IEEE P802.11  
Wireless LANs

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| Resolutions to 32.3.8.10 Midambles | | | | |
| Date: 2020-06-15 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Yujin Noh | Newracom |  |  | yujin.noh at newracom.com |
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Abstract

This submission shows

* Resolutions for comments from TGbd draft 0.3
* 7 CIDs: 19, 122, 152, 153, 154, 202 and 341

Revisions:

* Rev 0: Initial version of the document.
  + 5 CIDs 19, 122, 152, 153, 154, 202 and 341 are ready for SP
* Rev 1: reviews CIDs152 and 154 based on the teleconference call on 06/16
* Rev 2: typos fixed

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| **CID** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 152 | 56.26 | "An NGV STA may include midambles ..". As Midamble is mandatory for NGV PPDU, need to change "may" to "shall". | change "An NGV STA may include midambles .." to "An NGV STA shall include midambles ... " | Revised.  I agree that Midamble is a mandatory feature in 11bd. However, the spec still allows no midamble field in the PPDU depending on the number of data symbol and the Midamble Periodicity.  TGbd Editor: make changes according to this document 11-20-0721-02-00bd Resolutions to 32.3.8.10 Midambles. |
| 19 | 56.30 | We defined the three value for midamle peridicity and it is indicated by NGV-SIG field. | modify the following sentence like as " where M is either 4 or 8 or 16 as indicated by the Midamble Periodicity field in NGV-SIG field." | Revised.  TGbd Editor: make changes according to this document 11-20-0721-00-00bd Resolutions to 32.3.8.10 Midambles. |
| 122 | 56.30 | "Midambles are present in the Data field of the NGV PPDU every M OFDM symbols, where M is either 4 or <TBD> as indicated by the Midamble Periodicity field in <TBD>" Update "<TBD>" and rephrase. | Midambles are present in the Data field of the NGV PPDU after every M Data symbols, where M is 4, 8 or 16 as indicated by the Midamble Periodicity field in NGV-SIG. | Revised.  The same resolution to CID19 is applied to CID122. |
| 153 | 56.31 | "where M is either 4 or <TBD> as indicated by the Midamble Periodicity field in <TBD>." Need to update the <TBD> based on the latest motion on Midamble periodicity. | As in the comment. | Revised.  The same resolution to CID19 is applied to CID153. |
| 341 | 56.31 | remove TBD and correct the setence properly. M is 4, 8, or 16 as indicated by the Midamble Periodicity field in Table 32-10 | as in comment | Revised.  The same resolution to CID19 is applied to CID341. |
| 154 | 56.34 | "Each midamble is the same format as the NGV-LTF field(s) in the preamble of the same PPDU as defined in Clause 32.3.7.3.6 (NGV-LTF definition), as shown", the description can be improved to make it more clear. | change "Each midamble is the same format as the NGV-LTF field(s) in the preamble of the same PPDU as defined in Clause 32.3.7.3.6 (NGV-LTF definition), as shown" to "Eahc midamble field uses the same format as the NGV-LTF field of the same PPDU, which format is signaled in NGV-SIG. The Midamble OFDM symbol modulation is defined the same as Section 32.3.7.3.6 (NGV-LTF definition). The Midamble in a NGV PPDU is shown". | Revised.  TGbd Editor: make changes according to this document 11-20-0721-02-00bd Resolutions to 32.3.8.10 Midambles. |
| 202 | 56.32 | Add an equation after Line 32 that maps the Midamble Periodicity Field to M. | Add the following line after Line 32: M= 4 \* 2^(Midamble Periodicity Field), where the value of Midamble Periodicity Field is defined in Table Table 32-10 (Fields in the NGV-SIG field). | Rejected  Midambles are present in the Data field of the NGV PPDU every M OFDM symbols, where M is directly mapped to value among 4, 8, or 16 based on the values from Midamble Periodicity field (see Table 32-10) as below   * Set to 0 for **4** symbols * Set to 1 for **8** symbols * Set to 2 for **16** symbols * Value 3 is reserved.   The suggested equation seems redundant. |

***To TGbd Editor:*** ***P56L23*** *update the description as below.*

***------------- Begin Text Changes ---------------***

**32.3.8.10 Midambles**

An NGV STA ~~may~~shall include midambles in an NGV PPDU transmission ~~to facilitate channel estimation~~

~~update during the PPDU~~ when *NMA*is set to nonzero value as shown in Equation (32-42). Midambles facilitate updating of the channel estimate during the NGV PPDU reception. (#152) ~~The recipient might use the midambles to compensate the channel estimation.~~

Midambles are present in the Data field of the NGV PPDU every M OFDM symbols, where M is either 4, 8 or 16 ~~<TBD>~~ as indicated by the Midamble Periodicity field in NGV-SIG field (see Table 32-10 (Fields in the NGV-SIG field))~~<TBD>~~.(#19, #122, #153, #341)

~~Each midamble is the same format as the NGV-LTF field(s) in the preamble of the same PPDU as defined in~~

~~Clause 32.3.7.3.6 (NGV-LTF definition), as~~ Each midamble field uses the same format as the NGV-LTF field of the same PPDU, which format is signaled in NGV-SIG field. The generation of midamble is defined the same as subclause 32.3.7.3.6 (NGV-LTF definition). To suppress the generation of spectral lines, each midamble is modulated using the procedure described in TBD. The midamble in a NGV PPDU is shown in Figure 32-11 (NGV PPDU with midamble). (#154)

***------------- End Text Changes ------------------***