### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT2827359

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
RANDOLPH E. CRUTCHFIELD	04/22/2014
LONNY V. CABELKA	04/23/2014
MARK R. BOONE	04/22/2014
KEVIN P. KUEHN	04/21/2014
MARSHALL J. RASMUSSEN	04/22/2014

#### **RECEIVING PARTY DATA**

Name:	MEDTRONIC, INC.	
Street Address:	710 MEDTRONIC PARKWAY NE.	
Internal Address:	LC340	
City:	MINNEAPOLIS	
State/Country:	MINNESOTA	
Postal Code:	55432	

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

Property Type	Number	
Application Number:	14260309	

#### **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 via

US Mail.

**Phone:** 763-526-0925

**Email:** madonna.schroeder@medtronic.com

Correspondent Name: EVANS M. MBURU

**Address Line 1:** 710 MEDTRONIC PARKWAY NE.

Address Line 2: MVC22

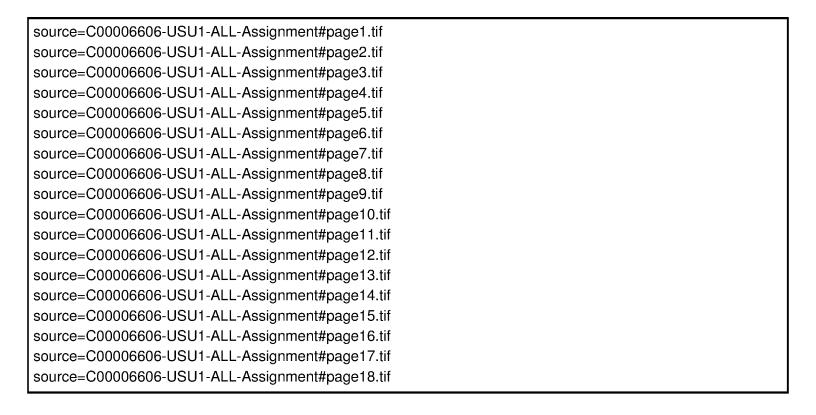
Address Line 4: MINNEAPOLIS, MINNESOTA 55432

ATTORNEY DOCKET NUMBER:	C00006606.USU1
NAME OF SUBMITTER:	EVANS M. MBURU
SIGNATURE:	/Evans M. Mburu/
DATE SIGNED:	04/24/2014

**Total Attachments: 18** 

502780763 REEL: 032745 FRAME: 0488

PATENT



PATENT REEL: 032745 FRAME: 0489

; filed on

#### ASSIGNMENT OF APPLICATION(S)

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

THERAPY DELIVERY METHODS AND CIRCUITS FOR AN IMPLANTABLE MEDICAL

	LL VIVE	
Ø	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;	
	for which an application for a United States Patent identified as U.S. Patent Application No.	; was filed on
	; 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.

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

Whereas, <u>Medtronic</u>, <u>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 55432-5604</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 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 6 Attorney Docket No.: C00006606.USU1

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/o	our name(s) on the day an	d year set forth below.	
Given Name (first and middle initial [if any]):	Family Name or Surname	(last name):	
Randolph E.	Crutchfield	- Communication	999999
Inventor's Signature:	Date;		
Made/A/ E little	22 1	PRIL 2814	
City and State:	Country:	Citizenship:	
Scottsdale, Arizona	US	US	
STATE OF ARIZONA )			
COUNTY OF MONICAPA) SS.			
On this 22nd day of Upril	, In Jo 14 , bei	fore me personally appeared the above-i	named,
and who executed the foregoing instrument, as sai	d person's free act and deed	, on the day and year aforesaid.	
SHEILA MAE SELL Notely Public - State of Arthor MANICOPA COUNTY May Commission Express November 30, 2016	Notary Parhic	iela Mae Bell	
	The state of the s		

Given Name (first and middle initial [if any]):	fany]): Family Name or Surname (last name):		
Lonny V.	Cabelka		
Inventor's Signature:	1	Date:	
Residence (City and State): San Clemente, California		Country: US	Citizenship: US
AC	KNOW	LEDGMEN	
State of California ) County of)			
On		basis of satisfactory evidence to be ment and acknowledged to me that (ies), and that by his/her/their half of which the person(s) acted,	
Signature	(S	eal)	

