503181212 02/16/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT			
CONVEYING PARTY	' DATA	· ·				
		Name	Execution Date			
ALEKSANDRE T. SA	MBELASHVI	_	01/27/2012			
THOMAS J. MULLEN	1	01/27/2012				
TODD J. SHELDON		01/30/2012				
RECEIVING PARTY	DATA					
Name:	MEDTRO	MEDTRONIC, INC.				
Street Address:	710 ME	710 MEDTRONIC PARKWAY N.E.				
City:	MINNEA	MINNEAPOLIS				
State/Country:	MINNES	MINNESOTA				
Postal Code:	55432-5	604				
		Number 4537006				
Property TypeApplication Number:145						
CORRESPONDENC		12)305-1228				
	•	he e-mail address first; if that i	is unsuccessful. it will be sent			
using a fax number,	if provided;	if that is unsuccessful, it will b				
		12-305-2476				
Email:		schurmann@mrgs.com ARK J. GEBHARDT	0			
•			TING, RAASCH & GEBHARDT P.A.			
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Address Line 4:	MINNEAPOLIS, MINNESOTA 55401					
ATTORNEY DOCKET	NUMBER:	P0040502.USC7.134085001	P0040502.USC7.13408500101			
NAME OF SUBMITTE	R:	MARK J. GEBHARDT	MARK J. GEBHARDT			
SIGNATURE:		/Mark J. Gebhardt/	/Mark J. Gebhardt/			
DATE SIGNED:		02/16/2015	02/16/2015			
Total Attachments: 3						
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Attorney Docket No.: P0040502.USU1/1111-385US01 ASSIGNMENT OF APPLICATION

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

ADAPTIVE CARDIAC RESYNCHRONIZATION THERAPY

for which an application for a United States Patent is being filed contemporaneously herewith;

for which an application for a United States Patent identified as U.S. Patent Application No.

which application is identified as PCT International Patent Application No.; filed;

Whereas, <u>Medtronic, Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principle place of business at <u>710 Medtronic Parkway N.E.</u>, <u>Minneapolis</u>, <u>Minnesota 55432-5640</u>, 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, including any provisional application disclosing 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 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 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

Page 1 of 3 Attorney Docket No.: P0040502.USU1/1111-385US01 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

PATENT REEL: 034967 FRAME: 0180

; was filed on

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.

Given Name (first and middle initial [if any]):	on the day and year set forth below. Family Name or Surname (last name):					
Aleksandre T.	Sambelashvili					
Inventor's Signature:	Date: Jan, 27, 2012					
City and State:	Country:	Citizenship:				
Maple Grove, MN	USA	USA				
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this <u>27</u> day of <u>5</u> , 2012, before me personally appeared the above-named Aleksandre T. Sambelashvill, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. (Seal) TAMARA D. DUFFNEY Notary Public Minnesota My Commission Expression. 31, 2016 Notary Public						
Given Name (first and middle initial [if any]): Family Name or Surname (last name): Thomas J. Mullen						
Inventor's Signature: Ten Mellan	Date: 27 JAN 2012					
City and State:	Country:	Citizenship:				
Andover, MN	USA	USA				
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this 22 day of 20 to 20						

On this ______ _, 2012, before me personally appeared _ day of <u>Conder or</u> the above-named Thomas J. Mullen, and who exceuted the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.

TAMARA D. DUFFNEY (Seal) Notary Public Minnesota Notary Public My Commission Expires Jan. 31, 2016

Assignment

Page 2 of 3 Attorney Doo Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 Attorney Docket No.: P0040502.USU1/1111-385US01

PATENT REEL: 034967 FRAME: 0181

Given Name (first and middle initial [if any]):	Family Name or Surneme (last name).						
	Family Name or Surname (last name):						
Todd J.	Sheldon						
Inventor's Signature:	Date:						
Tuded A.)helde	30 Jan à	2012					
City and State:	Country:	Citizenship:					
North Oaks, MN	USA	USA					
STATE OF MINNESOTA)							
) ss.							
COUNTY OF RAMSEY							
On this 30 day of 3 day of 3							
the above-named Todd J. Sheldon, and who executed the foregoing instrument, as said person's free act							
and deed, on the day and year aforesaid.							
(Scal) TAMARA D. DUFFNEY Notary Public Nimesota Mr Commission Explosion. 31, 2016	Notary Public	D. Dupping					

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Assignment

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RECORDED: 02/16/2015