IEEE P802.11 Wireless LANs

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| LB 266 Resolution for misc CIDs related to R-TWT 35.9.3 announcement |
| Date: Oct. 29, 2022 |
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# Abstract

This submission proposes resolutions for following **25** CIDs received for TGbe LB266:

12691, 13024, 13025, 13102, 13058, 13029,

10390, 10902, 13026, 13302, 13103, 13027, 13028, 13303, 10066, 13089, 10065, 13088, 12462, 10067, 13090,

~~13636~~, 13022, 10695, 12828

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: minor text fix. Resolved 13022, 10695, 12828. Exclude CID 13636 to other doc.
* Rev 2: revise text per discussion after presentation. Exclude neighbouring AP part of text.
* Rev 3-4: revised per discussion in the meeting.
* Rev 5: resolve the remaining 15 CIDs in cyan color. Proposed change is at last page.

***TGbe editor: The baseline for this document is 11be D2.2 and REVme2.0. For r5+, the revision is based on 11be D2.3.***

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.

# Note: 19 CIDs related to 35.9.3

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| **CID** | **Commenter** | **Clause** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 12691 | Arik Klein | 35.9.4.1 | 512.12 | the requirement from the non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true that is used as TXOP Holder to stop the TXOP before any r-TWT SP advertised by the associated AP needs to be reduced only to these r-TWT SP in which the Scheduling AP has at least one member. Otherwise (i.e. if the advertised r-TWT SP includes no member) - there is no reason to request the TXOP Holder to stop its transmission for nothing. Please add the corresponding mechanism, as proposed | Need to add the following:1. The Scheduling AP shall advertise in the Broadcast TWT Info subfield element an indication for each SP whether it includes at least one member and whether it is free to add more members to the SP or not.2. The non-AP STA which supports r-TWT (i.e. dot11RestrictedTWTOptionImplemented set to true) that is used as TXOP Holder shall ensure the TXOP ends before the start time of any r-TWT SP that has at least one member. | **Revised**Agree in principle. Add an encoded field with one of the values signaling “active” and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #12691.** |
| 13024 | Chunyu Hu | 35.9.3 | 511.59 | An AP may advertise a preferred schedule it is deployed to support mainly, before any non-AP STA establishes a membership. If a schedule doesn't have any non-AP STA as member yet, there is no reason for other STAs to stop their TXOP to protect the start time of such r-TWT SPs. The SP schedule should include info to indicate corresponding status. | See comment. | **Revised** – agree in principle. Add an encoded field with one of the values signaling “active” and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #12691.** |
| 13025 | Chunyu Hu | 35.9.3 | 511.59 | If a r-TWT schedule is suspended for all participating r-TWT STAs, should this be indicated in the advertised schedule so other STAs don't need to exercise the TXOP rules for SP protection purpose? | Develop mechanism to address the problem raised in comment. | **Revised** – agree in principle. Add an encoded field with one of the values signaling “active” and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #12691.** |
| 13102 | Chittabrata Ghosh | ï»¿35.9.3 | 511.59 | An AP may setup and announce r-TWT schedules without any members as per baseline. In this case, r-TWT supporting STAs will have to end their TXOPs at SP start boundary even though there are no member STAs yet (or existing memberships are suspended). Announcement signaling should indicate whether a schedule is active or not. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling “active” and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #12691.** |
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| 13058 | Chittabrata Ghosh | 35.9.3 | 511.58 | Define agreement setup procedure when EHT AP corresponds to a nontransmitted BSSID in a multiple BSSID set or belongs to a co-hosted BSSID set and with dot11RestrictedTWTOptionImplemented set to true; in this case, the AP corresponding to a nontransmitted BSSID might not be able to announce r-TWT SP schedules | As in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for nontransmitted BSSID and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #13058.** |
