**IEEE P802.15**

**Wireless Personal Area Networks**

|  |  |
| --- | --- |
| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | D02 Miscellaneous Comment Resolutions II |
| Date Submitted | 14 May 2025 |
| Source | Billy Verso (Qorvo),  | billy.verso at qorvo.com |
| Re: | IEEE P802.15.4ab |
| Abstract | Comment Resolutions for selected comments on the LB213 / P802.15.4ab D02. |
| Purpose | This document provides text changes intended to be part of the final IEEE Std 802.15.4ab (amendment to IEEE Std 802.15.4), as part of resolving selected comments from the consolidated spreadsheet (DCN 15-25-0174) that have been assigned to the author to resolve. |
| 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 “Source(s)” field above. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein. |
| Release | The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15. |
| Patent Policy | The contributor is familiar with the IEEE-SA Patent Policy and Procedures.<https://standards.ieee.org/about/sasb/patcom/materials/>  |

|  |
| --- |
| Comments addressed here: |

[1 Comment Index # 108 2](#_Toc198112963)

[2 Comment Index # 228 2](#_Toc198112964)

[3 Comment Index # 322 3](#_Toc198112965)

[4 Comment Index # 151 4](#_Toc198112966)

[5 Comment Index # 304 5](#_Toc198112967)

[6 Comment Index # 18 6](#_Toc198112968)

[7 Comment Index # 312 7](#_Toc198112969)

1. **Comment Index # 108**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 108(Alex) | 30 | 8.3.6. | 13 | SrcAddr has been renamed to SourceIRK in CompactFrameDescriptor | Change SrcAddr to SourceIRK (as done on p.26) |

**Discussion:**

This comment is talking about the SrcAddr parameter of the MCPS-DATA.indication primitive. The commenter is proposing to rename this to align with the SourceIrk that we added into the CompactFrameDescriptor structured parameter of the MCPS-DATA.request

In MCPS-DATA.request, in the base standard, there is no explicit source address parameter, because for the MAC the source address is either the device’s IEEE extended address, or a short address assigned to the device when it associated with the PAN coordinator. For compact frames we needed a parameter to specify the IRK to use in setting the RPA hash in the transmitted compact frame when the SrcAddrMode is COMPACT. SourceIRK seemed a good name for this new parameter.

In MCPS-DATA.indication primitive, the base standard already has the SrcAddr parameter to report the source address of the received frame being delivered to the next higher layer. In 4ab we reuse this, when SrcAddrMode is COMPACT, to deliver the (source) IRK resulting from successful resolution of the RPA Hash / RPA Prand for the received Compact frame.

Given that this “SrcAddr” is pre-existing and used in the base standard, not something we are adding, it is inappropriate for 4ab to rename it.

**Proposed Disposition:** Rejected.

**Disposition Detail:** MCPS-DATA.indication parameter “SrcAddr” is pre-existing in the base standard. It is not appropriate for 4ab to rename it.

# Comment Index # 228

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 228(Pooria) | 25 | 8.3.3 | 1 | Why is "SensReceive" needed? It is not used anywhere else in the draft. Monostatic involves single device. We are not defining any other parameters for monostatic | Remove "SensReceive" from Table 8-29. |

**Discussion:**

Monostatic sensing is part of 4ab. It is one of modes listed in subclause 10.40.2 *Operational modes for sensing* and it is signalled via a Sensing Mode field value specified in Table 38.

For a device capable of monostatic sensing there is a need for a control to tell the MAC/PHY whether to perform the monostatic sensing on the transmitted frame. Where some transmitted frames may be used for this purpose and others not, it makes sense to have this as a parameter of the MCPS-DATA.request, rather than having it as a PIB attribute (say).

The commenter is also incorrect to say that it is not used anywhere. It is used in subclause 10.40.4.7 *Control of HRP UWB sensing*, (p.154 line #22), which is describing the interactions for multistatic and monostatic sensing.

**Proposed Disposition:** Rejected.

**Disposition Detail:** The SensReceive parameter is used. It appears on p.154 line 22. This Boolean parameter added to the MCPS-DATA.request primitive is needed to request (when true) that the MAC/PHY performs the TX with simultaneous RX as required for monostatic sensing, or not if it is false.

