**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 -- MAC variable ranges -- CIDs 74, 76, 77, 78, 661, 662, 663, 1006, 1007, 1009, 1010, 1374, 1375** |
| Date Submitted | Sep 30, 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”. |
| 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. |

# Range of MAC variables missing in table

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| --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** |
| Tero Kivinen | 661 | 125 | 10.38.10 | 1 | The macMmsRangingSlotDuration is missing a range. | Add range to the macMmsRangingSlotDuration. |
| Tero Kivinen | 662 | 125 | 10.38.10 | 1 | The macMmsRangingRoundDuration is missing a range. | Add range to the macMmsRangingRoundDuration. Also I assume there is relation between slot duration and round duration, describe that relation in description. |
| Tero Kivinen | 663 | 125 | 10.38.10 | 1 | The macMmsRangingBlockDuration is missing a range. | Add range to the macMmsRangingBlockDuration. Also I assume there is relation between round duration and round duration, describe that relation in description. |
| Mickael Maman | 74 | 125 | 10.38.10.1 | 1 | Value 14 is missing in the range of macmmsReportPhaseMode | as in comment |
| Mickael Maman | 76 | 125 | 10.38.10.1 | 1 | according to management MAC configuration (line 2 page 86), macMmsRangingSlotDuration is 300\*(N+1) 0<=N<=7 RSTU. | add "300\*(N+1) 1<=N<=7" in range |
| Mickael Maman | 77 | 125 | 10.38.10.1 | 1 | range of ranging round duration is missing | add "1-255" in range and change RSTU to ranging slot |
| Mickael Maman | 78 | 125 | 10.38.10.1 | 1 | range of ranging block duration is missing | add "1-255" in range and change RSTU to ranging round |
| Carlos Aldana | 1006 | 125 | 10.38.10.1 | 1 | In description of macMmsResportPhaseMode, values 1-9 are referred to, but Table 58 only has values 1-8. Please fix. | As in comment |
| Carlos Aldana | 1007 | 125 | 10.38.10.1 | 1 | In description of macMmsResportPhaseMode, values 14 is referred to, but is not listed in Range. Please fix. | As in comment |
| Carlos Aldana | 1009 | 125 | 10.38.10.1 | 1 | In decription of macMmsNbInitMode, the Range is 1-9, but Table 58 only has 8 values. Please fix. | As in comment |
| Carlos Aldana | 1010 | 125 | 10.38.10.1 | 1 | There is no normative text associated with macMmsRangingSlotDuration, macMmsRangingRoundDuartion, and macMmsRangingBlockDuration variables | Please fix. |
| Pooria Pakrooh | 1374 | 125 | 10.38.10.1 | 1 | In Table 20, specify ranges of value for "Ranging round duration" and "ranging block duration" | As in the comment |
| Pooria Pakrooh | 1375 | 125 | 10.38.10.1 | 1 | In Table 20, specify Round and block duration in units of slot and round duration respectively, nor RSTU. | As in the comment |

Discussion: Agree with comments and spirit of proposed resolutions, but also references on p.88 to these variables need fixing. Start value of #76 seems incorrect?

Proposed resolution: Revise: Add the following values to the Range column:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Type** | **Range** | **Description** | **Default** |
| ... |  |  |  |  |
| *macMmsControlPhaseMode* | Integer | 1–8, 14, 15 | Modulation for the MMS control phase.  Values 1–9 relate to Table 58 and select the modulation for the O-QPSK PHY in the control phase.  Value 14 selects operating parameter set #1 and value 15 selects operating parameter set #2 from Table 74 for the UWB PHY in the control phase. | 1 |
| *macMmsReportPhaseMode* | Integer | 1–8, 14, 15 | Modulation for the MMS report phase.  Values 1–9 relate to Table 58 and select the modulation for the O-QPSK PHY in the report phase.  Value 14 selects operating parameter set #1 and value 15 selects operating parameter set #2 from Table 74 for the UWB PHY in the report phase. | 1 |
| ... |  |  |  |  |
| *macMmsNbInitSlotDuration* | Integer | 600+300×N,  0 ≤ N ≤ 15 | Initialization slot duration in RSTU | 1800 |
| *macMmsRangingSlotDuration* | Integer | 300+300×N,  0 ≤ N ≤ 7 | Ranging slot duration in RSTU | 600 |
| *macMmsRangingRoundDuration* | Integer | 300–612000 | Ranging round duration in RSTU, integer divisible by *macMmsRangingSlotDuration* | 16800 |
| *macMmsRangingRoundDuration* | Integer | 300–156060000 | Ranging block duration in RSTU, integer divisible by *macMmsRangingRoundDuration* | 1209600 |
| ... (leave other cells unchanged) |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

On page 88 change the following text:

8  The Control Phase Config field defines the value of *macMmsControlPhaseMode* which corresponds to the PHY layer modulation for the MMS control phase. Control

9  Phase Config field values 1 to 8 select a modulation mode from Table 58 (also numbered 1 to 8), value 14

10  selects UWB modulation according to set #1 from Table 74, while the value 15 selects UWB modulation

11  according to set #2 from Table 74. All other Control Phase Config field values are reserved.

12  The Report Phase Config field defines the value of *macMmsReportPhaseMode* which corresponds to the PHY layer modulation for the MMS report phase. Report Phase

13  Config field values 1 to 8 select a modulation mode from Table 58, value 14 selects UWB modulation

14  according to set #1 from Table 74, while the value 15 selects UWB modulation according to set #2 from

15  Table 74. All other Report Phase Config field values are reserved.

On p.86 change l.2-7:

The Ranging Slot Duration field encodes the value of *macMmsRangingSlotDuration*. The ranging slot duration in RSTU is given by: (Ranging Slot Duration field value + 1) × 300.

The Ranging Round Duration field encodes the value of *macMmsRangingRoundDuration* in units of ranging slots in the range 1 to 255. The value of zero is reserved.

The Ranging Block Duration field encodes the value of *macMmsRangingBlockDuration* in units of ranging rounds in the range of 1 to 255. The value of zero is reserved.