**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | 802.15 TG10 (L2R) Comment Resolution for CIDs #2130, #2340, #2345 | |
| Date Submitted | [19 January, 2016] | |
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| Re: | [TG10 (L2R) comment resolution.] | |
| Abstract | Comment Resolution for comments CIDs #2130, #2340, #2345 related to metric definitions and mesh configuration parameters | |
| Purpose | [TG10 (L2R) comment resolution to produce next draft.] | |
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**Comments #2130, #2340, #2345**

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| 2130 | Jussi Haapola | Centre for Wireless Communications / University of Oulu | 30 | 5.2.2.2 | 29 - 32 | The text leaves a lot for interpretation. Since the unit is .001 and the length is two octets, does this mean that the entire path ETX count maxes out at 65.535 (sixty five plus change) hops? | Describe the relation between the unit and the length field unambiguously. |
| 2340 | Verotiana Rabarijaona | NICT | 107 | 7.3 | 6 | Should "l2rDefaultTTL" and "l2rDefaultRL" be set per device or per mesh? | Move to table 48 if set per device |
| 2345 | Jussi Haapola | Centre for Wireless Communications / University of Oulu | 29 - 30 | 5.2.2.1 | all | The described algortihm does not really function as intended. The intention according to 2) is that the metric should rapidly increase with decrasing singal strength. However, as power factor 8 is used on a number between (0,1), the result heavily tends toward 0 rather than 1. As a result, the \mu(P) heavily tends to MinRSW rather than MaxRSW. | Change calculation of P = (Pmeas - Pmin) / (Pmax - Pmin) and then \mu0(P) = 1 - P^8. |

**CID 2130:**

The resolution depends on whether or not it is desired to count transmissions or retransmissions. If transmissions are counted, ETX offers approximately the same routing performance as hop count in all but the noisiest networks. If only retransmissions are counted, then interference-free routes with many hops might often be considered as almost equal to or even better than routes with only one or two hops. Recommendation: to count only retransmissions. Also, delete extraneous text at end of paragraph.

**Resolution: Accept with revision**

* **Replace the following text on page 30, line 29 of 5.2.2.2**

~~transmissions~~ retransmissions

* **Replace the following text on page 30, line 32 of 5.2.2.2**

~~Expected transmission count~~

**CID 2340:**

Since *l2rDefaultTTL* is often configured based on the network diameter, it should probably have the same value at every point in the mesh.

Since *l2rDefaultRL* controls the number of end-to-end retries, a device would set this based on the typical application requirements for an application hosted on the device. Different devices in the mesh may have different application requirements, so it would be reasonable to allow per-device settings for *l2rDefaultRL.*

**Resolution: Accept with revision**

* **Move the row containing** *l2rDefaultRL***from table 49 to table 48**

**CID 2345:**

Assuming that even moderately weak signals should be disfavored, accept resolution as stated. Also, note that the shape of the RSW metric is not exponential.

**Resolution: Accept with revision**

* **Replace the following text at page 29, line 35 of 5.2.2.1**

RSW value increases ~~exponentially~~ rapidly

* **Replace the following text at page 30, line 3 of 5.2.2.1**

*P =* (*P~~max~~meas - P~~meas~~min*) / (*Pmax - Pmin*).

* **Add “1-“ to the text at page 30, line 9 of 5.2.2.1, as shown**

1-*P*8