IEEE P802.11
Wireless LANs

|  |
| --- |
| CR for OPS |
| Date: 2018-07-09 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Laurent Cariou |  |  |  | laurent.cariou@intel.com |

Abstract

This document provides CR for CIDs: 15730, 15815, 15038, 15047

1. **Introduction**

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 Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax 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** | **Clause Number(C)** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 15730 | 27.14.3.2 | 363.49 | During a long TWT SP, the AP may transmit an OPS frame that indicates to a STA in TWT SP that the AP will not transmit anything for the non-AP STA for the duration of the opportunistic power save SP, i.e. 20ms. This may cause a long pause to the TWT SP and shorten the remaining time in TWT SP to be too short to transmit the remainder of the traffic. As the outcome, the STA may need to switch to active mode to get enough transmission time. Once STA is in active mode, then it can only follow the OPS instructions.To simplify the TWT SP handling it would be better if the opportunistic power save just terminates the ongoing TWT SP and the STA would not wake up to receive the remainder of the TWT SP. This way the TWT schedule is not affected by the OPS frame transmission and the following waking ups can be done according to TWT schedule. | Change the reception of the OPS frame.If a STA in PS mode has TWT SP ongoing and receives a FILS Discovery or OPS frame indicating that the AP will not transmit anything to the STA, then all ongoing TWT SPs are terminated and the AP will serve the STA earliest at the next TWT SP or after the duration indicated in the OPS frame which ever occurs first. | Rejected – better to keep the specification simple, and it is hard to define recommendations for every specific case. |
| 15815 | 9.4.2.6 | 130 | In case the TIM element is transmitted in an OPS frame, the encoding for non-OPS STAs could be the same as for OPS STAs, in order to simplify the computation. | Define different encoding rules for non-OPS STAs when included in an OPS frame | Rejected – It is simpler to have the same computation across all frames. |
| 15038 | 9.6.8.36 | 183.50 | FD frame may carry OPS element. Description of OPS is missing | Add description for OPS element | Revised – agree with the comment. Apply the changes as proposed in doc 1867r0. |
| 15047 | 9.6.28.4 | 189.14 | OPS frame doesn't carry Vendor Specific element | Add a sentence at the end of the section that says "No Vendor Specific element is present in the OPS frame" | Revised – Apply the changes as proposed in doc 1867r0. |

1. **Proposed changes**

***11ax Editor: Modify 9.6.7.36 FILS Discovery frame as follows:***

**9.6.7.36 FILS Discovery frame format**

**[…]**

The FILS Discovery frame may include one or more Vendor Specific elements. The Vendor Specific element is defined in 9.4.2.25 (Vendor Specific element)

The OPS element is defined in 9.4.2.250 (OPS element).

**9.6.31.4 OPS frame format**

***11ax Editor: Add the following sentence at the end of 9.6.31.4 OPS frame format:***

No Vendor Specific element is present in the frame.