**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) | |
| Title | **Additional contribution to the comment resolution for CID 3088 from LB116** | |
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| Re: | Comment database | |
| Abstract | Contributes to the resolution to CID 3088 | |
| Purpose | To be used by the technical editor to apply the necessary changes to the draft to resolve CID 3088 | |
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* ***Insert the following new Figure at the end of 5.2.7.1***



Figure x1 – P2P-RQ / P2P-RP IE processing in storing mode

* ***Insert the following new figure at the end 5.2.7.2***



Figure x2 – P2P-RQ / P2P-RP IE processing in non-storing mode

* ***Modify 5.2.7.1 as follows:***

When a device receives a P2P-RQ IE, if it has no existing path to the source of the P2P-RQ IE, it stores the information retrieved from the P2P-RQ IE into a new entry in the P2P path list in the MT. The address of the neighbor from which the P2P-RQ IE is received is recorded in the Next hop of the P2P path. The device calculates or measures the LQM between itself and the neighbor from the previous hop and adds the LQM to the PQM value found in the IE. The device then stores the result into the PQM Value of the P2P path entry.

If there is an existing path to the source of the P2P-RQ IE, the device compares the PSN currently recorded with the PSN of the P2P-RQ IE newly received. If the PSN of the new P2P-RQ IE is older than the recorded PSN, the latest P2P-RQ IE is discarded.

The IE is then discarded.

If the PSN of new P2P-RQ IE is greater than the recorded PSN, the device calculates the PQM between the device and the source of the P2P-RQ IE. All elements of the P2P path are updated with the information from the latest P2P-RQ IE and with the newly calculated PQM value.

If the device receiving the P2P-RQ IE is not the desired destination, it decrements the value in the TTL field, sets the value of the PQM Value field to the value of the PQM previously computed for this path and forwards the P2P-RQ IE. If the TTL reaches zero, the P2P-RQ IE is discarded.

If the device is the desired destination, it replies with a P2P-RP IE. The TTL field of the P2P-RP IE is set to (*l2rDefaultTTL* - ttl), where ttl is the value of the TTL in the received P2P-RQ IE. The PQM Value is set 0. The PSN is set to the device's current PSN. The P2P-RP IE is forwarded to the neighbor whose address is recorded in Next hop in the current P2P path entry.

When a device receives a P2P-RP IE, it processes the information in the IE in the same way as it processes the information in a P2P-RQ IE. A P2P path entry is created or updated accordingly.

If the address of the device receiving the P2P-RP IE does not match the address found in the Route Source Address field, the device forwards the P2P-RP IE through the Next hop recorded for the corresponding P2P path entry with the Destination address matching the address in the Route Source Address.

The processing of a received P2P-RQ IE or P2P-RP IE in storing mode is illustrated in Figure x1.

The original source device may start routing data frames as soon as it receives a P2P-RP IE. When a device receives a new P2P-RP IE, it the PQM value therein is lower than the PQM value provided by the current next hop, the P2P path is updated with the information of the new P2P-RP IE. Otherwise the P2P-RP IE is discarded.

* ***Modify the first paragraph of 5.2.7.2 as follows:***

When a device receives a P2P-RQ IE, if the device is not the desired destination, it increments the value in the Number of Intermediate Addresses field and appends its own address to the Intermediate Address List field. The device calculates or measures the LQM between itself and the neighbor from the previous hop and adds the LQM to the PQM value found in the IE. The device decrements the TTL, updates the PQM field with the calculated PQM value and forwards the P2P-RQ IE. The device keeps a record of the PSN and the Route Source Address of the P2P-RQ IE. Subsequent P2P-RQ IEs with the same Route Source Address and a PSN equal to or smaller than the recorded PSN are discarded. The PSN and Route Source Address records are purged periodically.

* ***Insert the following text at the end 5.2.7.2***

The processing of a received P2P-RQ IE or P2P-RP IE in non-storing mode is illustrated in Figure x2.