### 12/02/2019 505798088

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5844917

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
SHANTANU SARKAR	01/25/2018
DANIEL L. HANSEN	01/25/2018
GRANT A. NEITZELL	02/05/2018
JERRY D. REILAND	01/25/2018
RYAN WYSZYNSKI	01/25/2018

### **RECEIVING PARTY DATA**

Name:	MEDTRONIC, INC. (CVG)	
Street Address: 8200 CORAL SEA STREET NE.		
Internal Address:	MS: MVC22	
City: MOUNDS VIEW		
State/Country:	MINNESOTA	
Postal Code:	55112	

### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	16700087	

## **CORRESPONDENCE DATA**

Fax Number: (651)367-0471

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.

Phone: 763-526-0929

Email: madonna.schroeder@medtronic.com

MICHAEL J. OSTROM **Correspondent Name:** 

8200 CORAL SEA STREET NE. Address Line 1:

Address Line 2: MS: MVC22

Address Line 4: MOUNDS VIEW, MINNESOTA 55112

ATTORNEY DOCKET NUMBER:	C00002902US01CON
NAME OF SUBMITTER:	MADONNA M. SCHROEDER
SIGNATURE:	/Madonna M. Schroeder/
DATE SIGNED:	12/02/2019

**PATENT REEL: 051149 FRAME: 0848** 505798088

# Total Attachments: 12 source=C00002902USN18-ALL-Assignment#page1.tif source=C00002902USN18-ALL-Assignment#page2.tif source=C00002902USN18-ALL-Assignment#page3.tif source=C00002902USN18-ALL-Assignment#page4.tif source=C00002902USN18-ALL-Assignment#page5.tif source=C00002902USN18-ALL-Assignment#page6.tif source=C00002902USN18-ALL-Assignment#page7.tif source=C00002902USN18-ALL-Assignment#page8.tif source=C00002902USN18-ALL-Assignment#page9.tif source=C00002902USN18-ALL-Assignment#page10.tif source=C00002902USN18-ALL-Assignment#page11.tif source=C00002902USN18-ALL-Assignment#page11.tif

PATENT REEL: 051149 FRAME: 0849

Attorney Docket No.: C00002902.USN18

# ASSIGNMENT OF APPLICATION(S)

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

	METHOD AND APPARATUS FOR ATRIAL ARRHYTHMIA EPISODE DETECTION
	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;
$\boxtimes$	for which an application for a United States Patent identified as U.S. Patent Application No. 15/551,924; was filed on August 18, 2017.
	for which an application for a U.S. Provisional Application No.; was filed on;
$\boxtimes$	for which above application claims priority to U.S. Provisional Patent Application No. 62/117,785; filed on February 18, 2015;
$\boxtimes$	for which above application claims priority to U.S. Patent Application No. 14/695,111; filed on April 24, 2015;
$\boxtimes$	for which application is identified as PCT International Patent Application No. PCT/US2016/018408; filed February 18, 2016;

Whereas, Medtronic, Inc., a corporation organized and existing under the laws of the State of Minnesota and having a principle place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5604, hereinafter referred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the United States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be granted therefore;

NOW, Therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Corporation, its successors and assigns, the entire right, title and interest in and to said invention and the application(s) identified above and in and to any application claiming benefit thereto and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefore including our rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Letters Patent that may be granted, the same to be held and enjoyed by Corporation for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including the right to enforce such Letters Patent as fully and entirely as the same would have been held and enjoyed by the assignors if this assignment had not been made; together with all claims by assignors for damages by reason of past infringement or for provisional rights and including the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns, and other legal representatives;

AND, for the consideration aforesaid, we materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, we are the sole lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above mentioned, and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth;

AND, for the consideration aforesaid, we hereby individually covenant and agree to and with Corporation, its successors and assigns, that whenever its counsel or the counsel of its successors or assigns, learned in the law, shall advise that an amendment or division of, or continuation or any continuation-in-part thereof, or any other proceeding in connection with the filing or prosecution of said domestic or foreign patent applications, including interference proceedings, is lawful and desirable, or that a reissue of extension of said Letters Patent is lawful and desirable, we, or our executors, administrators or assigns will sign all papers and drawings, take all rightful oaths, and do all acts necessary or Assignment

Page 1 of 8

Attorney Docket No.: C00002902 USN18

Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

required to be done for the procurement of valid Letters Patent for said invention, or for the reissue or extension of the same, without charge to Corporation, its successors or assigns, but at Corporation's expense.

