IEEE P802.11
Wireless LANs

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| Proposed Text to Resolve CID 146 in CC12 |
| Date: 2014-05-20 |
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|  |  |  |  |  |

Abstract

This document presents suggested proposal towards CID 146

***Modify the following definition into 10.3.1 as highlighted in red texts:***

* STA authentication and association

***Discussion:***

CID 146 provides comments about SP dynamic truncation mechanism in IEEE 802.11aj. This proposal is intended to address and resolve the comments with adoption to the suggestions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 146 | Dejian Li | 9.33.8 | There are two types of SP truncation in 9.33.8: (1)The STA can truncate the SP and return to the PCP/AP the time left in the SP; (2)The STA can allocate any portion of its SP as a CBAP directly. However, releasing the remaining time in the SP as a CBAP by STA might lead to interference to some existing SPs. Furthermore, PCP that is battery powered can not save power during the SP if the SP is truncatable. | SP truncation types should be controlled by PCP/AP when allocating an SP for STA. |

***Proposed Resolution:***

##### **9.33.8 Dynamic truncation of service period**

***Insert the following subclause title immediately after the title of 9.33.8:***

9.33.8.1 DMG dynamic truncation of service period

***Insert the following subclause, 9.33.8.2, after 9.33.8.1:***

9.33.8.2 CDMG dynamic truncation of service period

A CDMG STA truncates an SP to release the remaining time in the SP. The dynamic truncation of SP includes two types of truncation. The first type of truncation is that the STA can return to the PCP/AP the time left in the SP, thus allowing the PCP/AP to grant any portion of the released time as part of an SP to any other STA or to allocate any portion of it as a CBAP. The second type of truncation is that the STA can use the Grant frame to release any part of the time left in the SP as a CBAP.

A CDMG STA supports the DMG dynamic truncation of SP as described in 9.33.8.1. Unlike the DMG dynamic truncation of SP, the SP truncation type shall be determined by the CDMG PCP/AP when allocating an SP.

A CDMG PCP/AP shall determine whether an SP is truncatable and which truncation type is adopted by setting the CDMG Truncatable field and the Truncation Type field within the Allocation Control field when allocating an SP for the source CDMG STA and destination CDMG STA. The CDMG STA shall truncate the SP in accordance with the truncation type indicated by the received Truncation Type field.

A CDMG PCP/AP should determine the Truncation Type fields according to the allocation type requirements of the STAs in its BSS, in order to satisfy the channel access requirements of the STAs. Since the remaining time in the SP released as a CBAP might cause interference to other STAs during SPSH, the CDMG PCP/AP shall set the Truncation Type field to 0 for the SPs that are under SPSH state to indicate that the CDMG STA returns the time left in the SP to the PCP/AP.

A CDMG PCP may sleep in a truncatable SP that the time left in this SP is released as a CBAP by the CDMG STA by setting the Truncation Type field to 1 and the CDMG PCP Active field to 0.

8.4.2.134 Extended Schedule element

***Change the title of Figure 8-401ab as follows:***

Figure 8-401ab Allocation Control field format (DMG)

***Insert the following figure, Figure 8-401aba, after Figure 8-401ab:***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B3 | B4 B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 B15 |
|  | Allocation ID | Allocation Type | Pseudo-static | CDMG Truncatable | Extendable | CDMG PCP Active | LP SCUsed | Truncation Type | Reserved |
| Bits: | 4 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |

Figure 8-401aba Allocation Control field (CDMG)

***Insert the following paragraph at the end of 8.4.2.134:***

For an SP allocation, the CDMG Truncatable field indicates whether an SP is truncatable. The CDMG Truncatable field is set to 1 to indicate that the source CDMG STA and destination CDMG STA can request SP truncation, and the SP truncation type is determined by the Truncation Type field. Otherwise, it is set to 0, and the Truncation Type field is reserved. For a CBAP allocation, the CDMG Truncatable field is reserved.

The CDMG PCP Active field is set to 1 if the PCP is available to receive transmissions during the CBAP or SP allocation and set to 0 otherwise. The CDMG PCP Active field is set to 1 if the CDMG Truncatable field is set to 1 and the Truncation Type field is set to 0, or if the Extendable field is set to 1, or when transmitted by an AP. In all other cases, the CDMG PCP Active field can be set to 0.

The Truncation Type field is valid only if the CDMG Truncatable field is set to 1 and is reserved otherwise. The Truncation Type field is set to 0 to indicate that the CDMG STA is to return the time left in the SP to the CDMG PCP/AP, thus allowing the CDMG PCP/AP to grant the released time to any other STA as an SP or a CBAP; This field is set to 1 to indicate that the CDMG STA allocates any portion of its SP as a CBAP.

***Change the fifth paragraph after Figure 10-5b as follows:***

The PCP may enter and remain in the Doze state for any portion of an SP if it is not a source or a destination of the SP. The DMG PCP shall remain in the Awake state for any portion of a truncatable or extendable SP (8.4.2.134). The CDMG PCP shall remain in the Awake state for any portion of a extendable SP or a truncatable SP whose Truncation Type field is set to zero (8.4.2.134). The availability of the PCP during a CBAP in the Awake BI shall be announced by setting the PCP Active subfield within the Allocation Control field to one for a CBAP allocation made through the Extended Schedule element.