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| 13029 | Chunyu Hu | 35.9.3 | 511.65 | "accommodating" is not in the responses of the TWT setup procedure. | See comment. | **Revised****TGbe editor: please make the changes as shown in {this doc} tagged by #13029.** |
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| 10390 | GEORGE CHERIAN | 35.9.3 | 0.00 | The spec should add the capabilty for an AP to advertise rTWT service periods of its neighboring APs. Rationale: rTWT efficiency depends on, not only whether the associated clients of the BSS follows the rTWT SP, but also on whether the clients in the OBSS follows the SP boundary. | As in the comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 10902 | Akira Kishida | 35.9.3 | 511.56 | As described in this clause, a r-TWT scheduling AP can indicate whether or not the schedule is available for accommodating any new membership and can notify other STAs. However, in the case of multiple r-TWT scheduling APs schedule r-TWT SP respectively, multiple r-TWT SP might be overlapped and should be avoided. TGbe should define mechanisms to prevent this issue. | As in the comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13026 | Chunyu Hu | 35.9.3 | 511.59 | The r-TWT schedule advertised by the AP should also help neighboring BSS to support each other's r-TWT operation for more effectiveness. | See comment. | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13302 | Muhammad Kumail Haider | ï»¿35.9.3 | 511.59 | r-TWT shedule announcement should indicate whether the schedule originates from own BSS or a neighboring BSS | Add an indication in announcement for whether r-TWT schedule belongs to own or different BSS | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13103 | Chittabrata Ghosh | ï»¿35.9.3 | 511.59 | r-TWT announcement mechanism should have a provision of sharing r-TWT schedules between (neighboring) APs for better coordination of schedules. This can also help mitigate OBSS interference for protection of r-TWT SP start boundaries. Add necessary signaling to facilitate such coordination and the extent of coordination should be discussed in this context. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
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| 13027 | Chunyu Hu | 35.9.3 | 511.59 | A STA may want to know current schedule without waiting for next Beacon, or not using the heavy loaded probe request/response frames etc. (as defined in 'transmitted Management frames') to do so. Define a signaling to support the schedule info retrieval. | See comment. | **Rejected**Can still rely existing Beacon/Probe Response frames. Don’t see strong reason to have a set of new signaling for the proposed purpose at this point.  |
| 13028 | Chunyu Hu | 35.9.3 | 511.59 | An AP may want to know other neighboring BSS's r-TWT schedule to best support each other's r-TWT operation. Define and/or describe necessary steps to do so. | See comment. | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13303 | Muhammad Kumail Haider | ï»¿35.9.3 | 511.59 | A STA should be able to request and retrieve the latest r-TWT schedule info via individually addressed frames rather than waiting for the next schedule announcement or relying on probe request/response frames which have higher overhead if used just to retrieve the latest schedule. | Develop signaling mechanism to retrieve r-TWT schedule info via individually addressed frames, as described in the comment. | **Rejected**Can still rely existing Beacon/Probe Response frames. Don’t see strong reason to have a set of new signaling for the proposed purpose at this point.  |
| **(Related CIDs from other subclauses)** |
