IPv6 Mesh over Bluetooth(R) Low Energy using IPSP

draft-ietf-6lo-blemesh-05

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Status

• WGLC on draft-ietf-6lo-blemesh-04
  – Comments received (thanks!)
    • Bilhanan Silverajan
    • Rahul Jadhav
    • Pascal Thubert

• draft-ietf-6lo-blemesh-05
  – Addresses the WGLC comments

• Authors believe that the document is now ready for the next step
Updates in -05 (I/III)

• Terminology
  – “IPv6 mesh over Bluetooth LE links”
    • Consistently throughout the document

• Abstract and Introduction
  – Clarify that the document is not sufficient by itself to enable IPv6 mesh over BLE
    • The document specifies the mechanisms that are needed...
    • The routing protocol is not specified

• Section 2. Bluetooth LE networks and IPSP
  – Bluetooth 4.1 has now been deprecated
  – Bluetooth 4.2 added as a normative reference
    • Bluetooth 4.1 now as an informative reference
Updates in -05 (II/III)

• Section 3.1. Protocol stack
  – Added MTU and fragmentation discussion
    • Bluetooth 4.2: “link layer” MTU is 247 bytes
    • Bluetooth 4.0 and 4.1: “link layer” MTU was 23 bytes
    • L2CAP fragmentation and reassembly used
    • No need to use 6LoWPAN fragmentation functionality
    • IPSP allows negotiating link layer connections with an MTU of 1280 bytes for IPv6
Updates in -05 (III/III)

• Section 3.3. Neighbor Discovery
  – RFC 6775 and RFC 8505
    • EARO (formerly, ARO)
    • ROVR
      – By default, based on the Bluetooth device address
      – Optionally, a crypto ID MAY be used (draft-ietf-6lo-ap-nd)
    • “As per RFC 8505, a 6LN MUST NOT register its link-local address”

• Section 5. Security considerations
  – Address theft and impersonation for Bluetooth device address-based ROVR
  – draft-ietf-6lo-ap-nd protects against such attacks
Questions/Comments?

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