Given Name (first and middle initial [if any]):  Mark R.	Family Name or Surname (last na Boone	ime):
Inventor's Signature	Date: 4/22/	12014
Residence (City and State):	Country:	Citizenship:
Gilbert, Arizona	US	US
STATE OF ARIZONA ) ss.  COUNTY OF Horizoga  On this Bond day of expridand who executed the foregoing instrument, as sain	ر <u>کو ا</u> before me d person's free act and deed, on the	personally appeared the above-named, day and year aforesaid.
(Seal)  (Seal)	Notary Public	May Bell

Given Name (first and middle initial [if any]): <b>Kevin P.</b>	Family Name or Surname (last name):  Kuehn	
Inventor's Signature:	Date:	
Residence (City and State): Shoreview, Minnesota	Country: US	Citizenship: US
STATE OF MINNESOTA ) ) ss.  COUNTY OF RAMSEY ) On this day of and who executed the foregoing instrument, as sa	,, before a judge person's free act and deed, on t	me personally appeared the above-named, the day and year aforesaid.
(Seal)	Notary Public	

Given Name (first and middle initial [if any]):  Marshall J.	Family Name or Surname (last name):  Rasmussen
Inventor's Sighature:  Wildlift J. Muss.	Date: 4/22/2014
Residence (City and State):	Country: Čitizenship:
Mesa, Arizona	US US
STATE OF ARIZONA )	
COUNTY OF Markega ) ss. On this 22nd day of Opril	
On this 22nd day of Ulfrel	, <u>2014</u> , before me personally appeared the above-named,
and who executed the foregoing instrument, as ear	person's free act and deed, on the day and year aforesaid.
(Seal)	Notary Public Mae Bell

#### ASSIGNMENT OF APPLICATION(S)

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

THERAPY DELIVERY METHODS AND CIRCUITS FOR AN IMPLANTABLE MEDICAL

# DEVICE ☐ for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith; ☐ for which an application for a United States Patent identified as U.S. Patent Application No. ; was filed on

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. ; filed on

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

Whereas, <u>Medtronic</u>, <u>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 55432-5604</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 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.: C00006606.USU1

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): Randolph E. Crutchfield Inventor's Signature: Date: City and State: Citizenship: Country: Scottsdale, Arizona US US STATE OF ARIZONA SS. COUNTY OF \_ On this , before me personally appeared the above-named, day of 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]): Lonny V.	Family Name or Surname (last name):  Cabelka  Date:  23-477 - 2014	
Inventor's Signature:		
Residence (City and State): San Clemente, California	Country: US	Citizenship: US
	CKNOWLEDGMENT	
State of California ) County of <u>クロッ</u> ター		(1985년) 1985년 - 1985년 - 1985년 - 1985 - 1985년 - 198
On <i><u>April 25, 2014</u> befo</i>	re me, <u>Brad Heino</u> (insert name and title	letoma wotang Public
personally appeared <u>Lonny V. Cabelka,</u> the person(s) whose name(s)d <b>sare</b> sub-	who proved to me on the b	asis of satisfactory evidence to be
he/she/they executed the same in his/he signature(s) on the instrument the perso executed the instrument.	antheir authorized capacity(	ies), and that by\nis/her/their
I certify under PENALTY OF PERJURY paragraph is true and correct.	under the laws of the State	
WITNESS my hand and official seal.		BRAD MEINDERTSMA Commission # 1962205 Notary Public - California
		Orange County  My Comm. Expires Dec 1 2015

Given Name (first and middle initial [if any]):  Mark R.	Family Name or Surname (last name):  Boone		
Inventor's Signature:	Date:		
Residence (City and State): Gilbert, Arizona	Country: US	Citizenship: US	
STATE OF ARIZONA ) ss.  COUNTY OF)  On this day of and who executed the foregoing instrument, as sa		me personally appeared the above-named, the day and year aforesaid.	
(Seal)	Notary Public	<u> Santa da de la composición de la comp</u> La composición de la	