| 10066 | Morteza Mehrnoush | 35.9 | 510.51 | An AP in a BSS may schedule rTWT SPs which may overlap with rTWT SPs of OBSS networks and cause extra collision and latency; in order resolve this issue, a mechanism to share the indented rTWT schedules among the APs (OBSSs) can help the APs to find the minimum overlapping of the rTWT schedules for each BSS. Please add a mechanism to the spec so that APs can share their rTWT schedules with other APs. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13089 | Chittabrata Ghosh | 35.9 | 510.51 | An AP in a BSS may schedule rTWT SPs which may overlap with rTWT SPs of OBSS networks and cause extra collision and latency; in order resolve this issue, a mechanism to share the indented rTWT schedules among the APs (OBSSs) can help the APs to find the minimum overlapping of the rTWT schedules for each BSS. Please add a mechanism to the spec so that APs can share their rTWT schedules with other APs. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 10065 | Morteza Mehrnoush | 35.9.4 | 512.07 | Per current spec, the non-AP EHT STAs that has knowledge of the rTWT SP schedule shall ensure their TXOP ends before the start of rTWT SP. However the non-AP EHT STAs in OBSS networks don't know the other BSSs rTWT schedule. If the AP can share the rTWT schedule info with other APs in OBSS networks so that OBSS EHT STAs could end their TXOP before start of rTWT SP, it helps to improve latency. Please add a mechanism for this. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13088 | Chittabrata Ghosh | 35.9.4 | 512.07 | Per current spec, the non-AP EHT STAs that has knowledge of the rTWT SP schedule shall ensure their TXOP ends before the start of rTWT SP. However the non-AP EHT STAs in OBSS networks don't know the other BSSs rTWT schedule. If the AP can share the rTWT schedule info with other APs in OBSS networks so that OBSS EHT STAs could end their TXOP before start of rTWT SP, it helps to improve latency. Please add a mechanism for this. | as in comment | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 12462 | Daniel Verenzuela | 35.9.4.1 | 512.13 | This section ensures that EHT STAs supporting r-TWT end their TXOP before a r-TWT SP starts to protect the r-TWT SP start. A similar mechanism should be created for protecting the r-TWT start from collisions with EHT STAs belonging to OBSSs. | Define mechanism to protect the start of a r-TWT SP from collisions with EHT STAs belonging to OBSSs. The commenter is willing to participate in resolution. | **Revised** – agree in principle. Add an encoded field with one of the values signaling for neighboring APs and associated normative text.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 10067 | Morteza Mehrnoush | 35.9 | 510.51 | An AP in a BSS may schedule rTWT SPs which may overlap with rTWT SPs of OBSS networks and cause extra collision and latency; to decrease the overlapping rTWT SPs among OBSS networks, the APs can use different subbands of a channel and share their subband usage with OBSS APs. Sharing this info helps the APs to select different subbands to decrease the overlapping rTWT SPs; e.g. if there are 4 BSSs which operate on a 160MHz channel, each BSS can use one 40MHz subband: 40LL, 40LU, 40UL, 40UU. Please add the procedure to the spec so that APs can share their subband usage with other APs. | As in comment | **Revised**While some part of the comment (subchannel) may not be able to be fully addressed without a more fundamental change in channel access e.g., agree some building block to address the OBSS problem can be introduced.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |
| 13090 | Chittabrata Ghosh | 35.9 | 510.51 | An AP in a BSS may schedule rTWT SPs which may overlap with rTWT SPs of OBSS networks and cause extra collision and latency; to decrease the overlapping rTWT SPs among OBSS networks, the APs can use different subbands of a channel and share their subband usage with OBSS APs. Sharing this info helps the APs to select different subbands to decrease the overlapping rTWT SPs; e.g. if there are 4 BSSs which operate on a 160MHz channel, each BSS can use one 40MHz subband: 40LL, 40LU, 40UL, 40UU. Please add the procedure to the spec so that APs can share their subband usage with other APs. | As in comment | **Revised**While some part of the comment (subchannel) may not be able to be fully addressed without a more fundamental change in channel access e.g., agree some building block to address the OBSS problem can be introduced.**TGbe editor: please make the changes as shown in {this doc} tagged by #10390.** |