1. **Comment Index # 322**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **clause** | **Line** | **Comment** | **Proposed Change** |
| 322(Billy) | 21 | 8.3.2.2 | 6 | I think the TxTimeSpecified parameter should also be RCTU\_TIME in the UWB driven case. If we delete the "NBA" from the sentence the "MMS UWB" can cover both cases. | Delete the "NBA" from the sentence. |

**Discussion:**

This relates to following lines:



For both NBA and UWB driven cases the MMS UWB packet transmission is timed from the poll or response transmission, and precise control of the transmission time is needed in both cases. A modified resolution is proposed to make that clearer:

**Proposed Disposition:** Revised.

**Disposition Detail:** Change the line to read: “For NBA MMS UWB and UWB driven MMS UWB, the TxTimeSpecified parameter shall be RCTU\_TIME.”

# Comment Index # 151

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 151(Mickael) | 30 | 8.3.6 | 1 | Missing Frametype parameter in order to validate or not the compactFrameDescriptor in the MCPS-DATA.indication | add a line in Table 8-32 FrameType | Enumeration | DATA\_FRAME, MULTIPURPOSE\_FRAME, COMPACT\_FRAME | Specifies the frame type received |

**Discussion:**

It is not clear whether there is currently, in the base standard, any mechanism for the next higher layer to know whether the received frame is a Data frame or a Multipurpose frame.

But, as far as Compact frames are concerned, their delivery can probably be inferred by the either the SrcAddrMode or DstAddrMode parameters being COMPACT. More certainly however, (and in case a compact frame is ever defined without source or destination addressing), the presence of the CompactFrameDescriptor parameter can definitely be used to signal that a compact frame is being delivered without needing to add a separate FrameType parameter for this. This can be clarified by changing the text as per the proposed “revised” resolution below:

**Proposed Disposition:** Revised.

**Disposition Detail:**

Change p.30 line 10 from:

~~If the received packet contains a Compact frame, then the CompactFrameDescriptor structure conveys the Compact frame's content information.~~

to:

The CompactFrameDescriptor parameter, if present, indicates that the received frame is a Compact frame, and conveys the Compact frame's content information.

# Comment Index # 304

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 304(Bin T) | 44 | 10.29.9.2.3 | 1 | In Table 5, the description for SoundingImphaseValue and SoundingQuadrature Value is " A relative measurement or the receive signal strenghth". The term "Receive signal strength" generally is refer to receive signal power, not the amplitude, and its value can not be negative. Use use the term Inphase value for an tap in CIR  | as in the comment |

**Discussion:**

This relates to the description of the individual taps (elements) of the sounding list in IQ Format:



The proposed resolution is not very helpful, but I suppose we could change the descriptions to

**Proposed Disposition:** Revised.

**Disposition Detail:**.

Change the Table 5 description of the SoundingInphaseValue to:

“A relative measurement of the received signal amplitude for an in-phase CIR tap.”

And, change the Table 5 description of the SoundingQuadratureValue to:

 “A relative measurement of the received signal amplitude for a quadrature CIR tap.”

# Comment Index # 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 18(Rojan) | 69 | 10.39.3.3 | 20 | What is the Control phase referenced here? Or is it meant to the Initiatlization and Setup Phase | Replace "control phase" with "Initiatlization and Setup Phase" |

**Discussion:**

This relates to the highlighted sentence within clause



* The commenter is correct that this should be talking about proceeding to initialization, without scanning, when coordination is not active. A revised resolution is proposed….

**Proposed Disposition:** Revised.

**Disposition Detail:**

Change the sentence:

~~Otherwise, the initiator starts the control phase without scanning for Acquisition Compact frame.~~

to read:

If coordination is not active, the initiator begins the Initialization setup handshake without scanning for Acquisition Compact frames.

# Comment Index # 312

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Index** | **page** | **Clause** | **line** | **Comment** | **Proposed Change** |
| 312(Bin T) | 83 | 10.39.8.1 | 3 | O-QPSK PHY may be used in the report phase | as in the comment |

**Discussion:**

This relates to the general clause below introducing subclause 10.39.8:



**Proposed Disposition:** Rejected.

**Disposition Detail:** The paragraph is not incorrect.

*<END>*