IEEE P802.11
Wireless LANs

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| Comment Resolution on A-BFT |
| Date: 2017-09-08 |
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## Abstract

This submission proposes resolutions of comments received from TGay comment collection (TGay Draft 0.3).

* 9 CIDs: 183, 220, 248, 255, 270, 271, 388, 389, 390

Revisions:

* Rev 0: Initial version of the document.

### 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 TGay 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 TGay Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

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| CID | Page Number | Line Number | Comment | Proposed Change | Resolution |
| 183 | 64 |  | If FailedRSSAttempts exceed RSSRetryLimit, then it could be allowed for STAs to also access directional allocation intervals, if they have antenna pattern reciprocity and they have performed the RX training during the Beacons with TRN\_Rs. | check feasibility of combining the rules described here with rules for accessing directional allocation intervals. | Rejected-Changes required may not be trivial, and the commentor does not specific about this alternatives to consider.  |
| 220 | 14 |  | The fields A-BFT Multiplier and A-BFT in Secondary Channel are only relevant if Next A-BFT=0. If Next A-BFT is greater than 0, it is better to keep reserved bits. | Add that the A-BFT Multiplier and A-BFT in Secondary Channel subfields are reserved if Next A-BFT is non-zero | Revised-Agree in principle with the comment.Add that Reserve Bits B44-45 are used for the “A-BFT Multiplier” and Reserve Bits B46-47 are used for “A-BFT in Secondary Channel” only when “Next A-BFT” = 0. If “Next A-BFT” ≠ 0 these bits remain reserved.TGay editor to make the changes shown in 11-17/1407r2 under all headings that include CID 220. |
| 248 | 31 |  | Can there be a way for a device to choose not specify RSSRetryLimit and RSSBackoff (i.e. use own default values)? | Add a 1-bit field to indicate whether RSSRetryLimit and RSSBackoff are not specified | Rejected-This kind of flexibility is not need because this kind of configuration should be managed by PCP/AP.  |
| 255 | 62 |  | It is also beneficial to enable Short SSW usage during A-BFT for unassociated STAs to reduce beamforming times during discovery | Consider alternative setting of AID fields in Short SSW packet for unassociated STAs | Rejected-Changes required may not be trivial, and the commentor does not specific about this alternatives to consider.  |
| 270 | 14 | 19 | The term secondary channel "below" and "above" occurs only here in the draft. The text is confusing and it could be interpreted as there are two secondary cxhannels one below and one above. The secondary channel should be uniquely defined for the BSS, and should not be redifined for A-BFT. | Remove or redefine the A-BFT in Secondary channel as a single bit field | Revised –Agree with the comment. The corresponding text in 9.3.4.2 DMG Beacon is revised as below in #3. TGay editor to make the changes shown in 11-17/1407r2 under all headings that include CID 270. |
| 271 | 31 |  | Why are A-BFT parameters the same for A-BFT and Extension A-BFT? It limits the flexibility. | Use Reserved bits in Figure 32 to define the A-BFT parameters for the Extension A-BFT | Rejected-This kind of flexibility is not need. The A-BFT Parameters are used to regulate the behavior of STA, no need to differenciate the legacy and extended A-BFT. |
| 388 | 62 | 8 | The STA may not know when is the last DMG Beacon frame with Next A-BFT equal to 0 | Reword the sentence to say STA bases on the duration field of the DMG beacon and (A-BFT Length x A-BFT multiplier) to derive the start of the additional SSW slots | Revised-Agree in principle with the comment.The corresponding text in 10.38.5.1 Allocation of A-BFT is revised as below. TGay editor to make the changes shown in 11-17/1407r2 under all headings that include CID 388. |
| 389 | 62 | 41 | STA accesses on 2nd ch in A-BFT may not able to receive SSW feedback on 2nd ch because the feedback carried in RSS is the sector of the primary channel | Disallow A-BFT on secondary ch, unless the STA has been BF trained with AP on the 2ndary ch | Rejected-A secondary channel used in A-BFT for SSW frame transmission is, in general, adjacent to the primary channel. Beam squinting effect is not significant in this case. The AP can still use the sector trained on the primary channel to transmit SSW feedback to the STA over the secondary channel. |
| 390 | 63 | 13 | In L13, the backoff is started following the completion of RSS in the same A-BFT for any STA.But in L17 the backoff starts at a new A-BFT | Specify L13 behavior is only for non-EDMG STA | Rejected-The backoff is started following the completion of RSS in the same A-BFT for any STA, not just for non-EDMG STA. In L17, it just specify additional behavior for EDMA STA (e.g., multiple channel A-BFT, and extened A-BFT)  |

**Discussion:** None

### Propose:

Revised for 14 CIDs 183, 220, 248, 255, 270, 271, 388, 389, 390 as per discussion and editing instructions in 11-17/1407r2.

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***#1: Insert the following paragraphe at the end of subclause 9.3.4.2 DMG Beacon (CID #220):***

Reserved bits B44-45 are used for the A-BFT Multiplier subfield and reserved bits B46-47 are used for the A-BFT in Secondary Channel subfield only when Next A-BFT subfield is equal to 0, otherwise these bits remain reserved.

***#2: Change the last paragraphe at the end of subclause 10.38.5.1 Allocation of A-BFT as follows (CID #388):***

To accommodate a larger number of STAs attempting access during the A-BFT, the number of SSW slots available to EDMG STAs in an A-BFT can be increased compared to what is available to non-EDMG STAs. The presence of additional SSW slots is indicated through the A-BFT Multiplier subfield in the Beacon Interval Control field in a DMG Beacon frame (see 10.38.4). When the A-BFT Multiplier field is nonzero and the Next A-BFT field is 0, an EDMG STA subtracts (A-BFT Multiplier × A-BFT Length) from the value of the Duration field of the received DMG Beacon frame to determine the start time of the additional SSW slots available to the EDMG STA. These additional SSW slots are then immediately followed by the SSW slots available to both EDMG and non-EDMG STAs, which is indicated by the value of the A-BFT Length field. Thus, from an EDMG STA’s perspective, the A-BFT contains A-BFT Length × (1 + A-BFT Multiplier) SSW slots.

***#3: For CID 270***

**Discussion**: How the Secondary, Secondary1, Secondary2 channels are located is defined in D0.5. This resolution follows the definition of those Secondary channels and provides the text.

***Text in p. 14, line 16-20 of D0.3***

~~The A-BFT in Secondary Channel subfield indicates whether, in addition to the being allocated in the primary channel, the A-BFT is also allocated on an adjacent secondary channel. If set to 0, the A-BFT is not allocated on any secondary channel. If set to 1, the A-BFT is also present on the secondary channel above the primary channel. If set to 2, the A-BFT is also present on the secondary channel below the primary channel. Value 3 is reserved.~~

***Revised text***

The A-BFT in Secondary Channel subfield indicates whether, in addition to the being allocated in the primary channel, the A-BFT is also allocated on an adjacent secondary channel. If set to 0, the A-BFT is not allocated on any secondary channel. If set to 1, the A-BFT is also present on the secondary channel. If set to 2, the A-BFT is also present on the secondary1 channel. If set to 3, the A-BFT is also present on the secondary2 channel.

***#4: For CID 389***

**Discussion**: Selecting a single 2.16 GHz channel where the A-BFT is present based on the value of the A-BFT in Secondary Channel subfield in the last received DMG Beacon. Any frame transmission between the initiatior and responder during the A-BFT shall be performed using the selected channel

Straw Poll:

* **Do you agree to accept resolutions to CIDs 183, 220, 248, 255, 270, 271, 388, 389, 390 in doc 11-**17/1407r2**?**