### IEEE P802.11 Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 11ax D4.2 MAC Comment Resolution for SM Power Save Part II | | | | |
| Date: 2019-07-08 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Po-Kai Huang | Intel Corporation | 2200 Mission College Blvd, Santa Clara, CA 950542200 |  | po-kai.huang@intel.com |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Abstract

This submission proposes resolutions for comments of TGax Draft D4.0 with the following CIDs:

21211

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revision based on offline discussion

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 TGax D4.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax D4.0 Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 21211 | Pooya Monajemi | 418.11 | 26.14.4 | This does not cover the UORA use case, where a BSRP/BQRP is allocated for AID12 = 0, and the Client's OBO counts down to 0. | Update the text to support this use case | Revised –  We clarify that SM power save is about changing the receiving chain rather than transmitting chain. For AP that has specific DL data, AP can use the mechanism in the spec to change the receiving chain of the STA with DL data. For UL data, STA can already transmit with its full capability without SM power save involved. If we need to use random access to signal downlink traffic, then further design is required.  For now, we add a note to clarify that the only consideration here is that for a STA that has not chaning receiving chain, the UORA Trigger transmitting with more than one spatial stream can not be processed by the STA.  We also expand the condition that a STA can exist SM power save based on the new HE UL/DL transmission situation.  TGax editor to make the changes shown in 11-19/1167r1 under all headings that include CID 21211 |

**Discussion:** *None.*

**Propose:** Revised for CID 21211 per discussion and editing instructions in 11-19/1167r1.

**11.2.6 SM power save**

***Change the 4th paragraph as follows:***

The STA can determine the end of the frame exchange sequence through any of the following:

* It receives an individually addressed frame addressed to another STA.
* It receives a frame with a TA that differs from the TA of the frame that started the TXOP.
* It receives a HE MU PPDU with the RXVECTOR parameter BSS\_COLOR equal to the BSS Color of the associated AP, no element of the RXVECTOR parameter STA\_ID\_LIST equal to 11 LSBs of the AID of the STA, no element of the RXVECTOR parameter STA\_ID\_LIST equal to 0 if the associated AP is not in a multiple BSSID set, and no element of the RXVECTOR parameter STA\_ID\_LIST equal to 2047 or BSSID index of the associated AP if the associated AP is in a multiple BSSID set.(#21211)
* It receives a Trigger frame that is an MU-RTS Trigger frame, BSRP Trigger frame or BQRP Trigger frame, and the Trigger frame does not include a User Info field with the AID12 subfield equal to the 12 LSBs of the AID of the STA.(#21211)
* The CS mechanism (see 10.3.2.1 (CS mechanism)) indicates that the medium is idle at the TxPIFS slot boundary (defined in 10.3.7 (DCF timing relations)).

***TGax editor: Change 26.5.5 UL OFDMA-based random access (UORA) as follows: (Track change on)***

**26.5.5 UL OFDMA-based random access (UORA)**

**26.5.5.1 General**

(…existing texts ….)

An HE AP may transmit a Basic Trigger frame, BQRP Trigger frame or BSRP Trigger frame that contains one or more RUs for random access. An AP that transmits a Trigger frame that is not a Basic Trigger frame, BQRP Trigger frame or BSRP Trigger frame shall not set the AID12 subfield of any User Info field of the frame to 0 or 2045.

NOTE — For a HE non-AP STA that changes the maximum number of receiving spatial streams to 1 and sets the OFDMA RA Support subfield in the HE MAC Capabilities Information field of the HE Capabilities element to 1, the HE non-AP STA cannot decode a Trigger frame sent with more than a single spatial stream. As a result, if the Trigger frame indicates eligible RA-RUs for the associated non-AP STAs, the HE non-AP STA cannot perform UORA defined in 26.5.5 (UL OFDMA-based random access (UORA)). An AP can take this behavior into consideration when sending a Trigger frame indicating eligible RA-RUs for the associated non-AP STAs. (#21211)

(…existing texts ….)