**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **LB213 - CRs for Status fields and Long term parameters updates** |
| Date Submitted | May 2025 |
| Sources | Rojan Chitrakar, Lei Huang (Huawei)rojan.chitrakar@huawei.com |  |
| Re: |   |
| Abstract |  |
| Purpose | To propose resolution for “P802.15.4ab™/D02 Draft Standard for Low-Rate Wireless Networks” |
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Rev 0: Initial version: 12 CIDs

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| **Name** | **Index#** | **Pg** | **Sub-Clause** | **Ln** | **Comment** | **Proposed Change** | **Disposition** |
| MAMAN, MICKAEL | 161 | 66 | 10.39.3.2 | 22 | If the initiator intends to proceed to the control phase, the Start of Ranging Compact frame Message Control field shall be set to zero, one or two, with the Startup Status field set as SUCCESS. There is no Startup Status field for zero and two configuration  | reverse two and one."if the initiator intends to proceed to the control phase, the Start of Ranging Compact frame Message Control field shall be set to zero, two or one with the Startup Status field set as SUCCESS. | Revise |
| CHITRAKAR, ROJAN | 29 | 116 | 10.39.11.3.3 | 6 | Startup Status field sounds a bit weird. |  Change "Startup Status field' to "Initialization Status field", or simply "Status field". | Revise |

**Proposed text changes on P802.15.4ab™/D02:**

**10.39.3.2 Session initialization**

***Modify the subclause as follows (Track changes ON)***

…

If the initiator intends to proceed to the control phase, it shall transmit a Start of Ranging Compact frame (10.39.11.3.4) with the Message Control field (within the Message ID field) set to zero, or two, or with the Message Control field set to one, and the Initialization Status field set as SUCCESS (as described in Table 25). If a responder receives a Start of Ranging Compact frame with the Message Control field value (within the Message ID field) of one and the value of the Initialization Status field is set as SUCCESS and the values of the NB Channel Map field, Management PHY Configuration field, Management MAC Configuration field, Ranging PHY Configuration field and MMS Number of Fragments field shall be passed to the higher layer. If any of the fields is present in both the Advertising Response and the Start of Ranging packet the latter value shall be passed to the higher layer. Unless further altered by OOB methods the higher layer is expected to employ the provided ranging configuration values to start the ranging session.

Otherwise, if the initiator does not intend to proceed to the control phase, it may transmit a Start of Ranging Compact frame with the Message Control field (within the Message ID field) set to one, and the value of the Initialization Status field set as one of the non-reserved entries in Table 25 other than SUCCESS. If a responder receives a Start of Ranging Compact frame with the Message Control field equal to one and the value of the Initialization Status field is one of the non-reserved entries in Table 25 other than SUCCESS, the responder’s action is as follows:

***Replace all 23 instances of “Startup Status” with “Initialization Status” throughout the 802.15.4ab draft.***

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| **Name** | **Index#** | **Pg** | **Sub-Clause** | **Ln** | **Comment** | **Proposed Change** | **Disposition** |
| SUN, LIHSIANG | 301 | 79 | 10.39.4.1 | 39 | There shold be some contraint on what cannot be changed in the updated long term parameter, such that initiator is able to verify the responder is using the updated parameter e.g. the config cannot be changed from a TWR to a OWR (from initiator) with measurement Report request set to 0 | as in comment | RejectSuch restrictions can be handled by higher layers and need not be specified in the 802.15.4ab specification. |
| MAMAN, MICKAEL | 193 | 118 | 10.39.11.3.5 | 11 | Now one-to-one poll compact frame can convey long term operating parameters | add "or long-term" after short-term | Accept |
| MAMAN, MICKAEL | 198 | 124 | 10.39.11.3.9 | 27 | Now one-to-many poll compact frame can convey long term operating parameters | add "or long-term" after short-term | Accept |

