IEEE P802.11  
Wireless LANs

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| 802.11bc CC31 – Resolution for CIDs assigned to Abhi – Part 2 | | | | |
| Date: August 31, 2020 | | | | |
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Abstract

This submission proposes resolutions for the following CIDs submitted during CC31 for 11bc D0.1 (18 CIDs):

143, 147, 151, 153, 155, 156, 318, 319, 243, 247, 250, 251, 252, 253, 255, 256, 258, 259

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 TGbc Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbc Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbc Editor: Editing instructions preceded by “TGbc Editor” are instructions to the TGbc editor to modify existing material in the TGbc draft. As a result of adopting the changes, the TGbc editor will execute the instructions rather than copy them to the TGbc Draft.***

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| **CID** | **Commenter** | **Type** | **Pg/Ln** | **Section** | **Comment** | **Proposed Change** | **Resolution** |
| 143 | Mark RISON | E | 22.06 | 9.4.2.bc.1 | "support for forwarding service and related capabilities" is missing an article, and the previous para made no mention of "related capabilities" -- what are these? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 143 |
| 147 | Mark RISON | E | 22.09 | 9.4.2.bc.1 | "if it intends to provide" -- it does intend to do so, if it includes it | Delete "if it intends" | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 147 |
| 151 | Mark RISON | E | 23.01 | 9.4.2.bc.2 | "if it is able to successfully able to authenticate" has too much ability, and to authenticate already implies success | Change to "if it is able to authenticate" | Accept |
| 153 | Mark RISON | E | 23.06 | 9.4.2.bc.2 | "ULs from a non-AP STA" is not clear. Uplink whats? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 153 |
| 155 | Mark RISON | T | 23.34 | 9.4.2.bc.3 | " if it cannot append 34 the requested information" -- append it to what? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 155 |
| 156 | Mark RISON | T | 23.33 | 9.4.2.bc.3 | "The No Forwarding Without Embedding subfield is set to 1 to indicate that the AP is not required to 33 forward the contents of the frame transmitted by non-AP STA to the remote destination if it cannot append 34 the requested information before forwarding. Otherwise the subfield is set to 0. " -- so if the bit is 0 the AP is required to do something that it cannot do? Makes no sense | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 156 |
| 318 | Stephen McCann | T | 29.11 | 9.6.7.bc | Within Figure 9-bc15, a Destination URI Length sub-field is required to parse the frame. | Add a Destination URI Length sub-field to Figure 9-bc15 | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 318 |
| 319 | Stephen McCann | T | 29.19 | 9.6.7.bc | What does the Packet Number Present bit refer to in Figure 9-bc16? | Remove the Packet Number Present bit from Figure 9-bc16. | Accept |
| 243 | Mark RISON | T | 46.06 | 11.bc.3.1 | "may not" is ambiguous | Change to "might not" | Accept |
| 247 | Mark RISON | E | 46.32 | 11.bc.3.2 | " it is strongly recommended " is nonstandard wording | Use "should" | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 247 |
| 250 | Mark RISON | T | 46.45 | 11.bc.3.3 | How can a broadcast be solicited or unsolicited? | Delete "unsolicited" | Accept |
| 251 | Mark RISON | T | 46.46 | 11.bc.3.3 | What exactly does broadcast mean here? Normally, in an infrastructure network, non-AP STAs send unicast frames to the AP, with A3 being the broadcast address. Is A1 or A3 or both the broadcast address, here? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 251 |
| 252 | Mark RISON | T | 46.47 | 11.bc.3.3 | "The URI to the remote 46 destination would be carried in the frame." -- what does "would be" mean here? Should? Shall? May? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 252 |
| 253 | Mark RISON | T | 47.05 | 11.bc.3.3 | The number of seconds since 2020-01-01 of what? The time the frame was first transmitted? Last transmitted (if retransmitted)? Generated by upper layers? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 253 |
| 255 | Mark RISON | E | 47.11 | 11.bc.3.3 | "In the rare scenario" -- that's a value judgment. Just say that it's a counter that wraps around at 2\*\*32-1 | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 255 |
| 256 | Mark RISON | E | 47.18 | 11.bc.3.3 | "one or more metadata" -- what does this mean? What's "a metadata"? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 256 |
| 258 | Mark RISON | T | 47.25 | 11.bc.3.3 | "may conform 25 to the requirements" -- what does this mean? What's the penalty for choosing not to conform? | As it says in the comment | Revised  TGbc editor please make changes as shown in doc 11-20/1298r1 tagged as 258 |
| 259 | Mark RISON | T | 47.29 | 11.bc.3.3 | This NOTE just appears to duplicate the normative para above it | Delete it | Accept |
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**9.4.2.bc.1 General**

***TGbc editor: Please make changes to the following paragraphs in this subclause as shown below:***

[143]An eBCS AP declares support for forwarding service and capabilities related to forwarding service by including the eBCS UL Capabilities element in a Beacon and broadcast Probe Response frame that it transmits.

