IEEE P802.11
Wireless LANs

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| CR for 26.8.4.4 |
| Date: 2022-04-22 |
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Abstract

This submission proposes resolutions for comments from comment collection on P802.11-REVme D1.0 with the following CIDs (4CIDs):

* 1201, 1203, 1204, 1205

Revisions:

R0: Initial version.

***Editing instructions formatted like this are intended to be copied into the TGme 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 “TGme Editor” are instructions to the TGme editor to modify existing material in the TGme draft. As a result of adopting the changes, the TGme editor will execute the instructions rather than copy them to the TGme Draft.***

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| **CID** | **Clause** | **Page** | **Line** | **Comment** | **Proposed Change** | **Resolution** |
| 1201 | 26.8.4.4 | 4221 | 18 | Change "Shall be in the awake state at the time it indicated in the Next TWT subfield of the TWT Information frame." to "Shall be in the awake state at the time indicated in the Next TWT subfield of the TWT Information frame." because it's the STA's operation after the STA receives the TWT Information frame. | As per comment | **Accepted** |
| 1203 | 26.8.4.4 | 4220 | 35 | The indicated text only describes the case that the non-AP STA is transmitter of the TWT information frame. Need to describe the case that the non-AP STA is the recipient of the TWT Information frame. Update the indicated text or add the related text after the indicated text | As per comment. | **Revised****Agree in principle with the commenter.****The indicated text is only for an HE STA as the transmitter of the TWT Information frame.****Need to describe the operation of the HE STA that receives a TWT Information frame as well as the transmitter.** **TGme editor: Please make changes as shown in doc 11-22/xxxxr0 tagged as 1203** |
| 1204 | 26.8.4.4 | 4220 | 41 | The indicated text only describes the case that the non-AP STA is transmitter of the TWT information frame. Need to describe the case that the non-AP STA is the recipient of the TWT Information frame. Update the indicated text or add the related text after the indicated text | As per comment. | **Revised****Agree in principle with the commenter.****The indicated text is only for a non-AP HE STA as the transmitter of the TWT Information frame.****Need to describe the operation of the non-AP HE STA that receives a TWT Information frame as well as the transmitter.** **TGme editor: Please make changes as shown in doc 11-22/xxxxr0 tagged as 1204** |
| 1205 | 26.8.4.4 | 4220 | 44 | The indicated text of the start time of preseving PM mode need to be clarified. The STA should do the operation after receiving ack for the TWT info frame (Not after sending the TWT info frame). Change "from the time the TWT Information frame was sent" to "from the time the acknowledgement for the TWT Information frame was received". | As per comment. | **Revised****Agree in principle with the commenter.****The start time of the PM mode should be the time that the STA receives the acknowledgment of the TWT Information frame.** **TGme editor: Please make changes as shown in doc 11-22/xxxxr0 tagged as 1204** |

**Proposed text:**

* TWT Information frame exchange for flexible wake time

An HE STA may transmit a TWT Information frame that contains a flexible TWT to a peer STA if the peer STA has set the Flexible TWT Schedule Support field in the HE Capabilities it transmits to 1; otherwise, the HE STA shall not transmit a TWT Information frame that contains a flexible TWT to the peer STA.

A flexible TWT is a nonzero value indicated in the Next TWT subfield of a TWT Information frame with All TWT subfield equal to 0, and the value is independent from any existing TWT values of TWT agreements that the HE STA might be following (if any). The HE STA sets the fields of the transmitted TWT Information frame as defined in 26.8.4.1 (General).

NOTE 1—Flexible TWT support does not depend on the STA’s TWT capabilities, i.e., the STA can use flexible TWT without being required to set up an individual TWT agreement or broadcast TWT schedule.

An HE STA that receives or transmits (#1203) an acknowledgment for a TWT Information frame with flexible TWT that contains a TWT Flow Identifier that identifies an existing individual TWT agreement shall replace the next TWT SP start time for that TWT agreement with the value contained in the Next TWT subfield of the TWT Information frame.

A non-AP HE STA that receives an acknowledgment for a TWT Information frame with flexible TWT that contains a TWT Flow Identifier that does not identify any existing individual TWT agreement preserves the PM mode from the time (#1205) the acknowledgment of the TWT Information frame was received to the time indicated in the Next TWT subfield of the TWT Information frame as described below in this subclause.

(#1204) A non-AP HE STA that transmits an acknowledgment for a TWT Information frame with flexible TWT that contains a TWT Flow Identifier that does not identify any existing individual TWT agreement preserves the PM mode from the time the acknowledgment of TWT Information frame was sent to the time indicated in the Next TWT subfield of the TWT Information frame as described below in this subclause.

NOTE 2—If the TWT Information frame has the All TWT field equal to 1, then the TWTs are suspended and resumed as described in 26.8.4.2 (TWT Information frame exchange for individual TWT) and 26.8.4.3 (TWT Information frame exchange for broadcast TWT).

A non-AP HE STA that transmits a TWT Information frame with flexible TWT to a peer STA

* May go to doze state after receiving the acknowledgment sent in response to the TWT Information frame if it is in PS mode (i.e., the PM subfield of the Frame Control field of the TWT Information frame is 1).
* May be unavailable if it is in active mode (i.e., the PM subfield of the Frame Control field of the TWT Information frame is 0).
* Shall be in the awake state at the time it indicated in the Next TWT subfield of the TWT Information frame.
* Shall be in the PS mode if the PM subfield of the TWT Information frame was 1 and in active mode if the PM subfield of the TWT Information frame was 0.

The STA, once in the awake state, shall follow the rules that correspond to the power management mode of the STA, which are defined in 11.2.3 (Power management in a non-DMG infrastructure network) for the active and PS modes and in 26.8 (TWT operation) when the STA operates within TWT SPs.

NOTE 3—An HE AP delivers DL BUs to the STA at or after the flexible TWT indicated in the flexible TWT by following the rules in 11.2.3.6 (AP operation) if the STA does not follow TWT and by following the rules in 26.8 (TWT operation) if the STA follows TWT and the delivery falls within a TWT SP. The STA is not required to send a frame at or after the flexible TWT to indicate its awake state to the AP. If the STA is following U-APSD, then the operation is resumed at a time that occurs at the flexible TWT; and if the STA is following an APSD schedule, then the operation is resumed at a time that occurs at or after the flexible TWT.

A non-AP HE STA that receives a TWT Information frame with flexible TWT from a peer STA

* May go to doze state after transmitting the acknowledgment if it is in PS mode.
* May be unavailable if it is in active mode.
* Shall be in the awake state at the time(#1201) indicated in the Next TWT subfield of the TWT Information frame.
* Shall be in the PS mode if the STA was in PS mode when it received the TWT Information frame and in active mode if the STA was in active mode when it received the TWT Information frame.

The STA, once in the awake state, shall follow the rules that correspond to the power management mode of the STA, which are defined in 11.2.3 (Power management in a non-DMG infrastructure network) for the active and PS modes and in 26.8 (TWT operation) when the STA operates within TWT SPs.