**IEEE P802.15**

**Wireless Specialty Networks**

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| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSNs) |
| Title | **Remaining items to address for the UWB PHY** |
| Date Submitted | February 20th, 2023 |
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| Abstract | Call for Proposals |
| Purpose | Announce Call for Proposals to develop the IEEE 802.15.6ma standard specification. |
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The remaining items to address for the 15.6ma revision UWB PHY are as follows:

**1. Harmonization (4ab) of PSDU construction**

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| 15.6 | Scrambler + FEC + Interleaver + UWB symbol-modulation  |
|  |  |
| 15.6ma | Scrambler + **FEC** + Interleaver + *External FEC* + **UWB symbol-modulation**  |
| 15.6ma | Scrambler + HARQ + **UWB symbol-modulation** |

**Bold:** compatible with 4ab.

**TBD:** External FEC. Check: Interleaver.

**2. Harmonization (4ab) of SHR**

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| --- | --- |
| 15.6 | Preamble sequences (Kasami) + SFD |
|  |  |
| 15.6ma |  ?  |

**TBD:** compatibility with 4ab preamble sequences. Important for awareness of 4ab transmissions.

**3. PHR**

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| --- | --- |
| 15.6 | PHR frame + HCS + FEC (Shortened BCH parity bits) |
|  |  |
| 15.6ma |  New PHR frame + HCS + ?  |

**TBD:** FEC.

**4. Potential deprecation**

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| Differentially encoded PSK modulation |  |
| Type II HARQ |  |
| FM-UWB |  |
| Pulse shapes | Only the spectral mask requires specification. Pulse shapes are implementation dependent. |