**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **Proposed updates for Section 16** |
| Date Submitted | Sep. 8, 2023 |
| Source | Bin Qian, Chenchen Liu, Lei Huang, Xiaohui Peng, David Xun Yang (Huawei Technologies) |
| Re: | Contribution to IEEE 802.15.4ab  |
| Abstract |  |
| Purpose | This submission proposes text to for the IEEE Std 802.15.4ab specification framework document. |
| Notice | This document does not represent the agreed views of the IEEE 802.15 Working Group or IEEE 802.15.4ab Task Group. It represents only the views of the participants listed in the “Source(s)” field above. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |

***This document aims to further clarify the consensus which does not include any new matters.***

# HRP UWB PHY

## General

***Insert the following paragraph after the third paragraph on Page 110, based on device type consensus document DCN 23-0308r3***

One advanced HRP UWB device shall be at least one of HRP-SDEV, HRP-ARDEV, or HRP-EMDEV supporting dynamic data mode.

…

### 16.2.10 Sensing sequence (SENS) field

***Change the following paragraph on Page 114, Line 13, based on sensing consensus text proposal DCN 23-0538r7***

The HRP-SDEV sensing sequence (SENS) field shall be constructed using preamble symbols using the same preamble code as for the SYNC and SFD in the packet. The symbols of the SENS are arranged in (one to four) blocks of active segments encapsulated by silent gap intervals. The HRP-SDEV shall support active segment lengths of 32, 64, and 128 symbols, with lengths of 16, 256 and 512 symbols being optional. The gap duration shall be one preamble symbol duration. For frequency stitching mode, if intra-packet frequency stitching is enabled, the extended gap size between active segments will be adopted. The duration of the extended gap is 40 preamble symbol duration. The HRP-SDEV shall support the single segment SENS. Support for the two, three and four segment SENS is optional. Where there are multiple active segments, each segment shall be the same length. Figure 111 shows the extent of the SENS when consisting of one or two segments.

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### 16.3.3.4 LDPC advanced coding

***Change Table 37 on page 120 based on coherent PHY consensus text proposal DCN 23-0308r3****:*

Table 37 – PPDU encoding parameters

|  |  |  |
| --- | --- | --- |
| Range of  | LDPC codeword length (bits) | Number of LDPC codewords () |
|  | 1944 |  |
|  | 1296 | 2 |
|  | 1944 | 1 |
|  | 1296 | 1 |
|  | 648 | 1 |