

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4229001

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
PRAMODSINGH HIRASINGH THAKUR	01/06/2017
QI AN	01/05/2017
KEITH R. MAILE	01/06/2017
HOWARD D. SIMMS JR	01/05/2017
JOHN D. HATLESTAD	01/06/2017
BIN MI	01/06/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CARDIAC PACEMAKERS, INC.
<b>Street Address:</b>	4100 HAMLIN AVENUE NORTH
<b>City:</b>	ST. PAUL
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55112-5798
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15407991
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(612)339-3061
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	612-373-6900
<b>Email:</b>	uspto@slwip.com
<b>Correspondent Name:</b>	SCHWEGMAN LUNDBERG & WOESSNER/BSC
<b>Address Line 1:</b>	PO BOX 2938
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402
<b>ATTORNEY DOCKET NUMBER:</b>	279.N49US1
<b>NAME OF SUBMITTER:</b>	KATHLEEN GANNON
<b>SIGNATURE:</b>	/Kathleen Gannon/
<b>DATE SIGNED:</b>	01/17/2017
This document serves as an Oath/Declaration (37 CFR 1.63).	

**Total Attachments: 4**

source=279.N49US1 ExeDec#page1.tif

source=279.N49US1 ExeDec#page2.tif

source=279.N49US1 ExeDec#page3.tif

source=279.N49US1 ExeDec#page4.tif

# COMBINED DECLARATION & ASSIGNMENT

Attorney Docket No.:  
279.N49US1

Page 1 of 2

Client Ref No. 15-0372US01

Title: HARNESSING S1 VARIABILITY FOR AF  
DETECTION

## ASSIGNMENT

WHEREAS, I, Pramodsingh Hirasingh Thakur, Qi An, Bin Mi, Keith R. Maile, Howard D. Simms Jr., John D. Hatlestad, have invented certain new and useful improvements as described in U.S. patent application, entitled HARNESSING S1 VARIABILITY FOR AF DETECTION, the application having been executed on even date herewith, and/or being identified in the United States Patent and Trademark Office ("USPTO") by Application No. 15/407,991, filed January 17, 2017 ("Invention"); and

WHEREAS, Cardiac Pacemakers, Inc., a Corporation of the State of Minnesota, and having an address of 4100 Hamline Avenue North, St. Paul, MN 55112-5798 (together with its successors and assigns, the "Assignee"), seeks to memorialize its ownership of the entire right, title and interest in and to the Invention;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I transfer to Assignee my entire right, title, and interest in and to the Invention, including all inventions disclosed or claimed in the above-identified patent application, including any improvements thereof, any corresponding domestic applications (e.g., provisional, non-provisional, divisional, continuation, continuation-in-part, reexamination, and/or reissue patent), any corresponding foreign applications, all patents issuing thereon, or other patent application based off or claiming priority to the above-identified patent application, and all rights and benefits under any applicable treaty or convention. I authorize the USPTO (or foreign equivalent thereof) to issue any patent (or similar legal protection) to the Assignee.

I authorize the Assignee to insert in this instrument the filing date and application number of the application when ascertained. I hereby authorize the Assignee (or its designee) to apply for patent (or similar legal protection) in its own name if desired, in any and all countries.

I represent to the Assignee that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I agree when requested, without additional consideration, but at the expense of the Assignee, to provide additional reasonable assistance necessary to memorialize this assignment, to execute all oaths, declarations, assignments, powers of attorney and other papers necessary to perfect and vest title to the rights assigned herein to the Assignee; and will render all assistance in filing, obtaining, maintaining, and enforcing any patent (or similar legal protection) on the Invention in any and all countries.

## DECLARATION

I have reviewed and understand the contents of the above-identified patent application including the claims, and I believe I am an original or an original joint inventor of a claimed invention in the above-identified patent application. The above-identified patent application was made or authorized to be made by me. I am aware of and acknowledge my duty to disclose to the USPTO all information known to me to be material to patentability of the claims in the above-identified patent application. I acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

