IEEE P802.11
Wireless LANs

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| CR for Misc CIDs |
| Date: 2019-10-07 |
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Abstract

This document provides CR for CIDs: 20090 20099 20245 20367 20368 20570 20599 20638 20668 20810 21525 20375 20042

R1: added CID20375, CID20042

R4: Note for 20090: Check with Peter if we use only Global operating classes: Peter suggests to have only Global operating classes.

CID20668: include the dot11ColocatedRNRimplemented to true to optionaly include RNR in beacon/probe.

CID20638: make the changes in 51/52, 59/56, 58/29, 61/30, 64/30, 121/36, 123/21, 124/53, 126/14 regarding ESS report.

20375: add resolution CID

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** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 20090 | Albert Petrick | 738.00 | ANNEX E | Annex E defines global operating classes for 5 GHz. Add a table for US Operating Classes for U-NII-5, U-NII-6 and U-UNII-7 for US. | As commented | Revise - US rules currently don't allow operation at 6 GHz. CEPT report 83 is the basis for the global classes. Changes may be needed in future revisions when regulation changes. There are however some editorial changes that need to be on table E-4. Apply the changes marked as CID20090 as proposed in <this document>. |
| 20099 | Albert Petrick | 276.54 | 11.3.3.2 | Power save mode clause reference missing. A reference clause should be added to be consistent with the preceding text on line 52 | Add "as described in clause 11.2.2.2 (STA Power Management modes). | Reject - Reference is not needed in the second sub-bullet.  |
| 20245 | James Yee | 39.59 | 3.2 | The definition of "Spatial Reuse" based on a single PPDU transmission predicated on what would have 'normally' prevented the transmission is too vague and not useful. Should be defined as a mode of operation. | Define SR as: A BSS operating mode that allows the medium to be reused more often between OBSSs in dense deployment scenarios by the early identification of signals from overlapping basic service sets (OBSSs) and interference management.Or, delete the definition. | Revise - modify the sentence to improve readability. Apply the changes marked as CID20245 in <this document>. |
| 20367 | Laurent Cariou | 284.29 | 11.35.2 | OCT support shall also be indicated if a reporting AP sends a Neighbor Report describing a reported AP. Define a new field in the Neighbor Report element to describe that both the reported and reporting AP supports OCT, and modify the conditions to indicate support for OCT in section 11.35.2 | As in comment | Revised - this CID was resolved with CID20366 in the latest revision of document 19/417. Apply the changes marked as CID20366 as proposed in the latest revision of document 19/417. |
| 20368 | Laurent Cariou | 284.29 | 11.35.2 | OCT support could also be indicated for all the APs that are part of the same ESS. This could be done by adding a field in the ESS Report element | Include a new field in the ESS Report element to indicate that within this ESS, OCT is supported. | Reject - Not sufficient support for this proposal |
| 20570 | Mark RISON | 69.40 | 9.2.4.1.8 | "The QoS Info field is pres-ent in the QoS Capability, EDCA Parameter Set, and MU EDCA Parameter Set elements transmitted by anHE AP." -- duplication | Delete the cited text at the referenced location | Accept |
| 20599 | Mark RISON | 276.50 | 11.2.3.2 | The "unavailable" state is the same as the doze state. The only point is that a device in Active mode can be in the unavailable state. It would be clearer to just allow an HE device in Active mode to enter doze state | Change "become unavailable" to "enter the doze state" throughout. Then change "unavailable" to "in doze state" throughout except in 9.2.4.6a.6 | Reject - unavailable is not the same as doze state. The device in unavailable may be not dozing. Unavailable state is not a power management state while the doze state is a power management state. It is also clear in section 11.2 that if the STA is in active mode, then it can not go to doze state.  |
| 20638 | Mark RISON | 117.53 | 9.3.3.3 | The ESS Report might be useful in a non-HE BSS too (and indeed 11.22.7.5 has no HE restrictions) | Delete " if dot11HEOptionImplemented is true; otherwise it is not present" at the referenced location. At 51.37 delete "if dot11HEOptionImplemented is true; otherwise not present" | Revised - agree with the commenter. Apply the changes proposed by the commenter in all locations where the ESS report element is included by makin the changes marked as CID20638 in <this document>. |
| 20668 | Mark RISON |  |  | In the context of 19/0095 it was not clear whether the spec allows more than one RNR per frame. It doesn't (compare in baseline "The Reduced Neighbor Report element is optionally present if" with "One or more Neighbor Report elements are present only in") | Address the suggestion that there could be multiple RNRs | Revised - baseline only allows a single RNR. The consensus of the group is to keep this approach. However, modify the tables so that there can be multiple RNR elements, and that APs with dot11ColocatedRNRImplemented set to true can optionally include this element. Apply the changes marked as CID20668 in <this document>. |
| 20810 | Mark RISON | 117.48 | 9.3.3.3 | Presumably, like EDCA Parameter Set and QoS Capability, MU EDCA Parameter Set should not be present in a mesh. Actually, 26.2.7 requires that MU EDCA be present if EDCA is present. Also it's MU EDCA Parameter Set, not just MU EDCA Parameter | In Table 9-34 change "The MU EDCA Parameter element is optionally present if dot11HE-OptionImplemented is true and the QoS Capability element is notpresent" to "The MU EDCA Parameter Set element is optionally present if dot11HE-OptionImplemented is true and the EDCA Parameter Set element is present" and " neither the EDCA Parameter Set element nor the MU EDCA Parameter Set element are is not present" to " the EDCA Parameter Set element is not present". In Tables 9-37, 9-39, 9-41 change "The MU EDCA Parameter Set element is optionally present ifdot11HEOptionImplemented is true" to "The MU EDCA Parameter Set element is optionally present ifdot11HEOptionImplemented is true and the EDCA Parameter Set element is present" | Revised - agree in principle with the comment. This was resolved by CID20603 and is captured in draft 4.2. Apply the changes marked as CID20603 as proposed in doc 413r4. |
| 21525 | Yongho Seok | 430.38 |  | "A 6 GHz HE STA shall determine the BSS channelization using the information in the Primary Channel field in the 6 GHz Operation Information field in the HE Operation element when operating in 6 GHz band (see 27.3.22.2 (Channel allocation in the 6 GHz band))."The BSS channelization is not clear. How is the secondary channel determined?If the basic assumption is an non-overlapping channel allocation, the channels of 6 GHz band of Annex E shall has the behvior limit set. (e.g., PrimaryChannelLowerBehavior and PrimaryChannelUpperBehavior). | As in comment | Revised - all possible channels are defined in Annex E table, each with the corresponding center frequency and BW, so there is no need for indication of PrimaryChannelLowerBehavior indication. However, the sentence that describes how a STA determines the BSS channelization was incomplete. This was changed in draft 4.2 with resolution to CID 21351. The sentence is however missing a"the". Change the sentence in draft 4.2 p437 l23 by the following sentence: "A 6 GHz HE STA shall determine the BSS channelization using the information in the Primary Channel field in the 6 GHz Operation Information field in the HE Operation element when operating in 6 GHz band (see 27.3.22.2 (Channel allocation in the 6 GHz band))." was changed into the following sentence: " A 6 GHz HE STA shall determine the BSS channelization using the information in the Primary Channel, Channel field Center Frequency Segment 0 and Channel Center Frequency Segment 1 subfields in the 6 GHz Operation Information field in the HE Operation element when operating in the 6 GHz band (see 21.3.14 (Channelization) for the channelization and 27.3.23.2 (Channel allocation in the 6 GHz band) for the equation defining the channel center frequencies in the 6 GHz band). "  |
| 20375 |  | 122.01 | 9.3.3.10 | The Short SSID List should be included in probe request as per doc 61r7 agreed in January 2019. This got omitted in D4.0 and should be added back to the spec. | Same as comment | Revise - this was already resolved and the Short SSID List is in the probe request in Draft 4.2 thanks to the resolution of CID20501. |
| 20042 | Abhishek Patil | 285.51 | 11.50 | The instructions to the editor were incorrect in doc 1227r14. The instruction should have asked for replacing the last paragraph with the following. | Change instruction to replace the last paragraph in this sub-clause of baseline spec with this paragraph. | Revised - agree with the commenter. Change the instruction and make the changes marked as CID20042 in <this document>. |

