IEEE P802.11
Wireless LANs

|  |
| --- |
| Comment Resolution Spatial Reuse |
| Date: 2025-02-25 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Christian Berger | NXP | 350 Holger Way, San Jose, CA |  | christian.berger@nxp.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes to address the following CIDs R1-10, R1-11, R1-13, R1-14, R1-15, and R1-16, changes are relative to Draft P802.11be\_D7.0, Draft P802.11REVme\_D7.0, and Draft P802.11bk D4.0.

Revisions:

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

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

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

**The text preceded by “Discussion” is not part of the adopted changes.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| **R1-8** | 27.16 | 9.4.2.166 | "to include one or more Transmit Power Envelope element in the EDCA based measurement exchange between an ISTA and an RSTA" - one or more, I guess we are asking for updates. Also "in the EDCA based measurement exchange"? | Not very clear. | **Revised**TGbk editor, make the changes identified in document [**https://mentor.ieee.org/802.11/dcn/24/11-24-1921-06-00bk-comment-resolution-spatial-reuse.docx**](https://mentor.ieee.org/802.11/dcn/24/11-24-1921-06-00bk-comment-resolution-spatial-reuse.docx) |
| **R1-9** | 28.05 | 9.4.2.300 | Changing reserved Bit 30 to "TPE Update Capable", why not use Bit 8? | As per comment | **Rejected**It is what it is. |
| **R1-10** | 28.13 | 9.4.2.300 | "The TPE Update Capable subfield is set to 1 to request or indicate the LMR frames of the FTM session includes one or more Transmit Power Envelope element" - all LMR frames? | As per comment | **Revised** |
| **R1-11** | 34.18 | 9.6.7.49 | "If the the TPE field is present in an LMR frame, it contains a Transmit Power Envelope element as defined in 9.4.2.160 Transmit Power Envelope element." - could be more than one | Change to "The TPE field is optionally present. If present, it contains one or more Transmit Power Envelope elements as defined 9.4.2.160 (Transmit Power Envelope element)." | **Revised** |
| **R1-13** | 36.06 | 11.21.6.3.2 | "An RSTA that set the TPE Update Capable subfield to 1, shall include at least one Transmit Power Envelope element in FTM frames." - "Shall include" in all FTM frames? That seems to be a large overhead for EDCA FTM. Also no mention of LMR? | Limit either to IFTM (the negotiation) or specify that it is included when there is an update (as needed?). | **Revised** |
| **R1-14** | 39.28 | 11.21.6.3.3 | "An RSTA that set the TPE Update Capable subfield to 1, shall include at least one Transmit Power Envelope element in IFTM frames and LMR frames." - in all LMR frames? That is a large overhead. | Clarify that this is not meant in every single LMR frame that is part of the FTM session, maybe at discretion of RSTA or when needed to convey an update? | **Revised** |
| **R1-15** | 54.09 | 11.21.6.4.3.4 | "NOTE - If there is only one R2I LMR, the PPDU carrying the R2I LMR is using one of the following formats: HE SU, HE MU or EHT MU (including EHT SU transmission)." - If there is only one LMR then an EHT MU format carrying that one LMR is an "EHT SU transmission" - but the word "including" seesms to say that it could not be? | Change to "EHT MU PPDU that is an EHT SU transmission" or "EHT MU PPDU using EHT SU transmission" or just remove the parathesis completely | **Revised** |

1. **9.4.2.166 FTM Parameters element**
2. ***TGbk Editor: Change subclause 9.4.2.166 as follows (on page 27, 11bk Draft4.0):***

For EDCA based ranging of non-EDMG STAs, the Secure RTT Measurement/TPE Update Capable subfield is set to 1 by an unassociated ISTA to indicate to an RSTA that it is capable of receiving updates of the Transmit Power Envelope during the EDCA based measurement exchange, and to 0 otherwise. (#**R1-8**)

1. **9.4.2.300 Ranging Parameters element**
2. ***TGbk Editor: Change subclause 9.4.2.300 as follows (on page 28, 11bk Draft4.0):***

The TPE Update Capable subfield is set to 1 by an unassociated ISTA to indicate to an RSTA that it is capable of receiving updates to the Transmit Power Envelope during the TB or Non-TB ranging measurement exchange. (#**R1-10**)

1. **9.6.7.49 LMR frame format**
2. ***TGbk Editor: Change subclause 9.6.7.49 as follows (on page 34, 11bk Draft4.0):***

The TPE field is optionally present. If present, it contains one or more Transmit Power Envelope element as defined in 9.4.2.160 (Transmit Power Envelope element). (#**R1-11**)

1. **11.21.6.3.2 Negotiation for EDCA based ranging measurement exchange**
2. ***TGbk Editor: Change subclause 11.21.6.3.2 as follows (on page 35/36, 11bk Draft4.0):***

An unassociated ISTA that is capable of receiving a Transmit Power Envelope element as part of its FTM procedure shall set to 1 its TPE Update Capable subfield in the IFTMR frame. An RSTA that is capable of transmiting a Transmit Power Envelope element as part of the FTM procedure shall respond with an IFTM frame with the TPE Update Capable field set to 1, if the IFTMR frame included a TPE Update Capable subfield set to 1.

An associated ISTA shall set the TPE Update Capable subfield to 0.

An RSTA that set the TPE Update Capable subfield to 1, shall include at least one Transmit Power Envelope element in the following FTM frames:

* The Transmit Power Envelope elements are included in the IFTM frame and shall be the same as the ones carried in the Beacon and other management frames transmitted by the RSTA.
* Additionally, if there is a change in the regulatory and local maximum transmit power that leads to a change in the Transmit Power Envelope elements carried in the Beacon and other management frames, the RSTA shall include updated Transmit Power Envelope elements in the first FTM frame and its retransmissions of the next burst instance. (#**R1-13**)
1. **11.21.6.3.3 Negotiation for TB and non-TB ranging measurement exchange**
2. ***TGbk Editor: Change subclause 11.21.6.3.3 as follows (on page 39, 11bk Draft4.0):***

An unassociated ISTA that is capable of receiving a Transmit Power Envelope element as part of its FTM procedure shall set to 1 its TPE Update Capable subfield in the IFTMR frame. An RSTA that is capable of transmiting a Transmit Power Envelope element as part of the FTM procedure shall respond with an IFTM frame with the TPE Update Capable field set to 1, if the IFTMR frame included a TPE Update Capable subfield set to 1.

An associated ISTA shall set the TPE Update Capable subfield to 0.

An RSTA that set the TPE Update Capable subfield to 1, shall include at least one Transmit Power Envelope element in the following frames:

* The Transmit Power Envelope elements are included in the IFTM frame, and shall be the same as the ones carried in the Beacon and other managemanget frames transmitted by the RSTA.
* Additionally, if there is a change in the regulatory and local maximum transmit power that leads to a change in the Transmit Power Envelope elements carried in the Beacon and other management frames, the RSTA shall include updated Transmit Power Envelope elements in at least five consecutive LMR frames. (#**R1-14**)