[147]An eBCS non-AP STA includes the eBCS UL Capabilities element in an eBCS UL frame to request an eBCS AP, that forwards its data to a remote destination, to append additional information to the packet before forwarding it to the remote server. Otherwise, an eBCS non-AP STA doesn’t include this element in the eBCS UL frame.

***TGbc editor: Please make changes to Table 9-bc5 as shown below:***

**Table 9-bc5 - Encoding of Limiting Mode subfield**

|  |  |  |
| --- | --- | --- |
| Subfield value | Definition | Encoding |
| 0 | No Throttling | AP applies no restrictions on the amount or frequency of uplink data from a non-AP STA that it forwards to a remote destination.[153] |
| 1 | Per Destination | AP applies forwarding limits as specified by the remote  destination with whom it has established a relationship. |
| 2 – 3 | Reserved |  |

***TGbc editor: Please make changes to the following paragraph in this subclause as shown below:***

The No Forwarding Without Embedding subfield is set to 1 to indicate that the AP can discard an uplink frame received from a non-AP STA and not forward the contents of the frame to the remote destination if it cannot append the requested information to the packet before forwarding. Otherwise the subfield is set to 0 to indicate that AP can forward a frame to the remote destination specified in the non-AP STA’s uplink frame even if it cannot support appending the requested information.[155, 156]

**9.6.7.bc eBCS UL frame format** [318]

***TGbc editor: Please update the format of eBCS UL frame such that Destination URI is carried before HLP Payload Length field as shown below:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Category | Public Action | eBCS UL  Control | Destination URI | HLP  Payload Length | HLP  Payload | STA  Certificate Length | STA  Certificate |
| Octets: | 1 | 1 | 1 | variable | 2 | variable | 0 or 2 | 0 or  variable |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Timestamp | eBCS UL  Capabilities | Frame  Signature Length | Frame Signature |
| Octets: | 0 or 8 | 0 or 4 | 0 or 2 | 1. or variable |

**Figure 9-bc15 - eBCS UL frame Action field format**

[318]

***TGbc editor: Please move the description of Destination URI element and the NOTE before HLD Payload Length field***

**11.bc.3.2 eBCS UL operation at an eBCS AP**

***TGbc editor: Please make changes to the following paragraph in this subclause as shown below:***

An eBCS AP may authenticate the transmitter of the packet before forwarding it to a remote destination and shall provide an indication of the authentication scheme in the eBCS Capabilities element that it transmits. An eBCS AP that does not require authentication of the transmitter shall forward the frame to the remote destination indicated in the frame irrespective of whether the frame carries the STA Certificate field or the Packet Number field or the Frame Signature field. In order to prevent DoS or injection attacks directed towards the remote destination, an eBCS APs that support forwarding service should perform source authentication and validate the frame signature.[247]

**11.bc.3.3 eBCS UL operation at an eBCS non-AP STA**

***TGbc editor: Please make changes to the following paragraph in this subclause as shown below:***

An eBCS non-AP STA that desires to send data to a remote destination shall transmit an eBCS UL frame to the broadcast destination address (i.e., Address 1 and Address 3 fields are set to broadcast address) carrying data intended for a remote destination. The URI to the remote destination shall be carried in the frame. The frame may also carry additional request from the transmitting STA to the forwarding AP.[251, 252]

***TGbc editor: Please make changes to the following paragraphs in this subclause as shown below:***

[253]When the STA has time information, the Time subfield of the Timestamp field shall carry the number of seconds since 2020-01-01 00:00:00 UTC when the frame is queued for transmission at the STA; otherwise the subfield shall be set to 0.

NOTE – How a STA obtains time information is out of scope of this standard.

[255]The Counter subfield of the Timestamp field shall carry a numeric value which is incremented for each packet transmission. When the STA has transmitted 232 – 1 frames, the value in the field wraps around and starts from 0.

***TGbc editor: Please make changes to the following paragraph in this subclause as shown below:***

[256]An eBCS non-AP STA may include eBCS Capabilities element (see 9.4.2.bcx.3 (eBCS Non-AP UL Capabilities)) to request embedding of metadata (such as Location, Date or IP Address) by the forwarding eBCS AP before forwarding the content to the remote destination identified in the frame.

***TGbc editor: Please make changes to the following paragraph and delete the NOTE in this subclause as shown below:***

[258]Forwarding service is best effort. discovering eBCS AP(s) or An eBCS non-AP STA may choose to monitor the WM and may choose to obey the requirements (such as authentication scheme etc) indicated by neighboring eBCS AP(s) (if any) that support forwarding service.