## Discussion:

Active – One set of CIDs pointed out that the R-TWT scheduling AP should indicate if a schedule currently is *active* or not. Active means that the schedule has at least one non-AP STA as member, and the schedule is not suspended. This allows R-TWT supporting STAs not to stop their traffic at the SP start time save unnecessary efforts.

OBSS – Another set of CIDs pointed out the necessity of advertising R-TWT SPs of neighboring APs, and some further suggest to add associated signaling. Having the basic support of advertising OBSS AP’s R-TWT schedule is essential to have in 11be, and will be the focus in this proposal, while leaving full-fledged coordination mechanism(s) for future development.

MBSS – CID 13058 raised the concern w.r.t. the R-TWT setup and advertisement for nontransmitted BSSID.

* **Observation-1**: not all nontrnasmitted BSSID profiles are always present in the Beacon/Probe Response frames.

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| Details in REVme D1.4, 11.1.3.8.3 (**Discovery of a nontransmitted BSSID profile**):An AP or PCP may choose to include only a partial list of nontransmitted BSSID profiles in the Beacon frame, S1G Beacon frame, or DMG Beacon frame or to include different sets of nontransmitted BSSID profiles in different Beacon frames, S1G Beacon frames, or DMG Beacon frames.An AP corresponding to the transmitted BSSID may choose to include only a partial list of nontransmitted BSSID profiles in an unsolicited broadcast Probe Response frame or a Probe Response frame sent in response to a Probe Request frame with Address 3 field set to wildcard BSSID and SSID set to wildcard. |

* + **Issues**: associated STA won’t know latest the bTWT/R-TWT schedule information.
		- a) AP should always include a nontransmitted BSSID profile in Beacon/Probe Response frame if there is any change to bTWT schedule (see Table 26-6—Broadcast TWT announcements). Currently this is not mandated. Should we add it or leave to AP’s choice?
		- b) For R-TWT specifically, the R-TWT supporting STA associated with the AP operating the BSS of the nontransmitted BSSID won’t be able to the R-TWT SP start time in order to comply to the channel access rule as specified in 35.8.4 (Channel access rules for R-TWT SPs)
* **Observation-2**: a non-AP STA associated with the AP transmitting the Beacon/Probe Response frame does not necessarily parse the nontransmitted BSSID profile information. If the latter contains R-TWT SPs info for the nontransmitted BSSID represented BSS, the non-AP STA won’t be able to comply to the channel access rules as specified in 35.8.4.
	+ **Issue**: c) an R-TWT scheduled STA associated with the AP transmitting the Beacon/Probe Prose frame may not have the information of the R-TWT SPs belong to the nontransmitting AP’s BSS, and doesn’t respect the corresponding R-TWT SP start time.
* Issue b) and c) can be resolved by the transmitting AP advertising the R-TWT schedule for the nontransmitting AP, similar to the resolution for the neighboring AP case.

Further, signaling for the R-TWT schedule of nontransmitting APs can share the same indicator as that of neighboring APs.

**Proposed solution**: current Broadcast TWT Info subfield has the format shown below. Combining b1 with b2 as a 2-bit subfield to enumerate the encoded value {0, 1, 2, 3} for {idle, active, full, obss}, respectively.

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**9.4.2.199 TWT element**

***TGbe editor: change Figure 9-700 (Broadcast TWT Info subfield format) as follows, and revise the second paragraph (Restricted TWT Schedule Full subfield …) right after the figure as follows:***

B0 B1 B2 B3 B7 B8 B15

Bits: 1 2 5 8

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| Restricted TWT Traffic Info Present | Restricted TWT Schedule Info | Broadcast TWT ID | Broadcast TWT Persistence |

**Figure 9-770—Broadcast TWT Info subfield format**

(#13227)The Restricted TWT Traffic Info Present subfield of the Restricted TWT Parameter Set field is set to 1 if the Restricted TWT Traffic Info field is present; and set to 0 otherwise. It is reserved for non-EHT STAs.

~~Restricted TWT Schedule Full subfield is set to 1 to indicate that the (#11109)R-TWT scheduling AP is unlikely to accept a request from a STA in the BSS to establish a new membership in the corresponding schedule; it is set to 0 otherwise. This subfield is valid when the corresponding Restricted TWT Parameter Set field is carried in a TWT element with Negotiation Type subfield set to 2, and the TWT element is trans- mitted by an EHT AP with dot11RestrictedTWTOptionImplemented set to true; otherwise, the subfield is reserved.~~

(#12691,13058)The Restricted TWT Schedule Info subfield is set as described in Table 9-339a (Restricted TWT Schedule Info subfield values) when included in a Restricted TWT Parameter Set field carried in a TWT element with Negotiation Type subfield set to 2, and the TWT element is transmitted by an EHT AP with dot11RestrictedTWTOptionImplemented set to true; otherwise, the subfield is reserved.

