IEEE P802.11
Wireless LANs

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| Comment Resolutions on Power Management |
| Date: 2019-05-13 |
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Abstract

This submission proposes resolutions for multiple comments related to TGba D1.0 with the following CIDs:

* 21 CIDs: 2022, 2052, 2121, 2122, 2219, 2220, 2260, 2426, 2453, 2609, 2680, 2731, 2732, 2745, 2768, 2769, 2773, 2774, 2802, 2803, 2805

R0: Original text

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

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

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

# Capability Element

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 2022 | 45.56 | 9.4.2.292 | In Table 9-231C a value of 2 states its Denied the preferred duty cycle period is too large. Too large is ambiguous - clarify with a value or add a Note at the bottom of table | As commented | Revised.The criteria is dependent on the current status and/or performance of the WUR AP. It would be implementation issue and the TGba spec doesn’t have to define a threshold, range or criteria. A sentence describing the above has been added.TGba editor please make the changes as shown in 11-19/0742r2 |
| 2052 | 68.65 | 30.7.2 | There are other rules that the STA follows when the STA is an 11ax STA which are defined in clause 27. I think we could simply mention that the STA follows the baseline power management procedures or something like that. | As in comment. | Rejected.IEEE 802.11ax is not finished yet. And IEEE 802.11ba is amendment of IEEE 802.11-2016. TGm will revise the sentence later.  |
| 2121 | 43.43 | 9.4.2.291 | It is not clear why the separate fields are needed for WUR Operation Parameters field and WUR Parameters field | Combine the WUR Operation Parameter field and the WUR parameter field into one field, and change the length of the subfield to 10 octets | Revised.It is modified as commented in D2.1.TGba editor, no further changes are needed. |
| 2122 | 43.02 | 9.4.2.292 | There is no mention about the WUR Parameter Control field for other cases. For example, when it is transmitted by non-AP STA or when the WUR Mode Response Status field is set to other than "Accept", the description of the field is not specified. | Either reserve the field for those cases or add a sentence to say that the WUR Parameter Control field may not be included for those cases. | Revised. It is revised in D2.1 as commented.TGba editor, no further changes are needed. |
| 2219 | 70.62 | 30.7.2 | Is there another way to receive a frame other than "successfully"? | Delete the word "successfully". | Accept.  |
| 2220 | 70.59 | 30.7.2 | What mode is a WUR non-AP STA in when it completes a WRU mode setup exchange? | Define the WUR non-AP STA mode state upon completion of a WRU mode setup exchange. | RejectedSubclause 30.7.2 decribes it. |
| 2260 | 43.49 | 9.4.2.291 | The WUR Parameters field should be corrected to the WUR Operation Parameters field | as in comment | Revised.It is modified as commented in D2.1.TGba editor, no further changes are needed. |
| 2426 | 46.65 | 9.4.2.292 | The text said "The format of the WUR Parameters Control field when the Action Type field is set to "Enter WUR Mode Response" or "Enter WUR Mode Suspend Response" and the WUR Mode Response Status field is set to "Accept" is shown in Figure 9-772h (WUR Parameters Control field format)." But what is the format of the WUR Parameters Control field when the Action Type field and the WUR Mode Response Status field are set to other cases. | Make it complete. | Revised. It is revised in D2.1 as commented.TGba editor, no further changes are needed. |
| 2453 | 46.24 | 9.4.2.292 | The WUR Parameters field has two different formats depending on whether it is transmitted from a WUR AP or a WUR non-AP STA. It would be much easier to read the spec if we add separate headings for the WUR AP transmitting case snd the WUR non-AP STA transmitting case. | Insert a subclause "9.4.2.292.1 WUR Parameters field format sent from a WUR AP" in P46L23 in D2.0. Insert a subclause "9.4.2.292.2 WUR Parameters format sent from a WUR non-AP STA" | RejectedCurrent format is enough to explain two differenct format of the WUR Parameters field. |
| 2609 | 70.08 | 30.7.2 | The third column refers to frame transmission, not an exchange since only one way frame transmission is involved (as indicated in the Table title). | change the third column heading to:"Status after the completion of the frame transmission" | Revised.TGba editor please make the changes as shown in 11-19/0742r2 |
| 2680 | 52.21 | 9.6.34.2 | Wrong reference | (9.4.2.292 (WUR Mode element)) | Revised.It is revised by TG editor in D2.1 as suggested.TGba editor, no further changes are needed. |
