

Claims

1. An implantable medical device (1), comprising: a functional device (10) for carrying out a therapeutic or diagnostic function, and a communication device (17) for communicating with a remote monitoring system (2), wherein the communication device (17), at a start of initial operation of the implantable medical device (1), is enabled to establish a communication with said remote monitoring system (2), wherein the communication device (17) is configured to transmit a transmit signal (T) repeatedly according to a predefined first time scheme to establish a communication with said remote monitoring system (2), wherein the communication device (17) is configured to transmit said transmit signal (T) repeatedly at a regular first time interval (RP1) to establish a communication with said remote monitoring system (2), wherein said transmit signal (T) is configured to trigger said remote monitoring system to establish a communication connection to the implantable medical device (1), and wherein the repeated transmission of the transmit signal (T) requires a current consumption of less than 20 mAs per day.
- 20 2. The implantable medical device (1) of claim 1, **characterized in** that the communication device (17) is configured to communicate with the remote monitoring system (2) using a pre-defined communication protocol.
3. The implantable medical device (1) of claim 2, **characterized in** that the communication protocol is MICS, BLE or Zigbee.
4. The implantable medical device (1) of one of claims 1 to 3, **characterized in** that the start of initial operation corresponds to an initial activation of the implantable medical device (1) at or subsequent to implantation.
- 30 5. The implantable medical device (1) of one of the preceding claims, **characterized in** that the implantable medical device (1) is configured to remain operative within a

patient over a time of operability, wherein the communication device (17) is enabled to establish said communication with said remote monitoring system over the entire time of operability.

- 5 6. The implantable medical device (1) of one of the preceding claims, **characterized in** that the implantable medical device (1) is configured to initiate at least one communication function on the occasion of establishment of a communication connection with the remote monitoring system (2).
- 10 7. The implantable medical device (1) of claim 6, **characterized in** that the implantable medical device (1) is configured, within the at least one communication function, to transmit monitoring data to the remote monitoring system (2).
- 15 8. The implantable medical device (1) of claim 6 or 7, **characterized in** that the implantable medical device (1) is configured, within the at least one communication function, to transmit monitoring data to the remote monitoring signal repeatedly according to a predefined, second time scheme.
- 20 9. The implantable medical device (1) of one of claims 6 to 8, **characterized in** that the implantable medical device (1) is configured, within the at least one communication function, to repeatedly transmit monitoring data to the remote monitoring signal at a regular, second time interval (RP2).
- 25 10. The implantable medical device (1) of one of claims 6 to 9, **characterized in** that the implantable medical device (1) is configured to activate the communication function only if a specific activation criterion is fulfilled.
- 30 11. The implantable medical device (1) of one of claim 10, **characterized in** that the activation criterion is that the last successful communication with the remote monitoring system (2) may not be longer ago than one day, 2 days, 3 days, 4 days, 5 days, 6 days, one week, 2 weeks, 3 weeks, or one month.

12. The implantable medical device (1) of one of claim 10 or 11, **characterized in** that the activation criterion is that in a pre-defined previous time span a specified number of successful communication connections have been established in between the implantable medical device and the remote monitoring system (2).
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13. A system comprising an implantable medical device (1) of one of the preceding claims and a remote monitoring system (2) for communicating with the implantable medical device (1).
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14. The system of claim 13, **characterized in** that the remote monitoring system (2) is configured to receive a transmit signal (T) from the implantable medical device (1) and to initiate a channel allocation procedure in a specified frequency band for establishing a communication connection with the implantable medical device (1) in case said transmit signal (T) is received.
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15. A method for operating an implantable medical device (1), comprising: providing said implantable medical device (1), the implantable medical device (1) including a functional device (10) for carrying out a therapeutic or diagnostic function, and a communication device (17) for communicating with a remote monitoring system (2);
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- wherein said step of providing said implantable medical device includes that the communication device (17), at a start of initial operation of the implantable medical device (1), is enabled to establish a communication with said remote monitoring system (2),
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- wherein the communication device (17) is configured to transmit a transmit signal (T) repeatedly according to a predefined first time scheme to establish a communication with said remote monitoring system (2),
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- wherein the communication device (17) is configured to transmit said transmit signal (T) repeatedly at a regular first time interval (RP1) to establish a communication with said remote monitoring system (2),
- wherein said transmit signal (T) is configured to trigger said remote monitoring system to establish a communication connection to the implantable medical device (1), and

wherein the repeated transmission of the transmit signal (T) requires a current consumption of less than 20 mAs per day.