

Claims

1. An implantable medical device (1), comprising:
a primary communication component (15) for establishing a communication
5 connection with an external communication arrangement (2) outside of a patient (P);
characterized in that the external communication arrangement (2) is a mesh
network comprising a multiplicity of nodes (20), wherein the primary
communication component (15) is configured to act as an additional node in the
mesh network for exchanging data with at least one of the multiplicity of nodes (20)
10 of the mesh network, and wherein at least one of the nodes (20) of the mesh network
is formed by a lighting device, which regularly are present within an environment, in
which the patient (P) regularly stays.
2. The implantable medical device (1) of claim 1, **characterized in** that the primary
15 communication component (15) is configured to establish a bi-directional
communication connection to said at least one of the multiplicity of nodes (20) of the
mesh network.
3. The implantable medical device (1) of claim 1 or 2, **characterized in** that the mesh
20 network is a Bluetooth mesh network, wherein the primary communication
component (15) is configured to establish a Bluetooth communication connection
with the at least one of the multiplicity of nodes (20) of the mesh network.
4. The implantable medical device (1) of one of claims 1 to 3, **characterized in** that the
25 primary communication component (15) is configured to act as a Bluetooth low-
power node.
5. The implantable medical device (1) of one of the preceding claims, **characterized by**
a secondary communication component (16) configured to establish a
30 communication connection to an external communication device (7) different than
the mesh network.

6. The implantable medical device (1) of claim 5, **characterized in** that the secondary communication component (16) is configured to receive control data via said communication connection to the external communication device (7) for controlling the primary communication component (15).
- 5 7. A system, comprising an implantable medical device (1) of one of the preceding claims and an external communication arrangement (2) forming a mesh network comprising a multiplicity of nodes (20).
- 10 8. The system of claim 7, **characterized in** that said at least one of the multiplicity of nodes (20) of the mesh network is a friend node configured to store messages destined for the primary communication component (15) of the implantable medical device (1) and to forward said messages to the primary communication component (15) of the implantable medical device (1) upon receiving a request notification from
15 the primary communication component (15) of the implantable medical device (1).
9. The system of claim 7 or 8, **characterized in** that at least one of the nodes (20) of the mesh network is formed by a non-medical device.
- 20 10. The system of one of claims 7 to 9, **characterized in** that the mesh network comprises a mesh gateway (21) which connects the mesh network to a public communication network (4).
11. The system of claim 10, **characterized by** a data center (5) connected to the mesh
25 network via the public communication network (4), wherein the implantable medical device (1) is configured to transmit data towards the data center (5) or receive data from the data center (5) via the mesh network.
12. The system of one of claims 7 to 11, **characterized in** that the implantable medical
30 device (1) is configured to receive at least one of firmware data and configuration data from said at least one of the multiplicity of nodes (20) of the mesh network.

13. The system of one of claims 7 to 12, **characterized in** that the implantable medical device (1) is configured to transmit at least one of measurement information relating to a measurement performed by the implantable medical device (1), communication status information relating to a communication status for communicating with the mesh network, and system status information relating to an operational status of the implantable medical device (1) for performing a diagnostic or therapeutic function to said at least one of the multiplicity of nodes (20) of the mesh network.
14. The system of one of claims 7 to 13, **characterized in** that the implantable medical device (1) is configured to carry out a localization function for localizing the implantable medical device (1) using the mesh network, or at least one of said multiplicity of nodes (20) is configured to carry out a localization function for localizing the implantable medical device (1).