### IEEE P802.11Wireless LANs

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| 11ba D1.1 MAC Comment Resolution for Miscellaneous Topic Part III |
| Date: 2019-01-10 |
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Abstract

This submission proposes resolutions for comments of TGba Draft D1.1 with the following CIDs:

423, 602, 628, 684

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 TGba D1.1 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGba D1.1 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.***

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 423 | 51.11 | 31.4.2 | Since you're going through all the trouble to send a second set of Beacons in the WURx encoding just to maintain TSF timer synchronization have you considered just including paging information in the WUR Beacon (for example a "WUR DTIM"). How would a WUR Beacon DTIM scheme compare to the proposed duty cycle operation as far as power saving performance and airtime usage? | Commenter to provide submission. Essentially give the WUR Beacon Frame a Frame Body field containing a bitmap of AIDs (or other identifier) to wake up. | Rejected – We note that the purpose of WUR is to develope the new receiving capability for WUR PPDU and provide better tradeoff for power consumption and latency. The WUR duty cycle mechanism is for better power save operation, which requires a synchornization mechanism with WUR PPDU. WUR Beacon is developed for this purpose. During the early discussion, it is expected that WUR Beacon can be transmitted with a much lower frequency than non-WUR Beacon. Note that the non-WUR Beacon is generally transmitted with 100ms period, and WUR Beacon can be transmitted with 10s period as an example. In this scenario, a WUR Beacon with DTIM indication of broadcast buffered BU does not make sense since the latency requirement for broadcast buffered BU then can not be satisfied under the low frequency transmission. Also, to meet delay constraint, WUR beacon then needs to be sent with higher frequency, which then increases the airtime usage. The scheme developed by 11ba is the broadcast WUR Wake-up frame to indicate broadcast buffered BU and is sent only necessary. As a result, we also do not need another scheme to achieve the same purpose.  |
| 602 | 101.36 | C.3 | Is WUR really intended to be always enabled, if implemented? That is, no means to externally enable/disable this feature? It seems more likely that dot11WUROptionImplemented should be dot11WUROptionActivated, and have MAX-ACCESS of read-write (externally controllable). This would also be consistent with the "and operational" part of the MIB attribute's DESCRIPTION text. | Change dot11WUROptionImplemented to dot11WUROptionActivated, cahnge the MAX-ACCESS to read-write and the DESCRIPTION to the standard language for a control attribute. | Rejected – We note that the language “operational” is simply the suggested text from 15/0355r13 for implemented variable as shown below. It does not mean that an Actived variable needs to be present. *Name: dot11<XXX>Implemented**MAX-ACCESS: none - access to external entity not allowed* *OR**MAX-ACCESS: read-only - access to external entity allowed**DESCRIPTION: "This is a capability variable. Its value is determined by device capabilities. This attribute, when true, indicates that the XXX feature is implemented and operational. This attribute, when false or not present, indicates that the XXX feature is not implemented or not operational."*We also note that like HE spec, a definition of implemtned variable like dot11HEOptionImplemented is the typical approach to handle major spec addition. There is no need to add additional Activated MIB. |
| 628 |  |  | The size of the WUR wakeup frame can be significantly reduced by using a paging identifier, because Address, MIC, and FCS are not needed in this case. | In addition to the existing (secure) WUR Wakeup frame, add a WUR Paging frame as WUR Wakeup frame. A proposal will be submitted. | Rejected – We note that WUR frame is designed with the consideration of unifying frame format and minimizing frame overhead. We can certainly design an optimized version for all types of WUR frame, but this type of design is most likely to be optional at the end.It is also generaly not a good idea to have multiple ways to do the same thing in a spec, which leads to fragmented implementation in the industry and contradicts with the pupose of having a standardized way of implementation. |
| 684 | 56.42 | 31.7 | In In STD 802.11-2016, a STA shall follow the rule below:A STA that is changing from doze to awake state in order to transmit shall perform CCA until a frame is detected by which it can set its NAV, or until a period of time indicated by the NAVSyncDelay from the MLME-JOIN.request primitive has transpired.Hence, NAVSyncDealy is harmful to some battery powered WUR STAs. | Will submit a contribution to provide a fast medium sync scheme to help WUR STA to access the channel quickly and save power. | Rejected – We note that the exact NAVSyncDelay value is not standardized, and a battery powered WUR STA can simply choose the proper NAVSyncDelay value.  |

**Discussion:** *None.*