FORM PTO-1584 1-31-92 P10962.00

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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the august of original documents or copy thereof.

1.	Name of conveying party(ies):			2. Name and address of receiving party(ies):			
	Xiaohong Zhou Thomas J. Mullen Michael R.S. Hill	Steve LaPorte Gary William King	ı		MEDTRONIC, INC. M.S. LC 340 710 Medtronic Parkw MINNEAPOLIS St		
	Additional name(s) of convey	ing party(ies) attached?	? []Yes [X]No				
3.	Nature of conveyance:			[X] Assignr [] Security [] Other_	nent [] y Agreement []	Merger Change of Name	
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4.	Application number(s) or patent number(s): 11/116,970 If this document is being filed together with a new application, the execution date of the application is:						
A.	Patent Application No.(s) Additional numbers attache	:d? []Yes [X]No					
5.	Name and address of party concerning document show	6. Total n patente	umber of applications and sinvolved:	d 1			
	Name: Paul H. McDowall			7. Total fe	ee (37 CFR 3.41):	\$40.00	
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9.	Statement and signature.		<u></u>				
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	Paul H. McDowail Name of Person Signing		Signature	vol.	Daje		
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Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

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PAGE 4/10 * RCVD AT 8/2/2005 2:53:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:7635146982 * DURATION (mm-ss):02-06

PATENT

REEL: 016864 FRAME: 0370

ATTORNEY DOCKET: P10962.00

ASSIGNMENT

WHEREAS, WE, Xiaohong Zhou, Thomas J. Mullen, Michael R.S. Hill, Steve R. Laporte, and Gary W. King, are the inventors of METHODS AND APPARATUS FOR SENSING CARDIAC ACTIVITY VIA NEUROLOGICAL STIMULATION THERAPY SYSTEM OR MEDICAL ELECTRICAL LEAD for which an application for a United States Patent was filed on April 28, 2005, under Serial No. 11/116,970; and

WHEREAS, <u>MEDTRONIC</u>, INC. a corporation organized and existing under the laws of the <u>State of Minnesota</u> and having a principal 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 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 behoof and use and behoof 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 hereby grant Corporation the right to fill in the serial number and filing date in this document upon their receipt;

AND, for the consideration aforesald, 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 caths, 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.

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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, 2005.
Xiaohong Zhou 3
STATE OF MINNESOTA
COUNTY OF ANORA
On this
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Molly Chlipcak
Notary Public Notary Public

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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, 2005.
Thomas J. Mullen
STATE OF MINNESOTA
COUNTY OF ANOKa
On this
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
MARCIA SAINT PIERRE NOTARY PUBLIC - MINESOTA Notary Public

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I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Corporation in accordance with this instrument.

TN "WITNESS WHEREOF, I have hereunto set my hang on

Michael R.\$. Hill

Printed Name

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PATENT

REEL: 016864 FRAME: 0374

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
Steve R. Laborte
STATE OF MINNESOTA
COUNTY OF ANO KA
On this
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.
Molly Chlibica
Notary Public No

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PAGE 9/10 * RCVD AT 8/2/2005 2:53:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:7635146982 * DURATION (mm-ss):02-06

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 STATE OF MINNESOTA COUNTY OF Anolda On this day of 2005, before me personally appeared Gary W. King, 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.

PAGE 10/10 * RCVD AT 8/2/2005 2:53:19 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-6/33 * DNIS:2738300 * CSID:7635146982 * DURATION (mm-ss):02-06