| 2731 | 52.44 | 9.6.34.2 | The sentence "In a WUR Mode Setup frame with the Action Type field of the carrying WUR Mode element set to "Enter WUR Mode Suspend Request" or "Enter WUR Mode Request," the Dialog Token field is set to a nonzero value chosen by the transmitting STA to identify the request/response transaction." is garbled and difficult to understand. Please rephrase | change the sentence "In a WUR Mode Setup frame with the Action Type field of the carrying WUR Mode element set to "Enter WUR Mode Suspend Request" or "Enter WUR Mode Request," the Dialog Token field is set to a nonzero value chosen by the transmitting STA to identify the request/response transaction." into "In a WUR Mode Setup frame with the Action Type field of the WUR Mode element set to "Enter WUR Mode Suspend Request" or "Enter WUR Mode Request", the Dialog Token field is set to a nonzero value chosen by the transmitting STA to identify the request/response transaction." | Accepted. |
| 2732 | 52.49 | 9.6.34.2 | The sentence "In a WUR Mode Setup frame with the Action Type field of the carrying WUR Mode element set to "Enter WUR Mode Suspend Response" or "Enter WUR Mode Response," the Dialog Token field is set to the value copied from the corresponding received WUR Mode Setup frame with the Action Type field of the carryingWUR Mode element set to "Enter WUR Mode Suspend Request" or "Enter WUR Mode Request."" is garbled and need to be rephrased. | please rephrase the quoted sentence. | Revised.The sentence is revised.TGba editor please make the changes as shown in 11-19/0742r2 |
| 2745 | 70.44 | 30.7.2 | Note 1 and note 2 should be specified instead of being added in the notes | change Note 1 and 2 into regular specification text | Accepted. |
| 2768 | 43.36 | 9.4.2.291 | What is difference between WUR Parameters and WUR Operation Parameters? | Please clarify | Revised.It is combined into one field in D2.1.TGba editor, no further changes are needed. |
| 2769 | 43.49 | 9.4.2.291 | Does the "WUR Parameter" here mean "WUR Operation Parameters" as WUR Parameters is only 1 Octets? | Please clarify | Revised.It is clarified in D2.1TGba editor, no further changes are needed. |
| 2773 | 46.27 | 9.4.2.292 | If the WUR Parameters field is only used for the response from AP, it would be better to indicate the WUR Parameters field shall not be present in the request frame instead of "reserved". |  | Revised.The WUR Parameter field is combined into WUR Operation Parameter field in D2.1.TGba editor, no further changes are needed. |
| 2774 | 46.01 | 9.4.2.292 | It is not necessary to include the WUR Parameters in the "Enter WUR Mode Suspend Request". The WUR receiver shall keep the previous WUR Parameters in its local storage. Suggest to delete "or "Enter WUR Mode Suspend Response" " from this sentence.Similarly, the "WUR Parameters" may not be always in the "Enter WUR Mode Request" unless there is some change in the WUR Paraemters comparing to the previous values. In this way, it would reduce the message size. | As in the comment. | Rejected.11ba spec doesn’t define the MAC signal that the STA has stored the previous WUR parameters.So the AP cannot gurantee the STA keep the paramters. Also, WUR parameters are delivered in PCR, so message size doesn’t matter.  |
| 2802 | 46.02 | 9.4.2.292 | Otherwise, is the WUR Parameters Control field reserved or not included? It is not clear. | Please add an otherwise statement to clarify it. | Revised. It is clarified in D2.1TGba editor, no further changes are needed. |
| 2803 | 46.43 | 9.4.2.292 | First, "a WUR AP is reserved" should be placed above Figure 9-772i. Second, it is unclear how many reserved bits are there. 16 bits or 80 bits? Why can't we say "Otherwise, the WUR Mode element sent from the WUR AP doesn't include a WUR Parameters field."? | Change the otherwise statement beginning on L28 to read: "Otherwise, the WUR Mode element sent from the WUR AP doesn't include a WUR Parameters field." | Revised. First part is resolved by TG editor in D2.1For second part, 80 bits are reserved as described in the paragraph. We have to maintain consistency with other paragraphs.  |
| 2805 | 49.01 | 9.4.2.292 | Otherwise, the WUR Parameters field is reserved. Are all 6 octets of it reserved? Why can't we say "Otherwise, the WUR Mode element sent from the WUR non-AP STA doesn't include a WUR Parameters field."? | Change the otherwise statement beginning on L1 to read: "Otherwise, the WUR Mode element sent from the WUR non-AP STA doesn't include a WUR Parameters field." | Rejected. 6 octets are reserved as described in the paragraph. We have to maintain consistency with other paragraphs. |

