## **6BLEMesh**

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6BLEMesh is a mesh topology standard over Bluetooth Low Energy (BLE).

Keywords: Bluetooth Low Energy ; BLE ; 6BLEMesh ; IoT ; 6LowPAN

## 1. Introduction

6BLEMesh is a specification being developed by the IETF that defines an IPv6-oriented approach for BLE mesh networking<sup>[1]</sup>. Using BLE link layer connections, 6BLEMesh offers bidirectional communication between faraway BLE nodes through internet <sup>[2]</sup>. This is the first BLE standard that has embedded IPv6 compatibility <sup>[3]</sup>.

This is the protocol stack offered by 6BLEMesh.



## 2. Roles and application

Three node roles proposed by 6BLEMesh; 6LBR, 6LR and 6LN. One or more 6LBRs are connected to the Internet. 6LNs are connected to the network through a 6LR or a 6LBR. 6LNs are low power nodes (typically assumed to be sensor nodes) that are mostly resource restricted devices. An example of 6BLEMesh network is mentioned below.



connection while the connection between 6LBR and internet might be any kind of network connection. Therefore, the 6LBR should provide minimum two physical connections.

## References

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3. Seyed Mahdi Darroudi; Carles Gomez; Jon Crowcroft; Bluetooth Low Energy Mesh Networks: A Standards Perspective. *IEEE Communications Magazine* **2020**, *58*, 95-101, <u>10.1109/mcom.001.1900523</u>.

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