IEEE P802.11Wireless LANs

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| Proposed Resolutions to some 11be LB266 CIDs on EMLSR | | | | |
| Date: 2022-12-01 | | | | |
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Abstract

This submission proposes the resolutions to 11be LB266 CIDs 11366, 11368, and 11369.

The page and line numbers refer to those in 11be\_D2.3 [1].

**Introduction**

This submission proposes the resolutions to 11be LB266 CIDs 11366, 11368, and 11369.

The page and line numbers refer to those in 11be\_D2.3 [1].

**Comments:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Page.Line | Clause | Comment | Proposed change | Resolution |
| 11366 | Qi Wang | 218.39 | 9.4.2.312.2.2 | Table 9-401h: A long EMLSR Transition Timeout causes significant restriction on the power save behavior of the STAs operating in the EMLSR mode. Please remove the large values from the allowed values of the Transition Timeout subfield. | As in comment. | Revised.  Agree with the commenter in principle. In addition to reducing the max EMLSR Transition Timeout from 128 TUs to 64 TUs, the EMLSR Transition Delay table is also modified to allow indication of the value with a finer resolution when it is <= 96 us, in order to reduce the unnecessary wait time by the AP MLD if the non-AP MLD has already returned to the listening operation.  TGbe editor: please incorporate the proposed text changes tagged with #11366 in this document. |
| 11368 | Qi Wang | 462.  52 | 35.3.17 | "A STA on one of the other links of the EMLSR links shall not transmit a frame with the Power Management subfield set to 1 before receiving the EML Operating Mode Notification frame from the AP affiliated with the AP MLD or before the end of the timeout interval." Why is this restriction necessary? When the EMLSR Transition Timeout value is large, this requirement poses strong and unnecessary restrictions of the power save of non-AP STAs. | Please delete the quoted text. | Revised.  Agree with the commenter in principle. However, instead of removing the sentence, we propose to reduce the max EMLSR Transition Timeout from 128 TUs to 64 TUs.  TGbe editor: please incorporate the proposed text changes tagged with #11368 in this document. |
| 11369 | Qi Wang | 463. 10 | 35.3.17 | "A STA on one of the other links of the EMLSR links shall not transmit a frame with the Power Management subfield set to 0 before receiving the EML Operating Mode Notification frame from the AP affiliated with the AP MLD or before the end of the timeout interval." Why is this restriction necessary? When the EMLSR Transition Timeout value is large, this requirement poses strong and unnecessary restrictions of the power save of non-AP STAs. | Please delete the quoted text. | Revised.  Agree with the commenter in principle. However, instead of removing the sentence, we propose to reduce the max EMLSR Transition Timeout from 128 TUs to 64 TUs.    TGbe editor: please incorporate the proposed text changes tagged with #11369 in this submission. |

1. **Discussion:**

None.

1. **Proposed resolution:**

**9.4.2.312.2.3 Common Info field of the Basic Multi-Link element**

***11be Editor: Please change the text on P238 in 11be\_D2.3[1] as shown below. (#11366)***

The EMLSR Transition Delay subfield indicates the transition delay time needed by a non-AP MLD to switch from exchanging frames on one of the enabled links to the listening operation on enabled links (see 35.3.17 (Enhanced multi-link single radio operation). (#11122) When the EMLSR Transition Delay subfield is included in a frame sent by an AP affiliated with an AP MLD, the EMLSR Transition Delay sub- field is reserved. The EMLSR Transition Delay subfield (#11391)includes 3 bits and is set as defined in Table 9-401f (Encoding of the EMLSR Transition Delay subfield(#11391)).

**Table 9-401f—Encoding of the EMLSR Transition Delay subfield(#11391) (#11366)**

|  |  |
| --- | --- |
| **EMLSR Transition Delay subfield value** | **EMLSR transition delay** |
| 0 | 0 us |
| 1 | 16 us |
| 2 | 32 us |
| 3 | 48 us |
| 4 | 64 us |
| 5 | 80 us |
| 6 | 96 us |
| 7 | 256 us |

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***11be Editor: Please change the text on P239 in 11be\_D2.3[1] as shown below. (#11366)***

The Transition Timeout subfield indicates the timeout value for EML Operating Mode Notification frame exchange in EMLMR mode (see 35.3.18 (Enhanced multi-link multi-radio operation)) and EMLSR mode (see 35.3.17 (Enhanced multi-link single radio operation)).

When the Transition Timeout subfield is included in a frame sent by an AP affiliated with an AP MLD, the Transition Timeout subfield is set as defined in Table 9-401h (Encoding of the Transition Timeout subfield). When the Transition Timeout subfield is included in a frame sent by a non-AP STA affiliated with a non-AP MLD, the Transition Timeout subfield is (#13754)reserved.

**Table 9-401h—Encoding of the Transition Timeout subfield (#11366, #11368, #11369)**

|  |  |
| --- | --- |
| **Transition Timeout subfield value** | **Transition timeout** |
| 0 | 0 us |
| 1 | 128 us |
| 2 | 256 us |
| 3 | 512 us |
| 4 | 1 TU |
| 5 | 2 TUs |
| 6 | 4 TUs |
| 7 | 8 TUs |
| 8 | 16 TUs |
| 9 | 32 TUs |
| 10 | 64 TUs |
| 11-15 | Reserved |

**References**

[1] IEEE P802.11be™/D2.2, Draft standard for information technology – Telecommunications and information exchange between systems local and metropolitan area networks – Specific requirements Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications, Amendment 9: Enhancements for extremely high throughput (EHT)

Amendment 4: Enhancements for positioning