***TGbe editor: insert a new table, Table 9-33a, below the above paragraph as follows:***

**Table 9-339a---Restricted TWT Schedule Info subfield values**

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| **Restricted TWT Schedule Info subfield value** | **Description when included in a Restricted TWT Parameter Set field** |
| 0 | The corresponding R-TWT schedule doesn’t have any member STA or the schedule is suspended for all the member STAs.Such an R-TWT schedule is referred to as an idle R-TWT schedule. |
| 1 | The corresponding R-TWT schedule has at least one member STA for which the schedule is not suspended.Such an R-TWT schedule is referred as an active R-TWT schedule. |
| 2 | Indicates an active R-TWT schedule for which the R-TWT scheduling AP is unlikely to accept a request from a STA in the BSS to establish a new membership.(#6414)Such an R-TWT schedule is referred to as a full R-TWT schedule (i.e., the AP might not have sufficient resources within this schedule for accepting new memberships). It is also an active R-TWT schedule. |
| 3  | Indicates the advertised R-TWT schedule is for a nontransmitting AP that belongs to the same multiple BSSID set or c-hosted BSSID set as the transmitting AP and is active. It is also an active R-TWT schedule. |

**35.8 Restricted TWT (R-TWT)**

**35.8.3 R-TWT SPs announcement**

***TGbe editor: Please modify this subclause as follows:***

If there is any R-TWT membership setup, the EHT AP shall announce the R-TWT schedule information by including Restricted TWT Parameter Set field(s) in the broadcast TWT element as specified in 9.4.2.199 (TWT element) contained in transmitted Management frames, which are specified in 26.8.3 (Broadcast TWT operation). (#13058)The membership is setup either with its associated EHT AP, or with any nontransmitting AP that belongs to the same multiple BSSID set or co-hosted BSSID set as the transmitting AP. In a multiple BSSID set, the transmitted BSSID shall include all advertised R-TWT schedules for the transmitted BSSID and all nontransmitted BSSIDs in the same multiple BSSID set as described in 11.1.3.8.4 (Inheritance of element values).

An R-TWT scheduling AP that includes a Restricted TWT Parameter Set field in a broadcast TWT element shall set the Restricted TWT Traffic Info Present subfield of the Restricted TWT Parameter Set field to 0 if the Negotiation Type subfield of the TWT element is equal to 2.

(#12691,13058)When advertising an R-TWT schedule, the R-TWT scheduling AP shall set the value of the Restricted TWT Schedule Info subfield as follows:

If the schedule does not have any non-AP member STA, or the schedule is suspended for all member STAs, the AP shall set the value to 0 (a.k.a. the schedule is idle); otherwise,

If the R-TWT schedule is for the BSS operated by the transmitting AP, the AP shall set the value to 2 to indicate the schedule is not (#13029)available for accepting new membership due to resource constraints (a.k.a. the schedule is full), and otherwise shall set the value to 1;

If the R-TWT schedule is for a BSS operated by a nontransmitting AP that corresponds to a nontransmitted BSSID in a multiple BSSID set or that belongs to a co-hosted BSSID set, and the schedule is not idle, the AP shall set the value to 3;

(#12691,13058)A non-AP STA should not request to establish membership in an R-TWT schedule advertised by the R-TWT scheduling AP with the Restricted TWT Schedule subfield set to 2.

**35.8.4 ﻿Channel access rules for R-TWT SPs**

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

***TGbe editor: Please change the 1st and 2nd paragraph ﻿(A non-AP EHT STA with…) as follows:***

﻿(#12691,13058)A non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true as a TXOP holder shall ensure the TXOP ends before the start time of any active R-TWT SPs that are advertised by its associated AP or the AP corresponding to the transmitted BSSID in a multiple BSSID set in which its associated AP belongs to, as specified in 35.8.3 (R-TWT SPs announcement). Before starting transmission of any MPDU, a non-AP EHT STA with dot11RestrictedTWTOptionImplemented set to true that is not a TXOP responder and not a member of the upcoming R-TWT SP shall check if there is enough time for the frame exchange to complete prior to the start of the R-TWT SP and, if there is not enough time, then the STA shall defer transmission by selecting a random backoff count using the present CW (without advancing to the next value in the sequence). The QSRC[AC] for the MSDU or A-MSDU is not affected.

﻿(#12691,13058)NOTE— the R-TWT schedule(s) announced in a Beacon or Probe Response frame and that is not in the nontransmitted BSSID profile include the schedule(s) for both transmitted BSSID and nontransmitted BSSID(s), if any, as specified in 35.8.3 (R-TWT SPs announcement).