9.4.2.292 WUR Mode element

**TGba Editor: Add following note after Table 9-321c [2022]:**

Note - The threshold and duration of duty cycle period and detail operation of the WUR AP for value of 2 are implementation dependent.

**9.6.34.2 WUR Mode Setup frame format**

**TGba Editor: Modify the 5th paragraph as follows [2731]:**

In a WUR Mode Setup frame with the Action Type field of the WUR Mode element set to "Enter WUR Mode Suspend Request" or "Enter WUR Mode Request," the Dialog Token field is set to a nonzero value chosen by the transmitting STA to identify the request/response transaction.

**TGba Editor: Modify the 6th paragraph as follows [2732]:**

In a WUR Mode Setup frame with the Action Type field of the WUR Mode element set to “Enter WUR Mode Suspend Response” or “Enter WUR Mode Response,” the Dialog Token field is set to the value copied from the corresponding received WUR Mode Setup frame with the Action Type field of the WUR Mode element set to “Enter WUR Mode Suspend Request” or “Enter WUR Mode Request.”

**30.7.2 WUR Mode Setup**

**TGba Editor: Modify Table 30-2 as follows[2609]:**

Table 30-2—WUR Mode Setup/Teardown frame transmission

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| --- | --- | --- |
| **Frame type carrying the WUR Mode element (and Action Type field value of the WUR Mode element) transmitted from a WUR non-AP STA to a WUR AP**  | **Frame type carrying the WUR Mode element (and Action Type field value of the WUR Mode element) transmitted from a WUR AP to a WUR non-AP STA** | **Status after the completion of the successful frame transmission** |
| WUR Mode Setup frame(Action Type = Enter WUR Mode) |  | The WUR non-AP STA enters WUR mode from WUR mode suspend |
| WUR Mode Setup frame(Action Type = Enter WUR Mode Suspend) |  | The WUR non-AP STA enters WUR mode suspend from WUR mode  |
|  | WUR Mode Setup frame(Action Type = Enter WUR Mode Response) | The WUR non-AP STA that is in WUR mode updates the WUR Parameters |
|  | WUR Mode Setup frame(Action Type = Enter WUR Mode Suspend Response) | The WUR non-AP STA that is in WUR mode suspend updates the WUR Parameters |
| WUR Mode Teardown frame |  | The WUR non-AP tears down WUR power management service  |
|  | WUR Mode Teardown frame | The WUR AP tears down WUR power management service |

**TGba Editor: Modify the 3rd, 4th paragraphs as follows [2745]:**

A request frame in Table 30-1 (Settings for WUR mode setup frame exchange - Request and Response) is successfully transmitted from a WUR non-AP STA to a WUR AP if an Ack frame is transmitted from the WUR AP to the WUR non-AP STA for the request frame.

A response frame in Table 30-1 (Settings for WUR mode setup frame exchange - Request and Response) is successfully transmitted from a WUR AP to a WUR non-AP STA if an Ack frame is transmitted from the WUR non-AP STA to the WUR AP for the response frame.

**TGba Editor: Modify the 6th paragraphs as follows [2219]:**

If the WUR AP accepts the request for WUR mode setup with the WUR Parameters field in the WUR Mode Setup frame, the WUR Mode Response Status field in the corresponding WUR Mode element is set to “Accept”. If the WUR non-AP STA receives the WUR Mode element, which contains WUR Mode Response Status field set to “Accept”, WUR power management service is negotiated between the WUR non-AP STA and the WUR AP with WUR parameters, which are indicated in the WUR Mode ele­ments.