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said Medtronic, Inc., as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below. Given Name (first and middle initial [if any]): Family Name or Surname (last name): Shantanu SARKAR Inventor's Signature: Date: City and State: Citizenship: Roseville, Minnesota US STATE OF MINNESOTA SS. 618 before me personally appeared the above-named day of Shantanu SARKAR, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. MADONNA M. SCHROEDER Notary Public State of Minnesota My Commission Expires (Seal) January 31, 2020 Notary Public

Given Name (first and middle initial [if any]):  Daniel L.	Family Name or Surname (last name): HANSEN	
Inventor's Signature:	Date:	
Residence (City and State): Castle Rock, Colorado	Country: US	Citizenship: US
Castle Rock, Colorado  STATE OF COLORADO ) ss.  COUNTY OF) ss.  On thisday of, before me personally appeared the above-named Daniel L. HANSEN, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.  (Seal)(Seal)		
`	Notary Public	

Given Name (first and middle initial [if any]):  Grant A.  Family Name or Surname (last name):  NEITZELL			
Inventor's Signature:	Date: 2-1-18	-	
Residence (City and State):	Country:	Citizenship:	
Plymouth, Minnesota	US	US	
STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY ) On this day of though the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.			
(Seal)  MADONNA M. SCHROEDE  Notary Public  State of Minnesota  My Commission Expires  January 31, 2020		ul-	

Given Name (first and middle initial [if any]):  Jerry D.	]): Family Name or Surname (last name): REILAND			
Inventor's Signature:		Date:	18	
Residence (City and State):		Country:	Citizenship:	
Coon Rayids, Minnesota		US	US	
STATE OF MINNESOTA )  SS.  COUNTY OF RAMSEY )  On this 2 day of				
(Seal)  MADONNA M. SCHROEDER Notary Public  State of Minnesota My Commission Expenses  Notary Public				
2020	1			

Given Name (first and middle initial [Wany]): Family Name or Surname (last name):			
Ryan	WYSZYNSKI		
Inventor's Signature:	Date: 25 Jan Ja 8		
Residence (City and State):	Country: Citizenship:		
Oak(Grove, Minnesora	US		
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )  On this day of d			
(Seal)  MADONNA M. SCHROEDE Notary Public State of Minnesota My Commission Expires January 31, 2020	"I WALL		

Attorney Docket No.: C00002902.USN18

# ASSIGNMENT OF APPLICATION(S)

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

L	METHOD AND APPARATUS FOR ATRIAL ARRHYTHMIA EPISODE DETECTION				
	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;				
$\boxtimes$	for which an application for a United States Patent identified as U.S. Patent Application No. 15/551,924; was filed on August 18, 2017.				
	for which an application for a U.S. Provisional Application No.; was filed on; for which above application claims priority to U.S. Provisional Patent Application No. 62/117,785; filed on February 18, 2015;				
	for which above application claims priority to U.S. Patent Application No. 14/695,111; filed on April 24, 2015; for which application is identified as PCT International Patent Application No. PCT/US2016/018408; filed February 18, 2016;				

Whereas, Medtronic, Inc., a corporation organized and existing under the laws of the State of Minnesota and having a principle place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5604, hereinafter referred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the United States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be granted therefore:

NOW, Therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Corporation, its successors and assigns, the entire right, title and interest in and to said invention and the application(s) identified above and in and to any application claiming benefit thereto and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefore including our rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Letters Patent that may be granted, the same to be held and enjoyed by Corporation for its own use and benefit and use and benefit of its successors and assigns to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made, including the right to enforce such Letters Patent as fully and entirely as the same would have been held and enjoyed by the assignors if this assignment had not been made; together with all claims by assignors for damages by reason of past infringement or for provisional rights and including the right to sue for, and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns, and other legal representatives;

