**IEEE P802.15**

**Wireless Personal Area Networks**

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| Project | IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs) |
| Title | **LB214/D01 comment resolution -- Proposed change to add support for ad-hoc extended privacy addresses** |
| Date Submitted | April 8, 2025 |
| Sources | Alex Krebs (Apple)  krebs @ apple.com |
| Re: |  |
| Abstract |  |
| Purpose | Supportive material for comments submitted to 802.15.4ac letter ballot 214. |
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---- Start of change 1 ----

Instructions to editor: On p.17, at the end of l. 15 insert

The privacy network ID may be used to generate ad-hoc extended privacy addresses as defined in 10.9a.2.5.

---- End of change 1 ----

---- Start of change 2 ----

Instruction to editor: On p.19, after l.15, insert

For some applications it may not be suitable to request a list of extended privacy addresses as described in 10.9a.3.1. Instead, an adhoc extended privacy addresses may be generated by means of the privacy network ID as the result of AES-128(key, data), where key is the MSB-wise zero padded privacy network ID, data is a 128-bit MSB-wise zero padded 24-bit value, and AES-128 is the 128-bit output of the block cipher from [B.2.2]. The extended privacy address is given by the data and the output of the AES-128 operation as shown in Figure 10-124x.

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| RMO-->LMO | Octet 8 RMO | Octet 7 | Octet 6 | Octet 5 | Octet 4 | Octet 3 | Octet 2 | Octet 1 LMO |
| LSB --> MSB | 00000000 | data Bits-16-23 | data Bits 8-15 | data Bits 0-7 | Output of AES-128 Bits 15-23 | Output of AES-128 Bits 8-15 | Output of AES-128 Bits 0-7 | 01110000 MXYZST.. |

Figure 10-124x—Generation of an ad-hoc extended privacy address key from privacy network ID

---- End of change 2 ----