IEEE P802.11  
Wireless LANs

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| Comment Resolutions: CID 4234, 4236, 4237 | | | | |
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|  |  |  |  |  |

Abstract

|  |  |  |  |
| --- | --- | --- | --- |
| CID | Section | Comment |  |
| 4234 | 8.4.2.171 | Publising BSSID alone is not very useful. Suggest to add the associated SSID, and/or Hashed domain name. To reduce the length of SSID, a short SSID may be considered | Add a Hashed domain name/Short SSID of the BSSID. If there is only one Hashed domain name for that BSSID, AP may include Hashed domain name, otherwise AP will include short SSID. |

* Reduced Neighbor Report element
* Neighbor AP Information field

***Change as follows:***

The Neighbor AP Information field specifies TBTT and other information related to a group of neighbor APs having the same primary channelSee Figure 8-401cj (Neighbor AP Information field format). [CID 2661]

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | TBTT Information Header | Operating Class | Channel Number | TBTT Information field #1 | TBTT Information field #2 (optional) | … | TBTT Information field #n (optional) |
| Octets: | 2 | 1 | 1 | variable | variable |  | variable |
| * Neighbor AP Information field format | | | | | | | |

The format of TBTT Information Header subfield is defined in Figure 8-401ck (TBTT Information Header subfield).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | B0 B1 | B2 B3 | B4 B7 | B8 B15 |
|  | TBTT Information Field Type | Reserved | TBTT Information Count | TBTT Information Length |
| Bits: | 2 | 2 | 4 | 8 |
| * TBTT Information Header subfield | | | | |

The TBTT Information Field Type subfield[CID 2012] defines the structure of the TBTT Information field. Value 0 indicates the presence of the informative Neighbor AP Information that is used to help the STA in AP discovery. Value 1 indicates the presence of the Neighbor AP Information that is used to recommend that the STA switch to another channel, another band, or neighbor AP as specified in the NeighborAP Information field. Values 2 and 3 are reserved. [CID 2708] [CID 2932]

The TBTT Information Count subfield[CID 2012] contains the number of TBTT Information fields that are included in the Neighbor AP Information field. The TBTT Information Count subfield value is nonzero.

The TBTT Information Length subfield[CID 2012] contains the length in octets of each TBTT Information field included in the Neighbor AP Information field. When the value of TBTT Information Length is 1, the TBTT Information field contains the TBTT Offset subfield. When the value of TBTT Information Length is 7 or 11, the TBTT Information field contains the TBTT Offset and the BSSID subfields. If the TBTT Information Length subfield is 5 or 11, the Short-SSID subfield is included in TBTT Information field to indicate the Short-SSID of a neighbor AP. Other values are reserved.[CID 2707, 2412, 2663, 3369, 2709, 2895, 3042, 3347] [CID 2519, 2819]

Operating Class[CID 2012] indicates the band and bandwidth of the primary channel of the APs in this Neighbor AP Information field. Valid values of Operating Class are shown in Table E-4.

Channel Number[CID 2012] indicates the last known primary channel of the APs in this Neighbor AP Information field. Channel Number is defined within an Operating Class as shown in Table E-4.

The format of TBTT Information field is shown in Figure 8-401cl (TBTT Information field).

|  |  |  |  |
| --- | --- | --- | --- |
|  | TBTT Offset | ~~Optional Subelements~~ BSSID | Short-SSID |
| Octets: | 1 | 0 or 6 | 0 or 4 |
| * TBTT Information field | | |  |

The TBTT Offset in TUs subfield is 1-octet in length and TBTT Offset subfield is one octet in length ~~and~~. When included in a Probe Response frame or FILS Discovery frame, it indicates the offset in TUs, rounded down to nearest TU, to the next TBTT of an AP from the immediately prior TBTT of the AP that transmits this element. When included in a Beacon frame, it indicates the offset in TUs, rounded down to the nearest TU, to the next TBTT of an AP from the TBTT of the Beacon frame in which it is included. The value 254 is used to indicate an offset of 254 TUs or higher. The value 255 is used to indicate an unknown offset value. If the TBTT Information Length subfield is 7 or 11, the BSSID subfield is included in TBTT Information field to indicate the BSSID of a neighbor AP. If the TBTT Information Length subfield is 5 or 11, the Short-SSID subfield is included in TBTT Information field to indicate the Short-SSID of a neighbor AP. The Short-SSID is defined as below

Short-SSID = CRC-32(SSID)

where:

SSID is the SSID field of the SSID element of the neighboring AP

Subject to regulations, a STA may send a Probe Request frame (including the received BSSID) on the channel indicated in the Neighbor AP Information field.

**10.43.8 Reduced Neighbor Report**

[…]

***Change as follows:***

To accommodate additional STAs on its operating channel, the AP should set the TBTT Information Field Type to 1 in the TBTT Information Header of the Neighbor AP Information field of the Reduced Neighbor AP Report element. The STA may switch to another channel, band or neighbor AP based on the received Reduced Neighbor Report. If, in a Reduced Neighbor Report, multiple Neighbor AP Information fields have a TBTT Information Field Type value of 1, then the STA should consider the information in the first Neighbor AP Information field for redirection purposes. The decision when AP considers its operating channel too congested is outside the scope of this standard.

A STA that receives a Reduced Neighbor Report element in which the TBTT Information Field Type field is 1 and in which the BSSID and/or Short-SSID field is not present may switch to another channel or to another band as specified in the received Operating Class field and Channel Number field. However, if the TBTT Information Field Type is 1 and BSSD and/or Short-SSID field is included in the TBTT Information, the STA may switch to a neighbor AP as specified in the received Operating Class field, Channel Number field, and BSSID and/or Short-SSID field.