IEEE P802.11
Wireless LANs

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| Comment resolutions for miscellaneous CIDs in clause 9 |
| Date: 2020-06-21 |
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Abstract

This submission proposes resolutions for multiple comments related to TGax D6.0 with the following CIDs (5 CIDs):

* 24015, ~~24115~~, 24161, 24372, 24433, 24568

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Incorporates suggestions received from Mark and suggestions received during the presentation (includes resolving resolution conflicts with dcn 11-20/822r3). Changes highlighted in green.
* Rev 2: Minor editorial change (added a comma) suggested by Mark. Change highlighted in this color.

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** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 24015 | Bims, Harry | 171.46 | It is confusing what is meant by "are the same as for TBTT Information Length" | Replace the text"Reserved, but the first 12 octets of the field are the same as for TBTT Information Length"with"Reserved. For these reserved values, the TBTT Information Field has at least 12 octets, where the content of the first 12 octets is the same as if the TBTT Information Length subfield value was 12." | Revised –Agree in principle with the comment. Proposed resolution is inline with the suggestion, except that an explicit list of the subfields is provided. TGax editor to make the changes shown in 11-20/0931r2 under all headings that include CID 24015. |
| ~~24115~~ | ~~Patil, Abhishek~~ | ~~459.50~~ | ~~Clarify that the purpose of including RNR is that RNR + Multiple BSSID together provides information of all discoverable BSSIDs (similar comment for 11.1.3.8.3)~~ | ~~As in comment~~ | ~~BEING RESOLVED BY ABHI~~ |
| 24161 | Kandala, Srinivas | 90.08 | It appears that certain values of Control ID are valid in +HTC in frames from AP to STA and some in frames from STA to AP | Add a row to indicate either the originator of the frame or the direction of the frame (n some cases but not all cases it is either the AP or STA and in some cases both).Futhermore, if they are only included in specific types of frames/sub-frames, calling them out may also be useful | Revised –These rules are already provided in the subclauses that provide normative behavior. To help the reader quickly identify these subclauses the table 10.11a (Conditions for including Control subfield variants) was added to subclause 10.8 (HT control field operation). Proposed resolution is to explicitly call out non-AP or AP in those cases where only one type of STA can use these functionalities. As for the type of frame that can carry this HT Cotnrol field that is already stated in 10.8 and 9.2.4.1.10.TGax editor to make the changes shown in 11-20/0931r2 under all headings that include CID 24161. |
| 24372 | RISON, Mark | 449.31 | [Resubmission of comment withdrawn on D5.0] "NOTE--An AP might send a Beacon frame in an HE SU PPDU only when operating in the 6 GHz band" is not clear as to whether it means "AP might choose to send HE SU beacon only in 6 GHz, or might choose to send in all bands" or means "Beacon in HE SU is only allowed in 6 GHz, and not in any other band" | Change the cited text to "NOTE--An AP does not send a Beacon frame in an HE SU PPDU (an HE beacon) unless it is operating in the 6 GHz band" | Accepted |
| 24433 | RISON, Mark |  | "a Beacon frame or group addressed frames" is technically wrong because it implies a Beacon frame is not a group addressed frame | Change the cited text to "one or more group addressed frames (possibly including a Beacon frame)" in 26.15.5 Additional rules for ER beacons and group addressed frames and 26.15.6 Additional rules for HE SU beacons and group addressed frames. In each of these two subclauses also change "A Beacon frame or a group addressed frame" to "A group addressed frame (including a Beacon frame)" | Revised –Agree in principle with the comment. Proposed resolution accounts for the suggested changes, while modifying the edits from an editorial perspective and expanding them to the subsequent paragraphs of the cited subclauses.TGax editor to make the changes shown in 11-20/0931r2 under all headings that include CID 24433. |
| 24568 | Sun, Li-Hsiang | 171.46 | "Reserved, but the first 12 octets of the field are the same as for TBTT Information Length." How can 12 octets same as Length subfield? | reqord the sentence | Revised –Agree in principle with the comment. Proposed resolution clarifies that this refers to the contents of the field rather than the length of the field. TGax editor to make the changes shown in 11-20/0931r2 under all headings that include CID 24568. |

