**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 of LB94 Comments on TRLE – CID 129, 753, 754, 755  |
| Date Submitted | [26 Aug 2014] |
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| Re: | Response to 802.15.4rev Letter Ballot Consolidated Comments |
| Abstract | Letter Ballot Comment Resolution for the Time-slot Relaying based Link Extension  |
| Purpose | Draft standard development |
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CID 129 :

* Comment

TRLE is out of scope for 802.15.4 for two reasons: Mesh networking is already defined in 802.15.5 for 802.15.4 devices. Relaying is simply a badly done mesh. L2R is now being developed to handle these issues. In addition, the TRLE solution is fundamentally broken in that it can only relay up or down the tree and does not take the shortest path. This makes it inferior to mesh solutions. TRLE requires sending frames through the coordinator although many PANs are peer-to-peer.

* Proposed Change

Delete TRLE. In addition to being out of scope, there are too many problems to fix and what might work is insufficient when compared with other technologies such as 802.15.5 mesh and L2R.

* Response to comment

TRLE is not a network protocol operated over the MAC sublayer. The purpose of TRLE is not for providing mesh networking, but for extending the range of a link between PAN coordinator and a device which form a star topology. TRLE provides a MAC sublayer filtering to relay a frame from PAN coordinator to a device or vice versa. TRLE operates in MAC sublayer.

The any combination of the features of IEEE 802.15.5 or L2R can’t replace the TRLE functions. By just residing a TRLE PAN relay between the PAN coordinator and devices, transparent link connectivity is supported without additional networking overheads to an end device.

TRLE has enough features just for extending the range of a link in a star network composed of the IEEE 802.15.4 beacon-enabled devices or the IEEE 802.15.4 DSME-enabled devices.

* Resolution

Reject

CID 753:

* Comment

The valid condition of appearing Relaying Path List field in TRLE-Management request command is missing.

* Proposed Change

After, line 52, put the sentence: "This field is valid only if the value of the Management Type field is set to 0x00."

* Response to comment

The appearance condition of Timestamp, Beacon Bitmap, Number of Slots, Relaying Path List field in the TRLE-Management request command format must be followed after specification of each field.

In page 678, move the sentence of line 33 to the end of line 36, line 38 to the end of line 42, line 44 to the end of line 48, line 50 to the end of line 52.

* Resolution

Accept in Principle

CID 754, 755:

* Comment

This sentence is related to the next paragraph.

* Proposed Change

Move the sentence after the next paragraph.

* Response to comment

The appearance condition of Timestamp, Sync Relaying Offset, Bidirectional Device Slot List, Device Descriptor field in the TRLE-Management Information field format must be followed after specification of each field.

In page 680, move the sentence of line 1 to the end of line 4, line 6 to the end of line 10, line 15 to the end of line 18, line 51 to the end of line 54.

In page 681, move the sentence of line 33 to the end of line 35.

* Resolution

Accept in Principle