﻿(#12691,13058)(#11705)(#13034)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 SPs announcement) unless the remaining portion of TXOP fallen 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).

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| **CID** | **Commenter** | **Clause** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| ~~13636~~ | Rubayet Shafin | 35.9 | 510.51 | Restricted TWT would be an important feature for TDLS communication. However, the use of Broadcast TWT schedule, which is the basis of restricted TWT operation, by two TDLS peers STAs for communication over the TDLS direct link is not defined for TDLS operation (though individual TWT agreement can be established for the TDLS direct link by the amendmends made in 11ax). | Please provide text to enable the utilization of broadcast/restricted TWT schedule by two TDLS peer STAs. | **Reject**The group didn’t converge on a solution after discussion. |
| 13022 | Chunyu Hu | 35.9.2.2 | 511.54 | r-TWT TIDs identified the latency sensitive traffic that the r-TWT schedule is setup for as already stated in 9.4.2.199 (P207L55/L60). Add corresponding normative text in this section or the previous one, whichver appropriate. |  | **Revised**This comment has been addressed by the resolution to CID #10429,13241 in doc 11-22/1280, and the corresponding changes are already in D2.2.**TGbe editor: please implement the changes tagged by #10429 in doc 11-22/1280r6.** |
| 10695 | Liangxiao Xin | 35.9.4.1 | 512.12 | When AP is the TXOP holder at the start time of the R-TWT SP but the AC of the TXOP is not for R-TWT TIDs, what happens? | AP should continue its TXOP but transmit the frames from R-TWT TIDs even if they are not from the primary AC during the current TXOP. | **Revised**This comment has been addressed by the resolution to CID #11705,13034 in doc 11-22/1470r7, and the corresponding change is already incorporated in D2.2.**TGbe editor: please implement the changes tagged by (#11705), (#13034) in doc 11-22/1470r7.** |
| 12828 | Laurent Cariou | 35.9.1 | 510.56 | A non-AP STA on link A affiliated with a non-AP MLD may be aware that another STA on link B of the non-AP MLD has an rTWT SP to which it is a member that will start soon. If a TxOP is started and the STA on link A of the non-AP MLD is the TxOP responder, it would be very useful to define a mechanism so that the TxOP responder can inform the transmitter that it will be available only for a specific duration and not for the entire duration of the TxOP. | Define a mechanism to fix the issue | **Revised**This comment has been addressed by the resolution to CID #13646,10435, and the corresponding changes are already in D2.2**TGbe editor: please implement the changes tagged by #13646,10435 in doc 11-22/1470r7.** |

# **Resolution for CIDs #10390 etc. (r4+) with baseline D2.3:**

***TGbe editor: Please change the 2nd paragraph from bottom (When advertising an R-TWT schedule, …) and insert a new paragraph as follows:***

(#12691)(#13058)When advertising an R-TWT schedule, the R-TWT scheduling AP shall set the value of the Restricted TWT Schedule Info subfield as follows:

* If the schedule does not have any non-AP member STA, or the schedule is suspended for all member STAs, the AP shall set the value to 0 (a.k.a. the schedule is idle); otherwise,
* If the R-TWT schedule is for the BSS operated by the transmitting AP, the AP shall set the value to 2 to indicate the schedule is not (#13029)available for accepting new membership due to resource constraints (a.k.a. the schedule is full), and otherwise shall set the value to 1;
* If the R-TWT schedule is for a BSS operated by a nontransmitting AP that corresponds to a nontransmitted BSSID in a multiple BSSID set or that belongs to a co-hosted BSSID set, and the schedule is not idle, the AP shall set the value to 3.
* (#10390)The AP shall set the value to 3 if the R-TWT schedule is for a neighboring AP, and the schedule is not idle.

(#10390)The R-TWT scheduling AP may acquire the R-TWT schedule information of neighboring APs by listening to the Management frames that announces their R-TWT schedules, and may advertise such a schedule by setting the value in the corresponding Restricted TWT Schedule Info subfield to 3.