Given Name (first and middle initial [if any]):  Kevin P.	Family Name or Surname (last name): Kuehn		
Inventor's Signature:	Date:		
Residence (City and State): Shoreview, Minnesota	Country: US	Citizenship: US	
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )  On this day of  and who executed the foregoing instrument, as sa		ne personally appeared the above-named,	
(Seal)	Notary Public		

Given Name (first and middle initial [if any]):  Marshall J.	Family Name or Surname (last name): Rasmussen		
Inventor's Signature:	Date:		
Residence (City and State): Mesa, Arizona	Country: US	Citizenship; US	
STATE OF ARIZONA ) ss.  COUNTY OF ) on this day of and who executed the foregoing instrument, as sa (Seal)		ne personally appeared the above-named, ne day and year aforesaid.	
	Notary Public		

#### ASSIGNMENT OF APPLICATION(S)

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

## THERAPY DELIVERY METHODS AND CIRCUITS FOR AN IMPLANTABLE MEDICAL DEVICE

$\boxtimes$	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;
	for which an application for a United States Patent identified as U.S. Patent Application No. ; was filed on
	;
	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. ; 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
hav	ring a principle place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5604, hereinafte

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 55432-5604</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 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.: C00006806.USU1

Assignment

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 yea	r set forth below.
Given Name (first and middle initial [if any]): Randolph E.	Family Name or Surname (last name): Crutchfield	
Inventor's Signature:	Date:	
City and State:	Country:	Citizenship:
Scottsdale, Arizona	US	US
STATE OF ARIZONA ) ) ss. COUNTY OF)		
On this day of	before n	ne personally appeared the above-named,
and who executed the foregoing instrument, as sa		
(Seal)		
XXXX	Notary Public	

Page 2 of 6 Attorney Docket No.: C00006606.USU1 Meditronic, Inc., 710 Meditronic Parkway, Minneapolis, MN 55432

Given Name (first and middle initial [if any]): Lonny V.	Family Name or Surname (last name): Cabelka		
Inventor's Signature:	.t	Date:	
Residence (City and State): San Clemente, California		Country: US	Citizenship: US
AC	KNOW	LEDGMEN	<b>%</b>
State of California ) County of)			
On			
Signature	(5	Seal)	

Page 3 of 6 Attorney Docket No.: C00006606.USU1 Medironic, Inc., 710 Medironic Parkway, Minneapolis, MN 55432

Given Name (first and middle initial [if any]):  Mark R.	Family Name or Surname (last name):  Boone		
Inventor's Signature:	Date:		
Residence (City and State):	Country:	Citizenship:	
Gilbert, Arizona	US	US	
STATE OF ARIZONA )  ss.  COUNTY OF)  On this day of  and who executed the foregoing instrument, as so	, before naid person's free act and deed, on the	ne personally appeared the above-named, he day and year aforesaid.	
(Seal)	Notary Public		

Given Name (first and middle initial [if any]):  Kevin P.	Family Name or Surname (last name):  Kuehn		
Inventor's Signature:	Date: 4/21/2014		
Residence (City and State):	Country: Citizenship:		
Shoreview, Minnesota	US		
STATE OF MINNESOTA ) ) ss.			
COUNTY OF RAMSEY )	naut		
On this HT day of April	2014, before me personally appeared the above-nam	ed ,	
and who exaculed the foregoing is trument, as said person's free act and deed, on the day and year aforesaid.			
(Seal) MADONNA M. SCHROEDE Notary Public Minnesofs (Seal)	-\$ 1.8/ma.//		

Given Name (first and middle initial [if any]): Marshall J.	Family Name or Surname (last name): Rasmussen		
Inventor's Signature:	Date:		
Residence (City and State):	Country:	Citizenship:	
Mesa, Arizona	US	US	
STATE OF ARIZONA ) ) ss.  COUNTY OF			
(Seal)	Notary Public		

Page 6 of 6 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

Assignment