**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 comment resolution for IE related comments of LB104** | |
| Date Submitted | 6 July 2015 | |
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| Re: | 802.15.10 Consolidated Comment Entry Form, IE related comments | |
| Abstract | Provides a proposed resolution to IE related comments | |
| Purpose | To be used by the technical editor to apply the necessary changes to the draft to resolve IE related comments | |
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1. **Comment CID #342, 345**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| 342 | Verotiana Rabarijaona | 55 | 6.2.2.1 | 25 | The MCO, PAN Coord Connection and DS Route Required flags are already present in the L2R-D IE. Are they also needed in the TC IE? | Consider deleting |
| 345 | Tero Kivinen | 55 | 6.2.2.1 | 51 | The DS Route Required field is not described at all. What is the meaning of it? |  |

**Resolution:**

In 5.1.2.3, if a device rejoins a mesh tree, does it need to rediscover the mesh tree first?

Option 1: Yes

* The MCO, PAN Coord Connection and DS Route Required flags can be removed from the TC IE.
* Insert a “L2R mesh tree discovery” step after the “Orphan scan (optional)” step in Figure 9

Option 2: No

* 2.1. If a device holds the information on the mesh tree it was connected to, these flags are not needed.
* 2.2. These flags might be needed otherwise.

1. **Comment CID #344, R178**

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| **CID** | **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| 344 | Verotiana Rabarijaona | 55 | 6.2.2.1 | 48 | The Depth field should not be deleted since the definition of the depth is not based on hops | Delete the end of the sentence from "and the" |
| R178 | Charlie Perkins | 55 | 6.2.2 | 7 | How many links are in "Path to Root" | Isn't the next hop sufficient? |

**Resolution**

The next hop can actually be found in the neighbor table.

* ***Modify Figure 32 as follows:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bits:0-7** | **8-14** | **15** | **Octets: 0/1/2** | **0/2/8** | **0/Variable** | **0/1** | **0/1** | **0/1** | **0/10** | **0/1** | **0/1** | **0/Variable** |  |
| Length | Sub-ID | Type = 0 | Descriptor | Mesh Root Address | Entity ID List | Depth | Sequence Number | TC IE Interval | MCO Descriptor | DAgg Buffering Time | Security Level | PQM List |  |

* ***Modify Figure 33 as follows:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bits: 0** | **1** | **2** | **3** | **4** | **5-7** |  | **9** | **10-15** |
| Short Descriptor | Metrics Present | Mesh Root Address Mode | MCO | PAN Coord Connection | Reserved |  | DS Route Required | Reserved |

* ***Delete the last paragraph of clause 6.2.2.1***

1. **Comment CID #346**

|  |  |  |  |  |  |
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| **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| Tero Kivinen | 55 | 6.2.2.2 | 52 | There is Entity ID field described, here bu the TC IE contains Entity ID List field, which then contains Entity ID fields. Perhaps it would be just enough to say that Entity ID List field is formatted as specified in the 6.2.1.2? |  |

**Resolution**

* ***Modify clause 6.2.2.2 as follows***

6.2.2.2 Entity ID List field

The Entity ID List field is formatted as described in 6.2.1.2.

1. **Comment CID #395, R204**

|  |  |  |  |  |  |  |
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| **CID** | **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| 395 | Tero Kivinen | 60 | 6.2.5.1 | 45 | What is the point of having “Address Mode Present” field here, and then we have one bit in the Neighbor Metric Container, which still cannot be omitted, as it is inside the octet that is transmitted. As written here, it would mean that one bit of first octet of the Neighbor Metric Container 1 is omitted, i.e. it would only be 7 bits long, thus rest of the IE would not be octet aligned. | Remove the Address Mode Present field completely. |
| R204 | Charlie Perkins | 60 | 6.2.5.1 | 49 | Bit is always there, but described as omitted sometimes | Change "omitted" to be "set to zero" |

**Resolution**

* ***Modify Figure 43 as follows:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bits: 0-10** | **11-14** | **15** |  | **16-23** | **Octets: 1** | **Variable** | **…** | **0/Variable** |
| Length | Sub-ID | Type = 1 |  | Number of Neighbors | NLM IE Interval | Neighbor Metric Container 1 | … | Neighbor Metric Container N |

* ***Delete clause 6.2.5.1***

1. **Comment CID #407**

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| **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| Verotiana Rabarijaona | 62 | 6.2.6.2 | 47 | A device might belong to a mesh tree connected to more than Entity so the Entity ID should be the Entity ID List field formatted as in clause 6.2.1.2 | Fix Figure 46 and correct this clause |

**Resolution**

* ***Modify Figure 46 as follows:***

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bits: 0-10** | **11-14** | **15** | **Octets:1** | **Variable** | **2/8** | **1** | **1** | **1** | **2/8** | **0/10** | **0/Variable** | **1** | **0/Variable** |
| Length | Sub-ID | Type = 1 | Descriptor | Entity ID List | Mesh Root Address | Depth | Sequence Number | RA IE Interval | Source Address | MCO Fields | Multicast Subscription | Number of Intermediate Addresses | Intermediate Address List |

* ***Modify clause 6.2.6.2 as follows:***

**6.2.6.2 Entity ID List**

The Entity ID List field is formatted as described in 6.2.1.2.

1. **Comment CID #453**

|  |  |  |  |  |  |
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| **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| Tero Kivinen | 70 | 6.2.10.4 | 3 | The header line in figure does not specify bits or octets. | Add Octes in the header line |

**Resolution**

* ***Modify Figure 58 as follows:***

|  |  |  |  |
| --- | --- | --- | --- |
| **Octets: 0/1** | **2/8** | **0/1** | **2/8** |
| Source Address PAN ID | Source Address | Destination Address PAN ID | Destination Address |

1. **Comment CID R215**

|  |  |  |  |  |  |
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| **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| Charlie Perkins | 63 | 6.2.6.9 | 33 | Number of Multicast Addresses should not have value of zero | Insert clarifying text |

**Resolution**

* ***Modify the second paragraph of 6.2.6.9 as follows:***

The Number of Multicast Addresses indicates the number of addresses present in the Multicast Subscription field and should be greater than or equal to 1.

1. **Comment CID R218**

|  |  |  |  |  |  |
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| **Commenter** | **Page** | **Clause** | **Line** | **Comment** | **Proposed change** |
| Charlie Perkins | 64 | 6.2.6.11 | 4 | Suggest bit vector format for Intermediate Hop Descriptor | 7 bits for Addresses, 1 bit for "continuation" |

**Resolution**

The size of the address mode bitmap can be derived from the Number of Intermediate Addresses field. The Intermediate Hop Descriptors field can be replaced with a bitmap without requiring a “continuation bit”

* ***Modify clause 6.2.6.11 as follows:***

The Intermediate Address List field is formatted as illustrated in Figure 49.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Octets: 1/Variable** | **2/8** | **…** |  | **0/2/8** |
| Address Mode Bitmap | Intermediate Hop Address 1 | … |  | Intermediate Hop Address N |

Figure 49—Format of the Intermediate Address List in the RA IE



Each bit b\_i (i=0,…,6) in the Address Modes field indicates the address mode of the Intermediate Hop Address *(i+1)*. A value of 0 indicates a short address, and a value of 1 indicates a long address.

The size of the Address Modes field is calculated according to the Number of Intermediate Addresses. If there are less intermediate hops than number of bits available in the Address Mode Bitmap field, the remaining bits are set to 0 and are ignored by the receiver.