  
\_\_\_\_\_  
Pramodsingh Hirasingh Thakur

Date 1/6/17

  
\_\_\_\_\_  
Keith R. Maile

Date 1/6/17

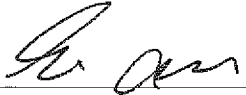
**COMBINED DECLARATION  
& ASSIGNMENT**

Attorney Docket No.:  
279.N49US1

Page 2 of 2

Client Ref No. 15-0372US01


Title: HARNESSING S1 VARIABILITY FOR AF  
DETECTION

  
\_\_\_\_\_  
Qi An

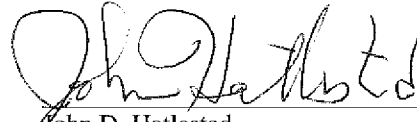
Date 1/5/17

\_\_\_\_\_  
Howard D. Simms

Date \_\_\_\_\_

  
\_\_\_\_\_  
Bin Mi

Date 1/6/17

  
\_\_\_\_\_  
John D. Halstead

Date 1/6/17

# COMBINED DECLARATION & ASSIGNMENT

Attorney Docket No.:  
279.N49US1

Page 1 of 2

Client Ref No. 15-0372US01

Title: HARNESSING S1 VARIABILITY FOR AF  
DETECTION

## ASSIGNMENT

WHEREAS, I, Pramodsingh Hirasingsh Thakur, Qi An, Bin Mi, Keith R. Maile, Howard D. Simms Jr., John D. Hatlestad, have invented certain new and useful improvements as described in U.S. patent application, entitled HARNESSING S1 VARIABILITY FOR AF DETECTION, the application having been executed on even date herewith, and/or being identified in the United States Patent and Trademark Office (“USPTO”) by Application No. 15/407,991, filed January 17, 2017 (“Invention”); and

WHEREAS, Cardiac Pacemakers, Inc., a Corporation of the State of Minnesota, and having an address of 4100 Hamline Avenue North, St. Paul, MN 55112-5798 (together with its successors and assigns, the “Assignee”), seeks to memorialize its ownership of the entire right, title and interest in and to the Invention;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, I transfer to Assignee my entire right, title, and interest in and to the Invention, including all inventions disclosed or claimed in the above-identified patent application, including any improvements thereof, any corresponding domestic applications (e.g., provisional, non-provisional, divisional, continuation, continuation-in-part, reexamination, and/or reissue patent), any corresponding foreign applications, all patents issuing thereon, or other patent application based off or claiming priority to the above-identified patent application, and all rights and benefits under any applicable treaty or convention. I authorize the USPTO (or foreign equivalent thereof) to issue any patent (or similar legal protection) to the Assignee.

I authorize the Assignee to insert in this instrument the filing date and application number of the application when ascertained. I hereby authorize the Assignee (or its designee) to apply for patent (or similar legal protection) in its own name if desired, in any and all countries.

I represent to the Assignee that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I agree when requested, without additional consideration, but at the expense of the Assignee, to provide additional reasonable assistance necessary to memorialize this assignment, to execute all oaths, declarations, assignments, powers of attorney and other papers necessary to perfect and vest title to the rights assigned herein to the Assignee; and will render all assistance in filing, obtaining, maintaining, and enforcing any patent (or similar legal protection) on the Invention in any and all countries.

## DECLARATION

I have reviewed and understand the contents of the above-identified patent application including the claims, and I believe I am an original or an original joint inventor of a claimed invention in the above-identified patent application. The above-identified patent application was made or authorized to be made by me. I am aware of and acknowledge my duty to disclose to the USPTO all information known to me to be material to patentability of the claims in the above-identified patent application. I acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

\_\_\_\_\_  
Pramodsingh Hirasingsh Thakur

\_\_\_\_\_  
Keith R. Maile

Date \_\_\_\_\_

Date \_\_\_\_\_

**COMBINED DECLARATION  
& ASSIGNMENT**

Attorney Docket No.:  
279.N49US1

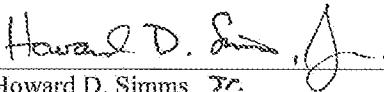
Page 2 of 2

Client Ref No. 15-0372US01

Title: HARNESSING S1 VARIABILITY FOR AF  
DETECTION

\_\_\_\_\_  
Qi An

Date \_\_\_\_\_

  
\_\_\_\_\_  
Howard D. Simms, Jr.

Date 5 Jan 2017

\_\_\_\_\_  
Bin Mi

Date \_\_\_\_\_

\_\_\_\_\_  
John D. Hatlestad

Date \_\_\_\_\_