

Claims

1. Method for programming an implantable medical device (1) for stimulating a human or animal heart with the help of a programming device (2), the implantable medical device (1) comprising a first processor, a first memory unit, a first stimulation unit configured to stimulate a cardiac region of a human or animal heart (7), and a first detection unit configured to detect an electrical signal at the cardiac region of the same heart (7), the method comprising the following steps:
 - a) providing a first input parameter to the programming device (2), the first input parameter being indicative whether the first stimulation unit is to be used to stimulate the His bundle (6) of the heart (7);
 - b) if the first input parameter indicates that the first stimulation unit is to be used to stimulate the His bundle (6) of the heart (7), supporting a user of the programming device (2) to configure the implantable medical device (1) for His bundle pacing by automatically proposing at least one stimulation parameter and an assigned stimulation parameter value specifically adapted for His bundle pacing;
 - c) allowing programming of the implantable medical device (1) by allowing setting the at least one stimulation parameter value.
2. Method according to claim 1, **characterized** in that a presence of a His bundle electrode (4) is automatically detected, wherein a positively detected presence is used as the first input parameter.
3. Method according to claim 1 or 2, **characterized** in that a set of stimulation parameters and assigned stimulation parameter values specifically adapted for His bundle pacing is automatically proposed.

4. Method according to any of the preceding claims, **characterized** in that prior to step b) at least one second input parameter is provided, wherein the at least one stimulation parameter and the assigned stimulation parameter value are proposed in additional dependence on the at least one second input parameter, wherein the at least one second
5 input parameter is chosen from the group consisting of an indication on a port (3) of the implantable medical device (1) to which a His bundle electrode (4) is connected, an indication on a patient's cardiac disease to be treated with the implantable medical device (1), an indication on a type of the implantable medical device (1), an indication on a model of the implantable medical device (1), an indication on a number of ports
10 (3) of the implantable medical device (1), and an indication on a cardiac chamber into which a lead connected to a port (3) of the implantable medical device (1) is placed.
- 5 Method according to claim 4, **characterized** in that the information on a kind of the patient's cardiac disease to be treated with the implantable medical device (1) is
15 retrieved by the programming device (2) from a database.
6. Method according to claim 4 or 5, **characterized** in that the patient's cardiac disease to be treated with the implantable medical device (1) is chosen from the group consisting of bradycardia with permanent atrial fibrillation or flutter, paroxysmal or
20 permanent high-degree atrio-ventricular block, heart failure with normal sinus rhythm, heart failure, heart failure with permanent atrial fibrillation or flutter, sick-sinus syndrome, brady-tachy syndrome, sick-sinus syndrome with chronotropic competence, dual node disease and permanent atrio-ventricular block, dual node disease and paroxysmal atrio-ventricular block, vasovagal syncope, symptomatic first-
25 degree atrio-ventricular block, infrequent paroxysmal cardiac pauses.
7. Method according to claim 4, **characterized** in that the second input parameter is automatically determined and is chosen from the group consisting of an indication on a port of the implantable medical device (1) to which a His bundle electrode (4) is
30 connected, an indication on a type of the implantable medical device (1), an indication on a model of the implantable medical device (1), an indication on a number of ports

(3) of the implantable medical device (1), and an indication on a cardiac chamber into which a lead connected to a port of the implantable medical device (1) is placed.

5 8. Method according to any of the preceding claims, **characterized** in that it is made possible to change the stimulation parameter value assigned to the at least one stimulation parameter.

9. Method according to claim 8, **characterized** in that it is made possible to save a set of stimulation parameters and assigned stimulation parameter values, the set comprising
10 at least one stimulation parameter value changed with respect to an original setting.

10. Method according to claims 8 or 9, **characterized** in that an automatic check is performed aiming at identifying a conflict between a changed stimulation parameter value and other stimulation parameter values of the same set of stimulation parameters.
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11. Method according to claim 10, **characterized** in that an alert is created in case of an identified conflict.

12. Arrangement comprising an implantable medical device (1) for stimulating a human
20 or animal heart and a programming device (2), the implantable medical device (1) comprising a first processor, a first memory unit, a first stimulation unit configured to stimulate a cardiac region of a human or animal heart (7), and a first detection unit configured to detect an electrical signal at the cardiac region of the same heart (7), the programming device (2) comprising a second processor and a second memory unit,
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characterized

in that the second memory unit comprises a computer-readable program that causes the second processor to perform the following steps when executed on the processor:
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- a) obtaining a first input parameter, the first input parameter being indicative whether the first stimulation unit is to be used to stimulate the His bundle (6) of the heart (7);
- 5 b) if the first input parameter indicates that the first stimulation unit is to be used to stimulate the His bundle (6) of the heart (7), supporting a user of the programming device (2) to configure the implantable medical device (1) for His bundle pacing by automatically proposing at least one stimulation parameter and an assigned stimulation parameter value specifically adapted for His bundle
- 10 pacing;
- c) allowing programming of the implantable medical device (1) by allowing setting the at least one stimulation parameter value.
- 15 13. Arrangement according to claim 12, **characterized** in that the programming device (2) comprises a display (8) for displaying a graphical user interface.
14. Computer program product comprising computer-readable code that causes a processor to perform the following steps when executed on the processor:
- 20 a) obtaining a first input parameter, the first input parameter being indicative whether a first stimulation unit of an implantable medical device (1) is to be used to stimulate the His bundle (6) of a heart (7);
- 25 b) if the first input parameter indicates that the first stimulation unit is to be used to stimulate the His bundle (6) of the heart (7), supporting a user of a programming device (2) to configure the implantable medical device (1) with the help of the programming device (2) for His bundle pacing by automatically proposing at least one stimulation parameter and an assigned stimulation parameter value
- 30 specifically adapted for His bundle pacing;

- c) allowing programming of the implantable medical device (1) by allowing setting the at least one stimulation parameter value.