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| **Name** | **Index#** | **Pg** | **Sub-Clause** | **Ln** | **Comment** | **Proposed Change** | **Disposition** |
| SUN, LIHSIANG | 300 | 121 | 10.39.11.3.6 | 5 | Response Status field's presence is determined based on whether the preceding poll frame requests long-term parameter change.In this case this Response Status field is not needed because the Response frame itslef is an ack and responder needs to comprehend the Poll frame befre sending Response frame | as in comment | **Reject**The Response Status field set to LTP\_ACK is included in the response frame as an explicit indication of the responder’s agreement to the suggested long term parameter update. The responder can also choose not to update the long term parameters, in which case it can transmit the response frame without the Response Status field. |
| VERSO, BILLY | 559 | 121 | 10.39.11.3.6 | 12 | This line says "The Response Status field is present and set to LTP\_ACK if the responder acknowledges the long-term operating parameters included in the preceding poll frame"... Essentially the presence of the field is the ACK signal, but how do we know whether this field is present or not? We could add a bit to the presence bitmap, or, make it always present,and have two values defined in the table, but since it is only a yes/no signal I think we could just allocate one bit for the signal (in the presence bitmap?).  | Add an LTP ACK bit into the presence bitmap. (It may need extension to a third octet to do this, but I think NB Channel Present bit could be merged into NB Channel Map Present field since they are mutually exclusive, and that would free a bit to do this ACK.). | **Revise**Prefer not to mix the Presence Bitmap field with the LTP\_ACK indication. However, there should be a bit in the Presence Bitmap to indicate the presence/absence of the Response Status field. |
| VERSO, BILLY | 561 | 121 | 10.39.11.3.6 | 22 | Should the Response Status field be mentioned here also? I guess it could be on it's own? | Add "Response Status field" into this list. | **Revise** |
| MAMAN, MICKAEL | 195 | 121 | 10.39.11.3.6 | 23 | the One-to-one Response Compact frame with Message Control field value of one can be used only for Response status | add " or response status" | **Revise** |
| MAMAN, MICKAEL | 203 | 131 | 10.39.11.3.10 | 15 | the One-to-many Response Compact frame with Message Control field value of one can be used only for Response status | add " or response status" | **Revise** |
| VERSO, BILLY | 567 | 131 | 10.39.11.3.10 | 15 | Should the Response Status field be mentioned here also? | Add "Response Status field" into this list. | **Revise** |
| VERSO, BILLY | 568 | 131 | 10.39.11.3.10 | 23 | See my comment on p121 L#12, LTP\_ACK could be done with just a bit in the presence bitmap rather than a whole octet, | Also amend this paragraph and Figure 114 accordingly if that is done, for my comment on p121 L#12. Padding may need to be include up to 4 octets in that case | **Revise** |

**10.39.11.3.6 One-to-one Response Compact frame**

***Modify the subclause as follows (Track changes ON)***

…

The Presence Bitmap field is set as specified in 10.39.11.1.3.14, with the fields other than NB Channel Map, Management PHY Configuration Present field, Management MAC Configuration Present field, Ranging PHY Configuration Present field, MMS Number of Fragments field and Response Status field set to zero.

…

For the One-to-one Response Compact frame with Message Control field value (within the Message ID field) of one, at least one of the NB Channel Map, Management PHY Configuration, Management MAC Configuration, Ranging PHY Configuration, MMS Number of Fragments, or Response Status fields shall be present in the Message Content field.

**10.39.11.3.10 One-to-many Response Compact frame**

…

The Presence Bitmap field is set as specified in 10.39.11.1.3.14, with the fields other than NB Channel Map, Management PHY Configuration Present field, Management MAC Configuration Present field, Ranging PHY Configuration Present field, MMS Number of Fragments field and Response Status field set to zero.

At least one of the fields NB Channel Map, Management PHY Configuration, Management MAC Configuration, Ranging PHY Configuration, MMS Number of Fragments, or Response Status fields shall be present.

**10.39.11.1.3.14 The Presence Bitmap field**

***Modify the subclause as follows (Track changes ON)***

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| Bits: 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SMC\_TLVsPresent | Start and End Slot Indices Present | Starting BlockIndex Present | MMS Ranging ModeConfiguration Present | Supported O-QPSK Modulation Modes Present | Group ID Present | NB Channel Present | Response Status Present |

**Figure 59—Extended Presence**

…

The Presence Bitmap field is set as specified in 10.39.11.1.3.14, except that the Block and Round Index Present field and the Extended Presence Bitmap Present field shall both be set to zero.

…

The Response Status Present field when one indicates that the Response Status field is included in the Message Content field or is not included when the Response Status Present field value is zero.