**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **LB207/D01 comment resolution -- NB RX/TX switching -- CID 1167** |
| Date Submitted | Nov 13, 2024 |
| Sources | Alex Krebs (Apple)  krebs @ apple.com |
| Re: |  |
| Abstract |  |
| Purpose | To propose resolution for MMS related comments for “P802.15.4ab™/D (pre-ballot) C Draft Standard for Low-Rate Wireless Networks”. |
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# CID 1167 (Revised)

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| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** |
| Billy Verso | 1167 | 67 | 10.38.4.1 | 26 | This says "may extend transmission of the poll Compact frame", but the transmission time itself is dependant only on the content of poll frame. This is really talking about the dimensioning of the slot. Which should take account of any LBT pause before the TX, the expected packet length itself, local device turnaround time, and the reception processing, response generation, turn-around time of the remote system since the next packet (i.e., a response) is expected to be begin directly at the end of this period. To keep packet boundaries on the 300 RSTU grid would suggest to leave 300 RSTU free after the end od the TX frame for all RX processing. | Reword the sentence as per comment, i.e., say the slot size should be set based on the factors as pet the comment. And I think it should always incorporate allowance for LBT up front, even if LBT is not on, so that enabling or disabling LBT does not need to change the slot size. Also potentially, one end might opt to do LBT when the other might not. |

Discussion: Initiator and responder negotiate and agree on the duration of macMmsRcpPollNSlots during the initialization and setup phase (or OOB otherwise). I would argue that all the consideration mentioned in the comment such as TX-RX switching time, or whether or not LBT is enabled, or what duration the POLL frame has is known apriori and it would be the responsibility of the devices to set the duration of macMmsRcpPollNSlots sufficiently large to cover all cases. But I agree that the word "extend" is confusing and the sentence commented on is unnecessarily complicated and should be simplified.

Nov 14, 2024: Group discussed that adding a sentence to require at least 300 RSTU empty legroom at the end of the macMmsRcpPollNSlots. Group discussed that the resulting unused slot time would be 300 to 600 RSTU. Group discussed that 600 RSTU may be unnecessarily large in practice and discourage/prevent efficient transceiver designs, eg. TX/RX switching and CCA/LBT ETSI definitions are both less than 120 RSTU. More discussion needed.

Nov 22, 2024 (offline discussion Billy/Alex): POLL and RESP packets require additional effort for CFO estimation for the following UWB fragment reception. We propose to leave at least 300 RSTU gap at the end of each transmission, to be required for interoperability in the standard.

Proposed resolution: Revised.

Disposition detail:

On p. 67 l. 26 replace the sentence:

The initiator may extend transmission of the poll Compact frame up to the poll period duration set by the macMmsRcpPollNSlots attribute if LBT is not enabled, or according to 10.38.7.3 otherwise.

by inserting the following sentence at the end of the first paragraph (l. 24):

Initiator and responder shall set the values of *macMmsRcpPollNSlots* and *macMmsRcpRespNSlots* such that a transmission free period of at least 300 RSTU is allocated after the transmission of poll and response Compact frames, respectively.