**Discussion: *None.***

* Reduced Neighbor Report element
* Neighbor AP Information field

**TGax Editor: *Change the table below of this subclause as follows (#CID 24015, 24568):***

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| --- |
| * TBTT Information field contents
 |
| TBTT Information Length subfield value | TBTT Information field contents |
| 1 | The Neighbor AP TBTT Offset subfield |
| 2 | The Neighbor AP TBTT Offset subfield and the BSS Parameters subfield  |
| 5 | The Neighbor AP TBTT Offset subfield and the Short-SSID subfield |
| 6 | The Neighbor AP TBTT Offset subfield, the Short-SSID subfield, and the BSS Parameters subfield |
| 7 | The Neighbor AP TBTT Offset subfield and the BSSID subfield |
| 8 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, and the BSS Parameters subfield |
| 11 | The Neighbor AP TBTT Offset subfield, the BSSID subfield andthe Short-SSID subfield |
| 12 | The Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-SSID subfield and the BSS Parameters subfield |
| 0, ~~2~~3–4, ~~6, 8–10, 12–255~~ 9–10 | Reserved |
| 13–255 | The first 13 octets of the field contain the Neighbor AP TBTT Offset subfield, the BSSID subfield, the Short-SSID subfield the BSS Parameters subfield, and the 20 MHz PSD subfield (i.e., same contents as when the length of the TBTT Information field is 13). The remaining octets are reserved.*(#24015, 24568)* (#22428) |

**26.15.5 Additional rules for ER beacons and group addressed frames**

**TGax Editor: *Change the paragraphs below of this subclause as follows (#CID 24433):***

An AP that transmits group addressed frames in an HE ER SU PPDU shall transmit the HE ER SU PPDU with an <HE-MCS, NSS> tuple where the HE-MCS is a mandatory HE-MCS and NSS = 1. *(#24433)*

A group addressed frame (including a Beacon frame) transmitted in an HE ER SU PPDU shall be sent as an S-MPDU (see Table 9-532 (A-MPDU contents in the S-MPDU context)), except for group addressed Data frames, which are not required to be sent as an S-MPDU, but are required to follow the rules in 10.12.4 (A-MPDU aggregation of group addressed Data frames). *(#24433)*

**26.15.6 Additional rules for HE beacons and group addressed frames**

**TGax Editor: *Change the note below of this subclause as follows (#CID 24372, 24433):***

An AP that transmits group addressed frames in an HE SU PPDU shall transmit the HE SU PPDU with an <HE-MCS, NSS> tuple where the HE-MCS is a mandatory HE-MCS and NSS = 1. *(#24433)*

NOTE—An AP does not send a Beacon frame in an HE SU PPDU (an HE beacon) unless it is operating in the 6 GHz band (see 26.17.2.2 (Beacons in the 6 GHz band)). *(#24372)*

A group addressed frame (including a Beacon frame) transmitted in an HE SU PPDU shall be sent as an S-MPDU (see Table 9-532 (A-MPDU contents in the S-MPDU context)), except for group addressed Data frames, which are not required to be sent as an S-MPDU, but are required to follow 10.12.4 (A-MPDU aggregation of group addressed Data frames). *(#24433)*

* HT Control field operation

An HE variant HT Control field shall not be present in a frame addressed to a STA unless that STA declares support for +HTC-HE in the HE MAC Capabilities Information field of the HE Capabilities element. The HE variant HT Control field carried in the frame may contain one or more Control subfields under the conditions listed in Table 10-11a (Conditions for including Control subfield variants).

**TGax Editor: *Change the table below of this subclause as follows (#CID 24161):***

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| --- |
| * Conditions for including Control subfield variants
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| Control subfield variant | Condition |
| TRS | The transmitting AP expects an HE TB PPDU that follows the TRS information as described in 26.5.2.2 (Rules for soliciting UL MU frames) and the recipient non-AP STA has set the TRS Support subfield in the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to 1. *(#24161)* |
| OM | The transmitting STA changes its operating mode, as described in 26.9 (Operating mode indication) and the recipient STA has set the OM Control Support subfield in the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to 1. |
| HLA | The transmitting STA follows the HE link adaptation procedure, as described in 26.13 (Link adaptation using the HLA Control subfield) and the recipient STA has set the HE Link Adaptation Support subfield in the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to a nonzero value. |
| BSR | The transmitting non-AP STA follows the corresponding buffer status report procedure, as described in 26.5.3 (MU cascading sequence) and the recipient AP has set the BSR Support subfield in the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to 1. *(#24161)* |
| UPH | The transmitting non-AP STA follows the UL MU operation procedure, as described in 26.5.2.3 (Non-AP STA behavior for UL MU operation). *(#24161)* |
| BQR | The transmitting non-AP STA follows the bandwidth query report procedure, as described in 26.5.2 (UL MU operation) and the recipient AP has set the BQR Support subfield in the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to 1. *(#24161)* |
| CAS | The transmitting STA follows either:* The reverse direction protocol procedure described in 10.28 (Reverse Direction Protocol) and the recipient STA has set the RD Responder of the HT Extended Capabilities field in the HT Capabilities elements it transmits to 1, or
* The PSR procedure described in 26.10.3 (PSR-based spatial reuse operation) and the recipient STA has set the SR Responder subfield of the HE MAC Capabilities Information field of the HE Capabilities elements it transmits to 1.
 |
| ONES | The transmitting STA includes an A-Control subfield that contains a Control subfield with Control ID subfield equal to 15 and Control Information subfield equal to all 1s and whose content can be ignored by the HE recipient STA. |