**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 Comments Resolution for 15.4ab D1.0 Sensing Comments** | |
| Date Submitted | September 2024 | |
| Sources | Pooria Pakrooh (Qualcomm) |  |
| Re: |  | |
| Abstract | Resolution to comments: 20, 81, 85, 219, 220, 221, 263, 904, 1242 | |
| Purpose | To propose comments resolution for “P802.15.4ab™/D (pre-ballot) C Draft Standard for Low-Rate Wireless Networks” | |
| 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 “Sources” field above.It is offered as a basis for discussion and is not binding on the contributing individuals. The material in this document is subject to change in form and content after further study. The contributors reserve the right to add, amend or withdraw material contained herein. | |

***Comment Indices #20 and #85 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 20 | Mickael Maman | 8.3.3 | 22 | 1 | Missing option to configure from which part of the packet the sensing is made |  |
| 85 | Carl Murray | 10.39.6.1 | 142 | 8 | CIR Report Request for Non-sensing Packet is defined but the non sensing TX CIR report parameters are missing | define which packet format (ranging, data, MMS) and from which part of the packet (SYNC, STS, payload) the CIR report is generated |

**Discussion:** The group discussed different options for the source of report for non-sensing packets in the past. The general agreement was that it is better to leave the source of CIR report to the receiver and not specify it in the standard. This has been reflected in the resolutions for pre-ballot draft C. Additionally the report can be requested from any non-sensing packet.

**Resolution: Rejected**

***Comment Index #81 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 81 | Mickael Maman | 10.39.4.6 | 131 | 12 | section 10.39.4.6 should be 10.39.4.5.1 | Revised |

**Discussion:**

Agree with the commenter.

**Resolution: Revised**

Change "10.39.4.6" to "10.39.4.5.1". Additionally follow this change for the corresponding subclauses accordingly: "10.39.4.6.1" to "10.39.4.5.1.1", etc. Also, change "10.39.4.7" to "10.39.4.6".

***Comment Indices #219, #220 and #221 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 219 | Aniruddh Rao Kabbinale | 10.39.1 | 128 | 14 | The nomenclature is not in accordance with nomenclature used for ERDEV in 15.4z. Controller, controlee, initator and responder should be the nomenclature | Define controller, define controlee, remove transmitter and receiver nomenclatures |
| 220 | Aniruddh Rao Kabbinale | 10.39.1 | 128 | 15 | The definition of sensing initiator is not clear. It is not clear what does "initiating RF session" means. Clarify what it means. | Modify definition of sensing initiator as follows:an SDEV that initiates an RF sensing session with one or more other SDEVs by sending/transmitting PPDUs to enable channel estimation for sensing. |
| 221 | Aniruddh Rao Kabbinale | 10.39.1 | 128 | 16 | The definition of sensing responder is not clear. It is not clear what "responds" means. Clarify what it means | Modify defitinion of sensing responder as follows: Ans SDEV that responds to a sensing initator by receiving PPDU from sensing initiator, performs channel estimation and may report CIR to initiator. |

**Discussion:**

Similar comments have been addressed in DCN 24-45-0. Additionally, sensing transmitter and sensing receiver are well defined as the devices sending and receiving sensing PPDUs, respectively.

**Resolution: Revised**

Follow the instructions in DCN 24-454-0 resolution to CIDs 222-228.

***Comment Index #263 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 263 | Li-Hsiang Sun | 16.2.10 | 191 | 8 | Is Ipatov 127 SYNC/SFD/SENS used in SENS pkt config 1 or 2 | Ipatov127 SYNC/SFD/SENS are only applicable to SENS pkt config 0 |

**Discussion:**

Yes, Length 127 Ipatov sequences are used only with SENS0 packets, mainly to avoid unnecessary BPRF mode implementation for the data field.

**Resolution: Rejected**

The commenter is asking a question. No Change is needed.

***Comment Index #904 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 904 | Carl Murray | 10.39.6.2 | 155 | 4 | The Normalisation factor is poorly described - "The Normalization Factor field specifies a 4-bit power-of-two normalization factor". | Replace the indicated test with   "The Normalization Factor field specifies a 4-bit unsigned integer, which will be used as the exponent in the expression 2^exponent to determine the normalization factor" |

**Discussion:**

Agree with the commenter on more clear description for the normalization factor.

**Resolution: Revised**

The Normalization Factor field specifies a 4-bit unsigned integer, which represents the exponent value in the expression . The CIR taps being reported in the CIR Taps field, i.e., the I and Q (in-phase and quadrature) tap values in the CIR Taps field are divided by. to generate the report.

***Comment Index #1242 in 15-24-0371-13-04ab-consolidated-comments\_draft\_1.0***

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 1242 | Billy Verso | 10.39.4.6.2 | 132 | 11 | Line 11 ends in ":" so I expect a dash list following it but it is just plain paragraphs, although the blank line #20 suggests that the list should be just the two paragraphs before. | Make two paragraphs into two dash-bullets and delete the blank line? |

**Discussion:**

Agree with the format change, need to generate three bullets.

**Resolution: Revised**

Generate three dash-bullets in lines 12, 15 and 21. Remove the space in line 20.