AND, for the consideration aforesaid, we materially represent to Corporation, its successors and assigns, that at the time of the execution and delivery of these presents, we are the sole lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above mentioned, and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth;

AND, for the consideration aforesaid, we hereby individually covenant and agree to and with Corporation, its successors and assigns, that whenever its counsel or the counsel of its successors or assigns, learned in the law, shall advise that an amendment or division of, or continuation or any continuation-in-part thereof, or any other proceeding in connection with the filing or prosecution of said domestic or foreign patent applications, including interference proceedings, is lawful and desirable, or that a reissue of extension of said Letters Patent is lawful and desirable, we, or our executors, administrators or assigns will sign all papers and drawings, take all rightful oaths, and do all acts necessary or Page 1 of 6 Attorney Docket No.: C00002902.USN18

Medironic, Inc., 710 Medironic Parkway, Minneapolis, MN 55432

**PATENT** REEL: 051149 FRAME: 0856

required to be done for the procurement of valid Letters Patent for said invention, or for the reissue or extension of the same, without charge to Corporation, its successors or assigns, but at Corporation's expense.

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said Medtronic, Inc., as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/	our name(s) on the day and yo	ear set forth below.
Given Name (first and middle initial [if any]): Shantanu	Family Name or Surname (last name): SARKAR	
Inventor's Signature:	Date:	
City and State: Roseville, Minnesota	Country: US	Citizenship: US
STATE OF MINNESOTA )  SS.  COUNTY OF RAMSEY )  On this day of  Shantanu SARKAR, and who executed the foregon aforesaid.	, before oing instrument, as said person's	me personally appeared the above-named free act and deed, on the day and year
(Seaf)	Notary Public	

Given Name (first and middle initial [if any]):  Daniel L.	Family Name or Su HANSEN	Family Name or Surname (last name):  HANSEN		
Inventor's Signature: Saniel X Hansen	Date:	Date: //25/2018		
Residence (City and State): Castle Rock, Colorado	Country: US			
STATE OF COLORADO )				
COUNTY OF DOUGLAS) ss.				
On this 25 day of 2014 a F. Daniel L. HANSEN, and who executed the form	goning instrument ac cal	E, before me personally appeared the above-named id person's free act and deed, on the day and year		
mount manufacture	South mondificate, as san	to person's nee act and deed, on the day and year		
NOTARY PUBLIC STATE OF COLOMADO (Seal) NOTARY ID 2012403514 NY COMMISSION EXPINES D	2 ///	Jehbey		

Given Name (first and middle initial [if any]):  Grant A.	Family Name or Surname (last name): NEITZELL				
Inventor's Signature:		Date:			
Residence (City and State):		Country:		Citizenship:	
Plymouth, Minnesota		US		US	
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )  On this day of,, before me personally appeared the above-named Grant A. NEITZELL, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.					
(Seal)		Notary Public			

Given Name (first and middle initial [if any]):  Jerry D.	Family Name or Surname (last name): REILAND			
Inventor's Signature:		Date:		
Residence (City and State):		Country:		Citizenship:
Coon Rapids, Minnesota		US		US
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )  On this day of  Jerry D. REILAND, and who executed the foregona foresaid.	oing instrum			nally appeared the above-named nd deed, on the day and year
(Seal)	Notary Public			

Given Name (first and middle initial [if any]): <b>Ryan</b>	Family Name or Surname (last name): WYSZYNSKI			
Inventor's Signature:	Date:			
Residence (City and State): Oak Grove, Minnesota	Country: US	Citizenship: US		
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )				
On this day of Ryan WYSZYNSKI, and who executed the foregaforesaid.		me personally appeared the above-named free act and deed, on the day and year		
(Seal)	Notary Public			

Page 6 of 6 Attorney Docket No.: C00002902.USN18 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 Assignment