IEEE P802.11  
Wireless LANs

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| PDT-MAC-TWT SP Management | | | | |
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Abstract

This document contains Proposed Draft Text (PDT) for the TWT SP management feature of the proposed TGbn (UHR, Ultra High Reliability) amendment to the 802.11 standard.

This version of PDT includes the motions passed in IEEE up to November 2024.

# Revision information

The following is a summary of the important changes that occurred within each revision of this document:

|  |  |
| --- | --- |
| **Revision** | **Major changes** |
| 0 | Initial revision |
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# Introduction

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 TGbn Draft. The abstract, revision information, introduction, explanation of the proposed changes and references sections are not part of the adopted material.

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

## Explanation of the proposed changes:

The proposed changes to the 802.11 TGbn draft within this document are based on the following motions adopted by the TGbn task group:

### Relevant passed motions:

[Motion #31, [1]]

* **11bn defines a mechanism that enables a non-AP STA to indicate that it does not have pending traffic to deliver during the current ongoing TWT SP.**
  + NOTE 1 – The exact signaling mechanism is TBD
  + NOTE 2 – This does not propose changing the SP termination mechanism/signaling itself. As per current spec, a TWT SP may be terminated by an AP as specified in 26.8.5
  + NOTE 3 – It is optional for the non-AP STA to provide such an indication

# Text to be adopted begins here:

**9.2.4.5 QoS Control field**

**9.2.4.5.1 QoS Control field structure**

***TGbn editor: Please modify row 6 of Table 9-10 (QoS Control field) as follows:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Applicable frame (sub)types** | **Bits 0-3** | **Bit 4** | **Bits 5-6** | **Bit 7** | **Bits 8** | **Bit 9** | **Bit 10** | **Bit 11-15** |
| … | … | … | … | … | … | | | |
| QoS Data and QoS Data+CF-Ack frames sent in a nonmesh BSS by non-AP STAs that are not a TPU buffer STA or a TPU sleep STA | TID | 0 | Ack Policy Indicator | AMSDU Present | TXOP Duration Requested | | | |
| TID | 1 | Ack Policy Indicator | AMSDU Present | Queue Size | | | |
| QoS Null frames sent in a nonmesh BSS by non-AP STAs that are not a TPU buffer STA or a TPU sleep STA | TID | 0 | Ack Policy Indicator | Reserved | TXOP Duration Requested | | | |
| TID | 1 | Ack Policy Indicator | ~~Reserved~~  EOTSP | Queue Size | | | |
| … | … | … | … | … | … | … | … | … |

***TGbn editor: Please add a new subclause in 9.2.4.5 as follows:***

**9.2.4.5.xxx EOTSP subfield**

﻿The End of Traffic for SP (EOTSP) subfield indicates if there is no further pending traffic from the transmitting non-AP STA during the current TWT service period. The EOTSP subfield is set to 1 if the transmitting non-AP STA does not have any more pending traffic to be delivered during the current TWT service period, and it is set to 0 if the transmitting non-AP STA either has more pending traffic to be delivered or does not know whether there is more pending traffic during the current TWT service period.

***TGbn editor: Please insert the following subclause in P802.11bnD0.1:***

**37.x UHR TWT operation**

**37.x.1 TWT SP Management**

﻿A TWT requesting STA or a TWT scheduled STA may set the EOTSP subfield to 1 in a QoS Null frame it transmits to a TWT responding STA or a TWT scheduling AP during an on-going TWT SP to indicate that the STA does not have any pending traffic for the remainder of the current TWT SP.

A TWT responding STA or a TWT scheduling AP, which receives a QoS Null frame with the EOTSP subfield equal to 1 from a TWT requesting STA or a TWT scheduled STA during a TWT SP, may terminate the TWT SP for that STA as described in 26.8.5 (Power save operation during TWT SPs).

# Text to be adopted ends here.

**References:**

1. [11-24-0171r21](https://mentor.ieee.org/802.11/dcn/24/11-24-0171-21-00bn-tgbn-motions-list-part-1.pptx): 11-24-0171-21-00bn-tgbn-motions-list-part-1, Alfred Asterjadhi (Qualcomm Inc.)