**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 Resolution for Comments #998** |
| Date Submitted | February 20, 2025 |
| Sources | Carlos Aldana (Meta), Pooria Pakrooh (Qualcomm) |  |
| Re: |   |
| Abstract |  |
| Purpose | To propose resolution to comment with CID #988 for “P802.15.4ab™/Draft 1.0 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. |

***Comment Index #998***

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| --- | --- | --- | --- | --- | --- | --- |
| 998 | Technical | 81 | 10.38.9.3.7 | 18 | To simplify design, there should be a way to signal the end of the NB channel map. Please add a field to Figure 49 to signal NB channel end. | As in comment |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Bits: 0–3   | 4–9 | 10–17   | 18–41 | 42–44 | 45–46 | 47   |
| NB channels0–3 | WLAN channel bitmask (UNII-3) | NB channels50–57 | WLAN channel bitmask (UNII-5) | NB channel start | NB channel step | Reserved |

**Discussion:** Agree in principle with commenter and it is desired to reduce the bitwidth of the field. Therefore, we propose a simple channel\_start and channel\_end configuration with decimation capability that results in 50% reduction of bitwidth.

Note: The proposed changes below already consider the approved changes in DCN 15-25-0045-04,

**Proposed Resolution : Revise.**

**Note to Editor #1:**

 **Add a new subclause 10.38.9.3.10**

**10.38.9.3.10: The NB Compact Channel Map field**

|  |  |  |  |
| --- | --- | --- | --- |
| Bits: 0–7 | 8-9 | 10-17 | 18-23 |
| NB channel start | NB channel step | NB channel end | Reserved |

 **Figure X1: The NB Compact Channel Map field**

The allowed list of NB channels is defined as

 *macMmsNbChannelAllowList = NbChannelAffineSet*

where NbChannelAffineSet = {y: y = x × NB\_channel\_step + NB\_channel\_start}, such that NB\_channel\_start ≤ y ≤ NB\_channel\_end and x ∈ ℕ0, where ℕ0 is the set of natural numbers, additionally including zero.

Bits 0 to 7 encode the value of NB\_channel\_start in the range 0 to 249.

Bits 8 to 9 encode the enumeration of NB\_channel\_step {1, 2, 4, 8}.

Bits 10 to 17 encode the value of NB\_channel\_end in the range 0 to 249. The value of NB\_channel\_end shall be greater than or equal to the value of NB\_channel\_start.

**Note to Editor #2:**

Change Figure 55 and the description in page 87 lines 12-13 as below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bits: 0-2 |  3 |  4 |  5 |  6 |  7 |
| NB Channel Map requested | Management PHY Config requested | Management MAC Config requested | Ranging PHY Config requested | Ranging MAC Config requested | reserved |

“The NB Channel Map requested field when set to 0 indicates that NB channel map is not requested, when set to 1 indicates that the NB Full Channel Map field is requested, when set to 2 indicates that the NB Lower Channel Map is requested, when set to 3 indicates NB Higher Channel Map is requested, and when set to 4 indicates the NB Compact Channel Map is requested to be included in the response Compact frame.”

**Note to Editor #3:**

Change Figure 58 as below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Bits: 0-2 |  3 |  4 |  5 |  6 |  7 | 0/1 |
| NB Channel Map Present | Management PHY Configuration Present | Management MAC Configuration Present | Ranging PHY Configuration Present | Ranging MAC Configuration Present | Extended Presence Bitmap Present | Extended Presence Bitmap |

**Note to Editor #4:**

Change page 90 lines 9-10 as below:

“… as shown in Figure 51, a value of three indicates the presence in the Message Content field of a 6-byte NB Channel Map as shown in Figure 49, and a value of 4 indicates the presence in the Message Content field of a 3-byte NB Channel Map as shown in Figure X1.”

**Note to Editor #5:**

Change Figure 59 as below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bits: 0 | 1 | 2 | 3 |  4 |  5-7 |
| SMC TLVs Present | Start and End Slot Indices Present | Starting Block Index Present | Block and Round Index Present | MMS Ranging Mode Configuration Present | reserved |

**Note to Editor #6:**

Table 20, line 2, modify the description as below:

“List of channels enabled for channel switching. This attribute can be constructed from NB Full Channel Map, NB Lower Channel Map, NB Higher Channel Map, or NB Compact Channel Map.”

**Note to Editor #7:**

In the following Figures, Change the number of bits for NB Channel Map field from “0/2/5/6” to “0/2/3/5/6”: Figure 67, Figure 75, Figure 78, Figure 83, Figure 95, Figure 97.

**Note to Editor #8:**

In the following Figures, Change the number of bits for NB Channel Map field from “0/2/5/6” to “0/2/3/5/6”: Figure 67, Figure 75, Figure 78, Figure 83, Figure 95, Figure 97.