an R-TWT SP is currently not addressed, and behavior is contradicting along the specification. | The commenter will provide a resolution on it. | RevisedProposed text is provided which specify that Beacon transmission priority is higher than the current R-TWT rule, and that among all data frames the QoS data frames of the R-TWT TID(s) are prioritized.TGbe editor, please make the changes tagged by CID 22383 in this document.  |

The page and line numbers above refer to those in 11be\_D5.0 [1].

1. **Discussion**

Legacy Specification Language for Beacon Generation is specified in Clause 11.1.3.2, based on which AP transmits a Beacon regardless on when this Beacon frame overlaps with the start point of R-TWT SP. There is no specification change of Clause 11.1.3.2 in 11be.

In Clause 35.8.4.1 the specification grants the R-TWT SP the highest priority and prevents a beacon to be transmitted. How to handle the overlap between a beacon transmission and the start of an R-TWT SP is currently not addressed, and behavior is contradicting along the specification for both the single link and the NSTR link case.

To address the current inconsistency, we propose to specify the Beacon transmission priority is higher than the current R-TWT rule as defined in Clause 35.8.4.1.

Furthermore, the proposed text intends to clarify that among all data frames the QoS data frames of the R-TWT TID(s) should be prioritized.

1. **Proposed Resolution**

***TGbe editor: Please change the 11be spec as shown below. The reference version is 11be\_D5.0 (#22382 and #22383)***

**35.8.4.1 TXOP and backoff procedure rules for R-TWT SPs**

**…**

***TGbe editor: Please update following paragraph by adding the note at the bottom of this subclause as shown below***

An EHT AP with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure the TXOP ends before the start time of any active R-TWT SP advertised by itself as specified in 35.8.3 (R-TWT announcement) unless the remaining portion of TXOP falling within the R-TWT SP is used for the delivery of DL frames of R-TWT DL TID(s) or to solicit the UL frames of R-TWT UL TID(s).

**…**

When a non-AP STA that is affiliated with a non-AP MLD and operates on one link of an NSTR link pair, or one of the EMLSR or EMLMR links is a member of an R-TWT SP on the first link; if the second non-AP STA affiliated with the same MLD is not a member of any other R-TWT SPs on the second link that overlap with the first SP, then the second non-AP STA and its associated AP (referred as the second AP), if their respective dot11RestrictedTWTOptionImplemented equal to true, should follow the rules below:

— The second AP as a TXOP holder on the second link should ensure its frame exchanges end no later than T amount of time before the start time of the R-TWT SP on the first link if the second non-AP STA is the corresponding TXOP responder or one of the responders,

— The second non-AP STA as a TXOP holder on the second link should ensure its TXOP ends no later than T amount of time before the start time of the R-TWT SP on the first link,

**…**

Note: If a Beacon frame transmission overlaps with the start time of any active R-TWT SP, then the ongoing Beacon frame transmission can continue within the R-TWT SP. (#22382 and 22383)

***TGbe editor: Please update following paragraph in this subclause as shown below - 11be\_ D5.0, page 624 line 49 (#22382 & #22383)***

**35.8.5 Traffic Delivery**

An R-TWT scheduling AP or a member R-TWT scheduled STA that initiates or participates in a frame exchange during an R-TWT SP shall ensure that among all Data frames, (#22382 & #22383) QoS Data frames of the R-TWT TID(s) are delivered first during the R-TWT SP.

**…**

**References**

[1] IEEE P802.11be™/D5.0, “Draft standard for information technology – Telecommunications and information exchange between systems local and metropolitan area networks – Specific requirements

Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications, Amendment 8: Enhancements for extremely high throughput (EHT)”, November 2023.