**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 LB213/D02 Comments Resolution for SSBD CIDs 9, 53, 256, 321** |
| Date Submitted | May 2025 |
| Sources | Larry Zakaib (Spark Microsystems)  larry.zakaib@sparkmicro.com |
| Re: |  |
| Abstract | Proposed comments resolution for CIDs 9, 53, 256, 321 |
| Purpose | Proposed resolutions to Clause 33 comments for “P802.15.4ab™/D2.0 Draft Standard for Low-Rate Wireless Networks”. |
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# CID 187

# CID 9 (Revised)

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| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Disposition Detail** | **Category** |
| Aldana, Carlos | 9 | 198 | 10.45.2 | 6 | CCA mode 3 does not exist anymore. It is either 3a or 3b | Please clarify | Revised:  See explanation and resolution below. |  |

**Note**

In the main standard (P802-15-04me-D07, P610, lines 23-27) CCA Mode 3 does exist and is defined as follows:

*CCA Mode 3:* one of following:

— *CCA Mode 3a: Carrier sense with energy above threshold when either is required.* CCA shall

report a busy medium if either CCA Mode 1 or CCA Mode 2 would return busy.

— *CCA Mode 3b: Carrier sense with energy above threshold when both are required.* CCA shall

report a busy medium only if both CCA Mode 1 and CCA mode 2 would return busy.

**Disposition Detail**

Change the sentence on P198 lines 6 & 7

**From**:

When used for SSBD, and CCA Mode 1 or Mode 3 are used, the CCA threshold shall be set to *phyCcaEdThreshold* and the CCA detection time shall be set to *phyCcaDuration*.

**To**:

When used for SSBD, and CCA Mode 1 or Mode 3 (either Mode 3a or Mode 3b) are used, the CCA threshold shall be set to *phyCcaEdThreshold* and the CCA detection time shall be set to *phyCcaDuration*.

# CID 53 (Revised)

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| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Disposition Detail** | **Category** |
| Kivinen, Tero | 53 | 16 | 6.6.3.4 | 25 | This text does not belong here, move it to 10.45.2 where the SSBD algorithm is described. Techincal | Move text to 10.45.2 as it does not belong here. The text in 10.45.2 can say that isRetrnamissionAttempt shall be set to TRUE if packet is retransmission as descibed in 6.6.3.4 and macSsbdPersistence is enabled. | Revised:  See below |  |

Given that the features described in Clause 6 (MAC functional description) of the main standard (P802-15-04me-D07) are mandatory, and that optional features are moved to Clause 10, it makes sense to move this text relating to SSBD to 10.45.2.

There is already text in section 10.45.2 in Draft D2 (P197, Lines 8-13) that discusses SSBD persistence:

“The SSBD algorithm includes a persistence option. For each SSBD attempt, *BF* is initialized as follows:

When *macSsbdPersistence* is TRUE then the initial value of the backoff factor is set based upon whether the channel access attempt is the first attempt or a retransmission. Retransmission is signaled by setting *isRetransmissionAttempt* to TRUE. When *isRetransmissionAttempt* is TRUE, the initial value of *BF* shall be set to the terminating value from the last SSBD access plus one. When *macSsbdPersistence* is FALSE, or when *isRetransmissionAttempt* is FALSE, *BF* shall be initialized to *macSsbdMinBf*.”

**Resolution:**

1. **Delete** the following text in clause 6.6.3.4. (P16, Line 25):

When the SSBD channel access method, described in 10.45, is used, and when *macSsbdPersistence* is enabled, when the packet is a retransmission, *isRetransmissionAttempt* shall be set to TRUE when invoking SSBD.

1. Instead of the text proposed by the commentor “isRetrnamissionAttempt shall be set to TRUE if packet is a retransmission as described in 6.6.3.4 and macSsbdPersistence is enabled”

**Add** the text in red below to 10.45.2 (P197, Lines 8-13):

.

The SSBD algorithm includes a persistence option. For each SSBD attempt, *BF* is initialized as follows:

When *macSsbdPersistence* is TRUE then the initial value of the backoff factor is set based upon whether the channel access attempt is the first attempt or a retransmission. If the packet is a retransmission, as described in 6.6.3.4, retransmission is signaled by setting *isRetransmissionAttempt* to TRUE. When *isRetransmissionAttempt* is TRUE, the initial value of *BF* shall be set to the terminating value from the last SSBD access plus one. When *macSsbdPersistence* is FALSE, or when *isRetransmissionAttempt* is FALSE, *BF* shall be initialized to *macSsbdMinBf*.

# CID 256 (Revised)

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| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Disposition Detail** | **Category** |
| PANPAN, LI | 256 | 16 | 6.6.3.4 | 25 | Three "when"s seem redundant | Change it to "When the SSBD channel access method, described in 10.45, is used, macSsbdPersistence is enabled, and the packet is a retrasmission, ….." | Revised:  Remove this sentence from section 6.6.3.5 according to the resolution of CID 53.  Note that the three “when”s in the sentence would have been necessary for correctness. |  |

# CID 321 (Revised)

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| **Name** | **Index #** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** | **Disposition Detail** | **Category** |
| VERSO, BILLY | 321 | 16 | 6.6.3.4 | 25 | The paragraph is a single sentence which reads poorly. Maybe it would be enough to have the simpler sentence, as per the proposed change. | Replace the paragraph with: "When the packet is a retransmission, isRetransmissionAttempt shall be set to TRUE when invoking SSBD. | Revised:  Remove this sentence from section 6.6.3.5 according to the resolution of CID 53. |  |