**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 D2.0 Sensing Comments** | |
| Date Submitted | September 2025 | |
| Sources | Pooria Pakrooh (Qualcomm) |  |
| Abstract | Resolution to comment 109 on D2.0 | |
| Purpose | To propose comments resolution for “P802.15.4ab™/D (pre-ballot) C Draft Standard for Low-Rate Wireless Networks” | |
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CIDs addressed: 109

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| **CID** | **Commenter** | **Sub-Clause** | **Page** | **Line** | **Comment** | **Proposed Change** |
| 109 | KREBS, ALEX | 8.3.6 | 30 | 19 | 64 us is too aggressive for mandatory support. | Change Range column to include 128, and change description to "value of 128 us is mandatory" and "values of 16 us, 32 us and 64 us is optional." and change Default column to 128. |

**Discussion:**

The specified values for AIFS in the draft (64us mandatory, 32us and 16us optional), are reflecting what has been discussed and agreed among the group (See 15-23-71, and all 15.4ab drafts following it).

The AIFS values defined in D2.0 are time requirements for providing immediate-ack. New higher data rates of 62.4Mbps and 124.8Mbps are introduced in 15.4ab to enable higher throughput for applications demanding high volume of data transfer in a limited time duration. After each packet transmission, a gap of AIFS is needed for the immediate acknowledgment. Therefore, the higher the AIFS, the less frequent the packets can be transmitted. This reduces the chances of retransmissions in case of packet failures. This is more severe for higher data rates as the packets are shorter.

A simple example of transmitting several MBs of data over a short period of time (a couple of seconds) is a realistic application for the newly defined data rates of 62.4 or 124.8Mbps. In such scenarios, using reasonable packet sizes of 1500-2000 Bytes, the overhead due to AIFS=128us could be 20%-30% more than AIFS=64us. This reduces the chances of possible retransmissions during a given time budget or can even eliminate the retransmission opportunity in some scenarios. Therefore, it is desirable to keep the mandatory AIFS value at 64us.

**Resolution: Reject**