IEEE P802.11
Wireless LANs

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| Proposed Resolution for CID 3053 |
| Date: 2023-03-10 |
| Author: |
| Name | Affiliation | Address | Phone | Email |
| Emily Qi | Intel Corporation |  |  | Emily.h.qi@intel.com |
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Abstract

##### This submission presents proposed resolutions for CID 3053.

##### The proposed changes are based on REVme D2.1.

##### Revision history:

##### R0 – initial version

| **CID** | **Page** | **Clause** | **Resn Status** | **Comment** | **Proposed Change** |
| --- | --- | --- | --- | --- | --- |
| 3053 | 2495.40 | 11.9.3.2 |  | "The decision to switch to a new operating channel and/or operating class in an infrastructure BSS is made by the AP" - agreed. However, the standard should provide a mean to allow non-AP STA to assist AP to make such decision. For example, non-AP STA may experience bad interference in the current operating channel and would like to notice AP that a channel switch is needed. The standard should allow non-AP STA to indicate that a channel switch is needed or preferred channels. The channel switch information provided by the non-AP STA is a recommendation. It is up to AP to make the final decision on whether the channel switch is needed and which channel to switch to. | Define Channel Switch Request/Response frames and procedure to allow non-AP STA to recommend a channel switch. The commenter can provide detailed changes. |

**Background**

A non-AP STA may experience bad interference in the current operating channel and would like to notify another STA that is operating in the same Noninfrastructure IEEE 802.11 network that a channel switch is needed and suggest preferred channels (if available). Another possibility is that a non-AP STA may not be able to operate on the current operating channel any more due to off-channel operations and would like to suggest an alternative operating channel.

The standard should allow non-AP STA to indicate that a channel switch is needed and preferred channels. The channel switch information provided by the non-AP STA is a recommendation. It is up to the other peer STA to make the final decision on whether the channel switch should be made and where to switch.

**Proposed Changes:**

**9.4.2.85 Channel Usage element**

***TGm editor: Please update Table 9-265 in this subclause as shown below:***

Table 9-265—Usage Mode definitions

|  |  |
| --- | --- |
| **Value** | **Usage Mode** |
| 0 | Noninfrastructure IEEE 802.11 network |
| 1 | Off-channel TDLS direct link |
| 2 | Noninfrastructure IEEE 802.11 network in which none of the APs belonging to the same ESS operate on the channels identified by the Channel Entry field |
| <TBD> | Noninfrastructure IEEE 802.11 network channel switch request |
| <TBD> +1 ~~3~~-255 | Reserved |

**11.21.15 Channel usage procedures**

***TGm editor: at 2609.25, please insert the following paragraphs:***

A non-AP STA that is operating in a noninfrastructure IEEE 802.11 network may send a Channel Usage Request frame with a Channel Usage element that carries a Usage Mode field with a value equal to <TBD> to another STA that is operating in the same Noninfrastructure IEEE 802.11 network to indicate that it prefers to switch the operating channel of the noninfrastructure IEEE 802.11 network to another channel. A non-AP STA may indicate the preferred operating channels by including one or more Operating class and Channel fields in the Channel Entry field of the Channel Usage element carried in the corresponding Channel Usage Request frame.

Upon receiving a Channel Usage Request frame with a Channel Usage element that carries a Usage Mode field with a value equal to <TBD> , a STA that is operating in a noninfrastructure IEEE 802.11 network should consider switching the operating channel of the noninfrastructure IEEE 802.11 network to a new channel that may be one of the preferred channels indicated in the received Channel Entry field of the same Channel Usage element, if present. The STA shall transmit a Channel Usage Response frame in response to the reception of a Channel Usage Request frame with the Usage Mode field equal to <TBD>by including a Channel Usage element with the Usage mode field set to <TBD> and no Channel Entry field. To switch the operating channel, the STA shall use the ECS procedures defined in 11.9.

***TGm editor: at 2607.65, add the following sentence to the end of the para:***

When the Channel Usage element is carried in the Probe Request frame and Probe Response frame, the Usage Mode field value shall not be set to <TBD>.