IEEE P802.11
Wireless LANs

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| Resolution for CID related to 35.3.8 BSS parameter critical update procedure |
| Date: 2021-03-25 |
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Abstract

This document proposes resoulution for CID 2440 related 35.3.8 BSS parameter critical update procedure.

Revisions:

* Rev 0: Initial version of the document.

***TGbe editor: Please note that baseline is 11be D0.4***

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 TGbe Draft. This introduction is not part of the adopted material.

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

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

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| **CID** | **Pg/Ln** | **Section** | **Comment** | **Proposed Change** | **Resolution** |
| 2440 | 137/52 | 35.3.8 | An AP may provide critical update information in an unsolicited broadcast ML Probe Response frame so that most clients are able to receive the updates and suppress their ML Probe Request to receive the update. | Please design a method to provide the critical update information when the critical update event is occurred on the AP. | **Revised**The Unsolicited PRCU (Unsolicited Probe Responses for Critical Update) Flag subfield was added to the Capability information field (Figure 9-85). An AP of an AP MLD sets the Unsolicited PRCU Flag subfield to 1 when a critical update occurs to any of elements for any AP on the same AP MLD. Otherwiese the AP sets the subfield to 0.The AP that indicates the Unsolicited PRCU subfield is set to 1 in the Beacon frame shall send unsolicited broadcast Probe Respnose frame(s) including the updated BSS parameters for the AP that the critical update occured until (and including) the next DTIM Beacon frame on the link that the AP is operating on.Also, if a non-AP STA of non-AP MLD receives the Beacon frame or Probe Response frame it transmits the Unsolicited PRCU Flag is set to 1, the non-AP STA shall not send Probe Request frame until next DTIM Beacon frame to avoid probe strom that could arise with the critical update event.**TGbe editor please implement changes as shown in doc 11-21/0501 tagged as 2440.** |

1. **Proposed spec text**

**9.4.1.4 Capability Information field**

***TGbe editor: Change Figure 9-85 (Capability Information field format (non-DMG STA)) as follows (#2440):***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 | B5 | B6 | B7 |
|  | ESS | IBSS | Reserved | Reserved | Privacy | Short Preamble | Critical Update Flag | Unsolicited PRCUFlag |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 |
|  | SpectrumManagement | QoS | Short Slot Time | APSD | Radio Measurement | EPD | Resrerved | Reserved |

Figure 9-85—Capability Information field format (non-DMG STA)

***TGbe editor: Please insert the following paragraphs after the last paragraph of section 9.4.1.4 and before the NOTE:***

(#2440) The Unsolicited Probe Responses for Critical Update (PRCU) Flag subfield is reserved except when the Capability Information field is carried in a Beacon or a Probe Response frame transmitted by an AP affiliated with an AP MLD.

An AP affiliated with an AP MLD sets the Unsolicited PRCU Flag subfield to 1 if the Critical Update Flag is set to 1 and the AP has schedule for transmission an unsolicited broadcast Probe Response frame carrying any of the elements with respect to critical updates. In this case, the AP follows the rules defined in 35.3.8 (BSS parameter critical update procedure). Otherwise, the AP sets the subfield to 0.

NOTE—An AP sets the Critical Update Flag value and Unsolicited PRCU Flag value to 1 in one or more Beacon frames by following the procedure defined in 35.3.8 (BSS parameter critical update procedure).

***TGbe editor: Please modify the clause 35.3.8 as shown below:***

**35.3.8 BSS parameter critical update procedure**

***TGbe editor: Please insert the following paragraphs after the 4th paragraph of section 35.3.8:***

(#2440) An AP affiliated with an AP MLD shall provide, in the Unsolicited PRCU Flag subfield of the Capability Information field defined in 9.4.1.4 (Capability Information field) of the Beacon and Probe Response frame(s) it transmits, an indication that it has scheduled for transmission one or more ML probe response(s) that sets Address 1 field of the Probe Response frame to broadcast address and that carries the updated BSS parameters for the other AP(s) affiliated with the same AP MLD.

An AP affiliated with an AP MLD shall provide the Unsolicited PRCU Flag subfield of the Capability Information field in the Beacon frame(s) after a critical update for the other AP(s) affiliated with the same AP MLD occurs until (and including) the next DTIM Beacon frame on the link that the AP is operating on. The AP that sets the Unsolicited PRCU Flag subfield to 1 in the Beacon frame(s) and the Probe Response frame(s) it transmits shall send ML probe response(s) that carries a Basic variant Multi-Link element that contains one or more Per-STA Profile subelement(s), each of which contains the Change Sequence field and element(s) changed from the most recent critical updates corresponding to the other AP(s) where the critical update occurred before it transmits the Beacon frame where the Unsolicitied PRCU Flag sets to 0.

If a non-AP STA affiliated with a non-AP MLD receives a Beacon frame or Probe Response frame with the Unsolicited PRCU Flag equal to 1, the non-AP STA shall not send any Probe Request frame to retrieve the updated BSS parameters before it receives the Beacon frame or Probe Response frame where the Unsolicited PRCU Flag sets to 0.A non-AP STA within a non-AP MLD may decode the Critical Update Flag subfield and the Unsolicited PRCU Flag subfield in the Capability Information field defined in 9.4.1.4 (Capability Information field).