1. **Proposed changes**

***TGax editor: Modify the following definition in subclause 3.2 Definitions specific to 802.11 (#20245)***

**spatial reuse (SR):** the transmission of a PPDU on the medium under certain conditions when a PPDU has been detected that would otherwise have prevented the transmission. (#20245)

***TGax editor: Change the following lines in table E-4 Global operating classes (#20090)***

|  |
| --- |
| * Global operating classes
 |
| Operating class | Nonglobal operating class(es) | Channel starting frequency (GHz) | Channel spacing (MHz) | Channel set | Channel center frequency index | Behavior limits set |
| 131 |  | 5.940 | 20 | — | 1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61, 65, 69 ,73, 77, 81, 85, 89, 93, 97, 101, 105, 109, 113, 117, 121, 125, 129, 133, 137, 141, 145, 149, 153, 157, 161, 165, 169, 173, 177, 181, 185, 189, 193, 197, 201, 205, 209, 213, 217, 221, 225, 229, 233 |  |
| 132 |  | 5.940 | 40 | — | 3, 11, 19, 27, 35, 43, 51, 59, 67, 75, 83, 91, 99, 107, 115, 123, 131, 139, 147, 155, 163, 171, 179, 187, 195, 203, 211, 219, 227 |  |
| 133 |  | 5.940 | 80 | — | 7, 23, 39, 55, 71, 87, 103, 119, 135, 151, 167, 183, 199, 215 |  |
| 134 |  | 5.940 | 160 | — | 15, 47, 79, 111, 143, 175, 207 |  |
| 135 |  | 5.940 | 80 | — | 7, 23, 39, 55, 71, 87, 103, 119, 135, 151, 167, 183, 199, 215 | 80+ |

