IEEE P802.11
Wireless LANs

|  |
| --- |
| Availability Window parameters modification |
| Date: 2018-10-27 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Dibakar Das | Intel |  |  | dibakar.das@intel.com |
| Ganesh Venkatesan | Intel |  |  | Ganesh.venkatesan@intel.com |
| Chittabrata Ghosh | Intel |  |  | Chittabrata.ghosh@intel.com |
| Feng Jiang | Intel |  |  | Feng1.jiang@intel.com |
| Jonathan Segev | Intel | 2111 NE 25th Ave, Hillsboro, OR 97124 |  | Jonathan.segev@intel.com |

Abstract

This submission addresses the following CIDs from TGaz CC28 and based on TGaz draft 0.5.4:

39, 167.

The proposed resolution uses the content in document 11- 11-18-1604-01-00az-Availability\_window\_update.pptx

History:

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Some changes that are highlighted in green.
* Rev 2: Fixed document number in instruction to editor.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Page | Clause | Comment | Proposed Change | Resolution |
| 39 | 53 | 11.22.6.4.3.1 | What is the behavior for "group related scheduling indications.? | As per comment | Revised. Modified the text to clarify what group related scheduling indications are. |
| 167 | 53 | 11.22.6.4.3.1 | it is not clear what "group related scheduling indications" means. | Remove "and group related scheduling indications" from the sentence. | Revised. Duplicate of CID 39. Modified the text to clarify what group related scheduling indications are. |

11.22.6.4.2 RSTA Centric EDCA basic legacy scheduling Measurement exchange

##### 11.22.6.4.3 Measurement Exchange in HEz Mode

11.22.6.4.3.1 General

***802.11az Editor:***

***Modify the following sentence in L28P53 as shown below:***

Within each availability window the RSTA and ISTAs shall perform ranging activities related only to polling, measurement sounding and measurement results reporting, as well as signalling of modification of availability window parameters (see section 11.22.6.5.2).

**9.6.7.33 Fine Timing Measurement frame format**

***802.11az Editor:***

***Modify the following paragraph of Clause 9.6.7.33 as shown below:***

The Ranging Parameters field is present in the initial Fine Timing Measurement Frame if the responder selects non-TB ranging or TB Ranging protocols for the ranging phase, and is not present in subsequent Fine Timing Measurement frames except for the conditions described in sections 11.22.6.5 and 11.22.6.6. If present, it contains a Ranging Parameters element as defined in 9.4.2.246 (Ranging Parameters).

***Modify the following paragraph of Clause 9.6.7.33 as shown below:***

The FTM Synchronization Information field is present in the initial Fine Timing Measurement frame and its retransmissions if any, and in the first Fine Timing Measurement frame within each burst and its retransmissions if any if the responder selects Fine Timing Measurement as the ranging phase, and in an A-MPDU aggregated with an LMR frame if the responder selects TB Ranging as the ranging phase; otherwise it is not present. If present when the responder selects Fine Timing Measurement as the ranging phase, it contains an FTM Synchronization Information element with a TSF Sync Info field containing the 4 least significant octets of the TSF at the responding STA corresponding to the time the responding STA received the last Fine Timing Measurement Request frame with the Trigger field equal to 1. If present when the responder selects TB ranging as the ranging phase, its content is TBD.

11.22.6.5 Fine Timing Measurement parameter modification

***802.11az Editor: Revise this section as follows:***

During an FTM session, an initiating STA may terminate the current session and request a new session with modified session parameters by transmitting a Fine Timing Measurement Request frame with Trigger field set to 1 and including a new Fine Timing Measurement Parameters element (if the responding STA selects Fine Timing Measurement as the ranging protocol for the ranging phase) or a Ranging Parameters field. The existing FTM session is terminated upon reception of such a Fine Timing Measurement Request frame. This Fine Timing Measurement Request frame is an initial Fine Timing Measurement Request frame for the new FTM session, which follows the behavior described in 11.24.6.3.

11.22.6.5.2 Availability Window parameter modification

During a TB Ranging session with an ISTA an RSTA may modify the parameters of the existing session by transmitting an A-MPDU containing a Fine Timing Measurement frame and an RSTA-to-ISTA LMR whenever the RSTA is permitted to transmit such an LMR to that ISTA. The FTM frame is of type Action no ACK and shall contain a Ranging Parameters field containing an HEz Specific Parameters subelement. The Availability Window subelement inside this HEz Specific Parameters subelement indicates the parameters of the new availability window assigned to that ISTA. In the FTM frame the Follow Up Dialog Token field is set as 0. The existing ranging session with the ISTA is not terminated and continues based on current Availability Window paramteters until the start of the new availability window signalled in the FTM frame.

**11.24.6.6 Fine timing measurement termination**

***802.11az Editor: Add the following to the end of the section:***

**11.24.6.6.2 TB Ranging and non-TB Ranging session termination**

A TB Ranging or a NTB Ranging session may be terminated through one of the following:

 — At any time during the session when the responding STA is permitted to transmit an RSTA-to-ISTA LMR frame, the responding STA sends an A-MPDU containing an LMR frame and a Fine Timing Measurement frame with the Dialog Token field set to 0 and of type Action no ACK. In the FTM frame the Follow Up Dialog Token field is set as 0. The FTM frame shall not include any Ranging Parameters field.

 — At any time during the session the initiating STA sends a Fine Timing Measurement Request frame with the Trigger field set to 0. This frame shall not include:
 — a Ranging Parameters field.

 — a Measurement Request element.

— At any time during the session the initiating STA terminates the current session and requests a new session with modified ranging parameters (see 11.24.6.5).