PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Xusheng Zhang	08/27/2009
David A Anderson	09/01/2009
Jeffrey M Huston	09/11/2009
Jeffrey M. Gillberg	09/03/2009

RECEIVING PARTY DATA

Name:	Medtronic, Inc.
Street Address:	710 Medtronic Parkway N.E.
City:	Minneapolis
State/Country:	MINNESOTA
Postal Code:	55432-5640

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12495204

CORRESPONDENCE DATA

Fax Number: (651)735-1102

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 6517351100

Email: hughes@ssiplaw.com
Correspondent Name: Shumaker & Sieffert
Address Line 1: 1625 Radio Drive

Address Line 2: Suite 300

Address Line 4: Woodbury, MINNESOTA 55125

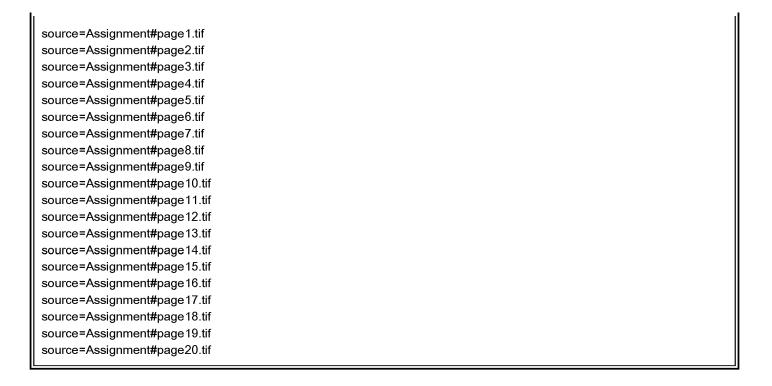
ATTORNEY DOCKET NUMBER: P0032040.00/1111-128US01

NAME OF SUBMITTER: Allison M. Hughes

Total Attachments: 20

PATENT REEL: 023271 FRAME: 0413 0 00 12495207

500969955



PATENT REEL: 023271 FRAME: 0414

ASSIGNMENT

WHEREAS, WE, Xusheng Zhang of 5958 Birchwood Street, Shoreview, Minnesota 55126; David A. Anderson of 39909 Palm Street NW, Stanchfield, Minnesota 55080; Jeffrey M. Huston of 3533 37th Aveune NE, Minnesota 55421; and Jeffery M. Gillberg of 155 107th Lane NW, Coon Rapids, Minnesota 55448, are the inventors of HEART SOUND SENSING TO REDUCE INAPPROPRIATE TACHYARRHYTHMIA THERAPY, for which an application for a United States Patent was filed on June 30, 2009, under Serial No. 12/495,204; and

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, 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 therefor;

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 therefor 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, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

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 filling 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 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Pa Letters Patent to Corporation in accordance with this instrumer	tents and Trademarks to issue the nt.
IN WITNESS WHEREOF, I have hereunto set my ha	and on this $\frac{27t}{1}$ day of
	2. 2. 2. 2. 2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.
Xusheng	Zhang
STATE OF MINNESOTA	
COUNTY OF ROM SEY	
On this 27th day of Avgvs+ appeared Xusheng Zhang, to me known to be the person of foregoing instrument and acknowledged that s/he executed deed.	, 2009, before me personally described in and who executed the the same as his/her free act and
IN WITNESS WHEREOF, I have hereunto affixed my office, the day and year above written.	official signature with the seal of my
CARRIE M ARCAND Notary Public Minnesota My Commission Expires January 31, 2010	Dur ascand

ASSIGNMENT Page 2 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
David A. Anderson
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared David A. Anderson, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 3 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Jeffrey M. Huston
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Jeffrey M. Huston, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

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ASSIGNMENT Page 4 of 5 P0032040.00/1111-128US01

PATENT REEL: 023271 FRAME: 0418

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day o, 2009.
Jeffery M. Gillberg
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Jeffery M. Gillberg, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 5 of 5 P0032040.00/1111-128US01

PATENT REEL: 023271 FRAME: 0419

ASSIGNMENT

WHEREAS, WE, Xusheng Zhang of 5958 Birchwood Street, Shoreview, Minnesota 55126; David A. Anderson of 39909 Palm Street NW, Stanchfield, Minnesota 55080; Jeffrey M. Huston of 3533 37th Aveune NE, Minneapolis, Minnesota 55421; and Jeffery M. Gillberg of 155 107th Lane NW, Coon Rapids, Minnesota 55448, are the inventors of HEART SOUND SENSING TO REDUCE INAPPROPRIATE TACHYARRHYTHMIA THERAPY, for which an application for a United States Patent was filed on June 30, 2009, under Serial No. 12/495,204; and

