PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TODD M. ZIELINSKI	09/05/2014
YONG KYUN CHO	09/05/2014
DOUGLAS HETTRICK	09/05/2014
XUSHENG ZHANG	09/04/2014

RECEIVING PARTY DATA

Name:	MEDTRONIC, INC.	
Street Address:	710 MEDTRONIC PARKWAY N.E.	
City:	MINNEAPOLIS	
State/Country:	MINNESOTA	
Postal Code:	55432-5604	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	14158516	

CORRESPONDENCE DATA

Fax Number: (612)305-1228

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: 612-305-1220

Email: sdombroske@mrgiplaw.com

Correspondent Name: MARK J. GEBHARDT **Address Line 1:** P.O. BOX 581336

Address Line 2: MUETING, RAASCH & GEBHARDT, P.A. Address Line 4: MINNEAPOLIS, MINNESOTA 55458-1336

ATTORNEY DOCKET NUMBER:	P0039997.USU1(134.0772)	
NAME OF SUBMITTER:	MARK J. GEBHARDT	
SIGNATURE:	/Mark J. Gebhardt/	
DATE SIGNED:	09/11/2014	

Total Attachments: 3

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PATENT REEL: 033717 FRAME: 0267 source=2014-09-05-Assignment-Executed#page3.tif

PATENT REEL: 033717 FRAME: 0268

Attorney Docket No.: P0039997.USU1

(134.07720101)

ASSIGNMENT OF APPLICATION

Whereas we, the below named inventors, with residence and citizenship as indicated below, have made an invention in

	CARDIAC RESYNCHRONIZATION THERAPY OPTIMIZATION BASED ON INTRACARDIAC IMPEDANCE
	for which an application for a United States Patent is being filed contemporaneously herewith;
\boxtimes	for which an application for a United States Patent identified as U.S. Patent Application No. 14/158,516 was filed on January 17, 2014;
	for which above application claims priority to U.S. Provisional Patent Application No filed on; which application is identified as PCT International Patent Application No filed;
	Whereas, Medtronic, Inc., a corporation organized and existing under the laws of the State of Minnesota and ring a principle place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5604, hereinafter erred 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

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 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 us 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 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.

Assignment

granted therefore;

Page 1 of 3

Attorney Docket No.: P003997.USU1 (134.07720101)

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, we have signed our names on the day and year set forth below.

Given Name (first and middle initial [if any]): Family Name or Surname (last name):

Todd M.	Zielinski		
Inventor's Signature:	Date:	Date: 5aptambar 5, 0014 Country: Citizenship:	
City and State: Ham Lake, MN	Country: US	Citizenship: US	
STATE OF MINNESOTA) ss. COUNTY OF RAMSEY) On this day of the day of the day of the day and year aforesaid. (Seal) SUSAN M. NIENABEP Notary Public Minneson Notary Public Notary Public Notary Public			
Given Name (first and middle initial [if any]): Yong Kyun Family Name or Surname (last name): Cho			
Inventor's Signature: Date: September 5, 2014 City and State: Country: Citizenship:			
City and State: Excelsior, MN	Country: MN	Citizenship: US	
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this day of 20 00 00 00 00 00 00 00 00 00 00 00 00			

Assignment

Page 2 of 3

Attorney Docket No.: P003997.USU1 (134.07720101)

Given Name (first and middle initial [if any]):	Family Name or Surname (last name):		
Douglas	ettrick		
Inventor's Signature:	Date:	Date: 5-557-14	
City and State:	Country:	Citizenship:	
Andover, MN	US	us	
STATE OF MINNESOTA)			
) ss. COUNTY OF RAMSEY)		8	
On this 5th day of 2014, before me personally appeared the above-named,			
and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.			
(Seal) SUSAN M. NIENASE Notary Public-Minneson My Commission Expires Jan 31, 2	Notary Public	<u>Lienaber</u>	

Given Name (first and middle initial [if any]):	middle initial [if any]): Family Name or Surname (last name):		
Xusheng	Zhang	, ,	
Inventor's Signature:	D	Date: 09/04/	2014
City and State:	C	Country:	Citizenship:
Shoreview, MN	N	IN	US
STATE OF MINNESOTA)) ss.			
COUNTY OF RAMSEY On this			
and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.			
(Seal) SUSAN M. NIENABER Notary Public-Minnesou My Commission Expires Jen 31, 2015 Notary Public			

Assignment

Page 3 of 3

Attorney Docket No.: P003997.USU1 (134.07720101)

RECORDED: 09/11/2014 REEL: 033717 FRAME: 0271