***TGax editor: Change the instruction “Insert the following at the end of the subclause” below by the new instruction (#20042)***

**11.50 Reduced neighbor report**

***Replace the paragraph starting with “A STA that receives a Neighbor AP Information field with a recognized TBTT Information Field Type subfield but an unrecognized TBTT Information Length subfield shall …” with the paragraph below (#20042)***

***TGax editor: Modify the following table 9-69 Band ID field as follows (#20090)***

* Band ID field

The Band ID field is 1 octet in length and is defined in Table 9-69 (Band ID field).

|  |
| --- |
| * Band ID field
 |
| Band ID value | Meaning |
| 0 | TV white spaces |
| 1 | Sub-1 GHz (excluding TV white spaces) |
| 2 | 2.4 GHz |
| 3 | 3.6 GHz |
| 4 | 4.9 and 5 GHz  |
| 5 | 60 GHz |
| 6(11aj) | 45 GHz |
| 7 | 6 GHz |
| 8–255 | Reserved |

[…]

* MLME-SCAN.confirm
* Semantics of the service primitive

***Insert the following rows at the end of the BSSDescriptionSet table:***

***TGax editor: Modify the row for ESS Report in the following Table as follows (#20638):***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Valid range | Description | IBSS adoption |
| ESS Report | As defined in frame format | As defined in 9.4.2.250 (ESS Report element) | The value from ESS Report element. The parameter is optionally present if an ESS Report element was present in the Probe Response or Beacon frame from which the BSSDescriptionSet was determined. Otherwise, the parameter is not present. | Do not adopt |

* MLME-ASSOCIATE.confirm
* Semantics of the service primitive

[…]

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

***TGax editor: Modify the row for ESS Report in the following Table as follows (#20638):***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| ESS Report | As defined in ESS Report element | As defined in 9.4.2.250 (ESS Report element) | Provides information on ESS to assist BSS transition. The parameter is optionally present |

[…]

* MLME-ASSOCIATE.response
* Semantics of the service primitive

[...]

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

***TGax editor: Modify the row for ESS Report in the following Table as follows (#20638):***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| ESS Report | As defined in ESS Report element | As defined in 9.4.2.250 (ESS Report element) | Provides information on ESS to assist BSS transition. The parameter is optionally present |

[…]

* MLME-REASSOCIATE.confirm
* Semantics of the service primitive

[…]

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

***TGax editor: Modify the row for ESS Report in the following Table as follows (#20638):***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| ESS Report | As defined in ESS Report element | As defined in 9.4.2.250 (ESS Report element) | Provides information on ESS to assist BSS transition. The parameter is optionally present |

[…]

* MLME-REASSOCIATE.response
* Semantics of the service primitive

[…]

***Insert the following entries into the unnumbered table in this subclause maintaining the primitive order above:***

***TGax editor: Modify the row for ESS Report in the following Table as follows (#20638):***

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Valid range | Description |
| ESS Report | As defined in ESS Report element | As defined in 9.4.2.250 (ESS Report element) | Provides information on ESS to assist BSS transition. The parameter is optionally present  |

***TGax editor: Modify Table 9-37 – Association Response frame body as follows (#20638):***

|  |
| --- |
| * Association Response frame body
 |
| **Order** | **Information** | **Notes** |
| **60** | **ESS Report** | The ESS Report element is optionally present.  |

***TGax editor: Modify Table 9-39 – Reassociation Response frame body as follows (#20638):***

|  |
| --- |
| Table 9-39 - Reassociation Response frame body  |
| **Order** | **Information** | **Notes** |
| **65** | **ESS Report** | **The ESS Report element is optionally present.** |

***TGax editor: Modify Table 9-34 – Beacon frame body as follows (#20638):***

|  |
| --- |
| Table 9-34 - Beacon frame body  |
| **Order** | **Information** | **Notes** |
| **83** | **ESS Report** | **The ESS Report element is optionally present.** |

***TGax editor: Modify Table 9-41 – Probe Response frame body as follows (#20638):***

|  |
| --- |
| Table 9-41 – Probe Response frame body  |
| **Order** | **Information** | **Notes** |
| **100** | **ESS Report** | **The ESS Report element is optionally present.** |

***TGax editor: Modify Table 9-34 – Beacon frame body as follows (#20668):***

|  |
| --- |
| Table 9-34 - Beacon frame body  |
| **Order** | **Information** | **Notes** |
| **63** | **Reduced Neighbor Report** | **The Reduced Neighbor Report element is optionally present if****dot11TVHTOptionImplemented or dot11FILSActivated(11ai) or dot11ColocatedRNRImplemented is****true; otherwise not present.** |

***TGax editor: Modify Table 9-41 – Probe Response frame body as follows (#20668):***

|  |
| --- |
| Table 9-41 – Probe Response frame body  |
| **Order** | **Information** | **Notes** |
| **65** | **Reduced Neighbor Report** | **The Reduced Neighbor Report element is optionally present if****dot11TVHTOptionImplemented or dot11FILSActivated(11ai) or dot11ColocatedRNRImplemented is****true; otherwise not present.** |