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, 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 therefor;

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 therefor 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, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

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 5 P0032040.00/1111-128US01

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IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Xusheng Zhang
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Xusheng Zhang, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 2 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of
David A. Anderson
STATE OF MINNESOTA
COUNTY OF RAMSEY
On this day of 2009, before me personally appeared David A. Anderson, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed. IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
CARRIE M ARCAND Notary Public Notary Public Minnesota My Commission Expires January 31, 2010

ASSIGNMENT Page 3 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Jeffrey M. Huston
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Jeffrey M. Huston, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
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Notary Public

ASSIGNMENT Page 4 of 5 P0032040.00/1111-128US01

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IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Jeffery M. Gillberg
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Jeffery M. Gillberg, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 5 of 5 P0032040.00/1111-128US01

ASSIGNMENT

WHEREAS, WE, Xusheng Zhang of 5958 Birchwood Street, Shoreview, Minnesota 55126; David A. Anderson of 39909 Palm Street NW, Stanchfield, Minnesota 55080; Jeffrey M. Huston of 3533 37th Aveune NE, Minneapolis, Minnesota 55421; and Jeffery M. Gillberg of 155 107th Lane NW, Coon Rapids, Minnesota 55448, are the inventors of HEART SOUND SENSING TO REDUCE INAPPROPRIATE TACHYARRHYTHMIA THERAPY, for which an application for a United States Patent was filed on June 30, 2009, under Serial No. 12/495,204; and

WHEREAS, MEDTRONIC, INC., a corporation organized and existing under the laws of the State of Minnesota and having a principal place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5640, 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 therefor:

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 therefor 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, and also hereby authorize Corporation and its employees to fill in the serial number and filing date above after this document has been executed;

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;

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ASSIGNMENT Page 1 of 5 P0032040.00/1111-128US01

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IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Xusheng Zhang
STATE OF MINNESOTA
COUNTY OF
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IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 2 of 5 P0032040.00/1111-128US01

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IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
David A. Anderson
STATE OF MINNESOTA
COUNTY OF
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Notary Public

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IN WITNESS WHEREOF, I have hereunto set my hand on this day of day of
Out / Lb
Jeffrey M. Huston
STATE OF MINNESOTA
COUNTY OF
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IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Clubu w B
ANDREW W BACHTLE Notary Public Notary Public Minnesota My Commission Expires Jan. 31, 2012

ASSIGNMENT Page 4 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
Jeffery M. Gillberg
STATE OF MINNESOTA
COUNTY OF
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Notary Public

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ASSIGNMENT Page 1 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day o, 2009.
Xusheng Zhang
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared Xusheng Zhang, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Notary Public

ASSIGNMENT Page 2 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.
IN WITNESS WHEREOF, I have hereunto set my hand on this day of, 2009.
David A. Anderson
STATE OF MINNESOTA
COUNTY OF
On this day of, 2009, before me personally appeared David A. Anderson, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.
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Notary Public

ASSIGNMENT Page 3 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissione Letters Patent to Corporation in accordance with this in	er of Patents and Transtrument.	ademarks to issue the
IN WITNESS WHEREOF, I have hereunto se, 2009.	et my hand on this _	day of
- J	effrey M. Huston	
STATE OF MINNESOTA		
COUNTY OF		
On this day of appeared Jeffrey M. Huston, to me known to be the foregoing instrument and acknowledged that s/he ex deed.	person described in a	and who executed the
IN WITNESS WHEREOF, I have hereunto affix office, the day and year above written.	xed my official signati	ure with the seal of my
<u></u>	otary Public	

ASSIGNMENT Page 4 of 5 P0032040.00/1111-128US01

I hereby request the Honorable Commissioner of Patents and Trademarks to issue t Letters Patent to Corporation in accordance with this instrument.	
IN WITNESS WHEREOF, I have hereunto set my hand on this day day	of
July July July Jeffery M. Gillberg	
STATE OF MINNESOTA	
COUNTY OF	
On this 3RD day of DEPTENHER, 2009, before me personal appeared Jeffery M. Gillberg, to me known to be the person described in and who executed to foregoing instrument and acknowledged that she executed the same as his/her free act and deed. IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of roffice, the day and year above written.	nd
Notary Public J	
NANCY A. STRONG Notary Public-State of Minnesota My Commission Expires January 31, 2011	

RECORDED: 09/23/2009

ASSIGNMENT Page 5 of 5 P0032040.00/1111-128US01

PATENT REEL: 023271 FRAME: 0434