IEEE P802.11  
Wireless LANs

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| Resolution for CID 24114 | | | | |
| Date: May 26, 2020 | | | | |
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Abstract

This submission proposes resolutions for CID 24114 received for TGax SA Ballot 1:

Revisions:

* Rev 0: Initial version of the document.

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. This introduction is 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.***

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| **CID** | **Commenter** | **Pg/Ln** | **Section** | **Comment** | **Proposed Change** | **Resolution** |
| 24114 | Patil, Abhishek | 307.25 | 11.5 | 11ax expanded the format of RNR and extended its functionality to 6 GHz discovery and advertisement of nonTxBSSID profiles. Therefore, it is likely that an AP is unable to fit all the information in a single RNR IE. | Update the spec (11.50 and frame formats) to allow more than one RNR IE in relevant mgmt. frames. Provide clear rules to prevent abuse (e.g., an AP shall include more than one RNR only if it is unable to carry information of its co-located 6 GHz AP(s), nonTxBSSIDs, and/or neighboring AP(s) in a single RNR element). | **Revised**  Agree with the comment. TGax has extended the RNR to report co-located APs (6 GHz and APs in a multiple BSSID set). Based on offline discussions with several AP vendors, it was determined that it is possible to have up to 16 BSSIDs on a lower band (2.4 or 5GHz) and 6 GHz. TGax has also mandated to include certain fields when reporting co-located APs – e.g., BSSID, Short SSID (if different from reporting AP) and BSS Parameters. Therefore, it is possible that a single RNR IE is unable to fit all the reported APs.  **TGax editor, please make changes as shown in doc 11-20/0818r0** |

* Beacon frame format

*TGax editor, please make changes to the following table in this sub-clause as shown below*

Change the following rows in Table 9-34 (Beacon frame body) maintaining row order:

|  |  |  |
| --- | --- | --- |
| * Beacon frame body | | |
| **Order** | Information | Notes |
| 63 | Reduced Neighbor Report | One or more Reduced Neighbor Report elements are optionally present if dot11TVHTOptionImplemented or dot11FILSActivated or dot11ColocatedRNRImplemented is true; otherwise not present. |

* Probe Response frame format

*TGax editor, please make changes to the following table in this sub-clause as shown below*

Change the following rows in Table 9-41 (Probe Response frame body) maintaining numeric order:

|  |  |  |
| --- | --- | --- |
| * Probe Response frame body | | |
| **Order** | Information | Notes |
| 65 | Reduced Neighbor Report | One or more Reduced Neighbor Report elements are optionally present if dot11TVHTOptionImplemented, ~~or~~ dot11FILSActivated or dot11ColocatedRNRImplemented is true; otherwise not present. |

* FILS Discovery frame format

*TGax editor, please make changes to the following table in this sub-clause as shown below*

|  |  |  |
| --- | --- | --- |
| * FILS Discovery frame format | | |
| Order | Information | Notes |
| 4 | Reduced Neighbor Report  element | The Reduced Neighbor Report element is optionally present if dot11FILSActivated, dot11HEOptionImplemented or dot11ColocatedRNRImplemented is true, otherwise it is not present. |

* Reduced neighbor report

*TGax editor, please make changes to the 1st paragraph in this sub-clause as shown below*

In Beacon and Probe Response frames, a Reduced Neighbor Report element may be transmitted by an AP with dot11TVHTOptionImplemented, ~~or~~ dot11FILSActivated or dot11ColocatedRNRImplemented equal to true. In FILS Discovery frames, a Reduced Neighbor Report element is optionally sent by an AP with dot11FILSActivated or dot11ColocatedRNRImplemented equal to true. An HE AP that operates in the 2.4 GHz or 5 GHz band and that is in the same co-located AP set as one or more 6 GHz APs shall follow the rules in 26.17.2.4 (Out of band discovery of a 6 GHz BSS) for including a Reduced Neighbor Report element in Beacon and Probe Response frames. A Reduced Neighbor Report element, when carried in a frame transmitted by a non-HE AP, contains information on neighbor APs. A Reduced Neighbor Report element, when carried in a frame transmitted by an HE AP, contains information on neighboring APs, or co-located APs or a combination of both. A Reduced Neighbor Report element might not be exhaustive either by choice or by the fact that there may be neighbor APs not known to the reporting AP. A non-HE AP shall include at most one Reduced Neighbor Report element in the Beacon or Probe Response frame that it transmits. An HE AP may include more than one Reduced Neighbor Report element in the Beacon or a Probe Response frame that it transmits if the AP is unable to fit all reported APs in a single element due to element size considerations. An AP shall include at most one Reduced Neighbor Report element in the FILS Discovery frame that it transmits.

NOTE – An AP can transmit FILS Discovery frames at frequent intervals, hence their overall size needs to be kept small to reduce overhead. Therefore, it is recommended that an HE AP when including Reduced Neighbor Report element in a FILS Discovery frame that it transmits prioritizes reporting co-located APs followed by neighboring APs within its ESS over other neighboring APs to fit all the reported APs within a single element.