**IEEE P802.15**

**Wireless Specialty Networks**

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| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSNs) | |
| Title | Miscellaneous Comments, Part 1 | |
| Date Submitted | 14-Novemner-2024 | |
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| Re: | Resolving comments form LB207 | |
| Abstract | Proposed resolutions to CIDs 1026, 457, 1388, 512, 513 | |
| Purpose | Make the world better by encouraging adoption and productive use of 802.15 standards based on accurate information | |
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# Introduction

This document addresses the following comments: 1026, 457, 1388, 512, 513

Comments:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Sub-clause** | **Line #** | **Comment** | **Proposed Change** |
| 1026 | 19 | 7.4.4 | 6 | In Table 7-9 the "Use Description" reference for these new IEs is not present. If they don't have a described use then they should be removed. | Determine the most relevant clause reference for each of these IEs and insert it into the table. |
| 457 | 72 | 10.38.7.4.3 | 19 | PRNG usually generates sequence of integers, in case of using AES-128 this is not really a case. It generates sequence of blocks which consists of sequence of bits and/or octets. Using term least significant will cause confusing as it would assume that the AES function wound return integer, which it does not. | Change to leftmost 32 bits, which matches how section 4.4 defines the strings. |
| 1388 | 72 | 10.38.7.4.3 | 21 | As pointed out similarly for RPA\_hash calculation before, modulo operation is not defined for AES-128 block output. We can use similar language here to fix. | Replace lines 19-21 by:  The *PrngValue* is then given by bits 0 to 31 of *NbaPrng(macMmsPrngSeed, RangingBlockIndex)* Also change line 24 to:  where MOD is the integer modulus operator, ~~and~~ n is the length of macMmsNbChannelAllowList, and input/outputs of *NbaPrng* are MSB zero-padded unsigned integers. |
| 512 | 85 | 10.38.9.3.11 | 4 | The table 14 defines more than just the valid range. | Change text to say that Number of RSF values are defined in table 14. |
| 513 | 85 | 10.38.9.3.11 | 8 | The table 15 defines more than just the valid range. | Change text to say that table defines the values, not range. |

# Resolutions

## CID 512

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 512 | 85 | 10.38.9.3.11 | 4 | The table 14 defines more than just the valid range. | Change text to say that Number of RSF values are defined in table 14. |

Resolution detail: change text to:

The Number of RSF field specifies the number of RSF segments in the UWB MMS packet and shall be set to one of the non-reserved values in Table 14.

## CID 513

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 513 | 85 | 10.38.9.3.11 | 8 | The table 15 defines more than just the valid range. | Change text to say that table defines the values, not range. |

The Number of RIF field specifies the number of RIF segments in the UWB MMS packet and shall be set to one of the non-reserved values in Table 15.

## CID 1388

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1388 | 72 | 10.38.7.4.3 | 21 | As pointed out similarly for RPA\_hash calculation before, modulo operation is not defined for AES-128 block output. We can use similar language here to fix. | Replace lines 19-21 by:  The *PrngValue* is then given by bits 0 to 31 of *NbaPrng(macMmsPrngSeed, RangingBlockIndex)* Also change line 24 to:  where MOD is the integer modulus operator, ~~and~~ n is the length of macMmsNbChannelAllowList, and input/outputs of *NbaPrng* are MSB zero-padded unsigned integers. |

Recommended resolution: Accepted

Discussion: The proposed change removes ambiguity of which bits of a block of bits are intended and clarifies that it is the input to the PRNG (both integers) that are being padded.

## CID 457

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 457 | 72 | 10.38.7.4.3 | 19 | PRNG usually generates sequence of integers, in case of using AES-128 this is not really a case. It generates sequence of blocks which consists of sequence of bits and/or octets. Using term least significant will cause confusing as it would assume that the AES function wound return integer, which it does not. | Change to leftmost 32 bits, which matches how section 4.4 defines the strings. |

Recommended resolution: Revised

Resolution Detail:

Replace lines 19-21 by:

The PrngValue is then

given by bits 0 to 31 of NbaPrng(macMmsPrngSeed, RangingBlockIndex)

Also change line 24 to:

where MOD is the integer modulus operator, and n is the length of macMmsNbChannelAllowList, and input/outputs of NbaPrng are MSB zero-padded unsigned integers.

Discussion: This is the resolution proposed in comment 1388 which is technically correct.

## CID 1026

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1026 | 19 | 7.4.4 | 6 | In Table 7-9 the "Use Description" reference for these new IEs is not present. If they don't have a described use then they should be removed. | Determine the most relevant clause reference for each of these IEs and insert it into the table. |

Proposed resolution: Revised

Resolution detail: Add the references to **Use description column** as shown:

|  |  |
| --- | --- |
| **Name** | **Use description** |
| Scheduling IE | 10.32  10.39 |
| Enhanced Ranging Round IE (ERR IE) | 10.32.3.5  10.32.8.1  10.32.9.4 |
| Hyper Block Structure IE (HBS IE) | 10.32.3.5  10.38.9.6 |
| Application Control IE (AC IE) | 10.39.4.3  10.39.4.6  10.39.5.3  10.40.2  10.40.4 |
| CIR Report IE | 10.39.4.6  10.39.5.3  10.39.6.1 |
| SBP Request IE | 10.39.5.2  10.39.6.5 |
| SBP Response IE | 10.39.5.2  10.39.6.5 |
| SBP Termination | 10.39.5.4 |
| Processed Target Feature Report IE | 10.39.4.5 |
| Dynamic Data Mode Negotiation IE (DDMN IE) | 10.41.2  10.41.3 |
| NB Allocation IE | 10.43.2  10.43.3 |

Discussion: non required.