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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEVEN M. GOETZ	01/02/2007
RICHARD T. STONE	12/21/2006
WARREN W. BALL	12/21/2006
CARL D. WAHLSTRAND	12/21/2006
MICHAEL T. HEGLAND	05/04/2016
GABRIELA C. MOLNAR	05/04/2016
JAMES M. OLSEN	05/26/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16881907

CORRESPONDENCE DATA

Fax Number: (651)735-1102

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: 651-735-1100

Email:pairdocketing@ssiplaw.comCorrespondent Name:SHUMAKER & SIEFFERT, P.AAddress Line 1:1625 RADIO DRIVE, SUITE 100Address Line 4:WOODBURY, MINNESOTA 55125

ATTORNEY DOCKET NUMBER:	P0025459.00US01CON
NAME OF SUBMITTER:	JENNIFER DALLMAN
SIGNATURE:	/JENNIFER DALLMAN/
DATE SIGNED:	05/22/2020

PATENT REEL: 052736 FRAME: 0780

Total Attachments: 7 source=P002545900US01CON_Assignment#page1.tif source=P002545900US01CON_Assignment#page2.tif source=P002545900US01CON_Assignment#page3.tif source=P002545900US01CON_Assignment#page4.tif source=P002545900US01CON_Assignment#page5.tif source=P002545900US01CON_Assignment#page6.tif

source=P002545900US01CON_Assignment#page7.tif

PATENT REEL: 052736 FRAME: 0781 Attorney Docket No.: 1023-547US01

ASSIGNMENT

For valuable consideration, we, Steven M Goetz of 4650 – 586th Place North, Brooklyn Center, Minnesota 55429; Richard T. Stone of 630 Huron Blvd. S.E., Minneapolis, Minnesota 55414; Warren W. Ball of 12764 Killdeer St. N.W., Coon Rapids, Minnesota 55448; and Carl D. Wahlstrand of 1 Bluebird Lane, St. Paul, Minnesota 55127, hereby assign to: Medtronic, Inc., having a place of business at: 710 Medtronic Parkway, LC-340, Minneapolis, MN 55432 and its successors and assigns (collectively hereinafter called "the Assignee") the entire right, title and interest throughout the world in the inventions and improvements which are the subject of an application for United States Patent signed by us, entitled PROGRAMMING INTERFACE WITH A CROSS-SECTIONAL VIEW OF A STIMULATION LEAD WITH COMPLEX ELECTRODE ARRAY GEOMETRY, filed October 31, 2006, and assigned U.S. Serial Number 11/591,188; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

> PATENT REEL: 048808 FRANTE: 07675

Date: 07 Jan 2007 Steven M. Goetz
State of MW)) ss: County of Aroka) On this 2 day of
WITNESS my hand and official seal. KarenAnn Harvey Notary Public Minnesota My Commission Expires January 31, 2010 Date: December 21, 2006 Richard T. Stone
Richard T. Stone State of Minnesota) On this 21st day of December, 2006, before me, Helen M. Terway Notary Public, personally appeared Richard T. Stone personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
WITNESS my hand and official seal. HELEN'M. TERWAY Notary Public Minnesota By Commission Expires January 31, 2007 My Commission Expires: 01/31/2007

PATENT REEL: 048888 FRANE: 0786

Date:	12-21-06	, ,	Warren W. Ball
C Notary Poof satisfaction of satisfaction of the contraction of the c	ablic, personally ctory evidence) edged to me that	day of Dot end y appeared Warre to be the person the/she/they exe the instrument t	en W. Ball personally known to me (or proved to me on the basis (s) whose name is/are subscribed to the within instrument and cuted the same in his/her/their authorized capacity, and that by the person(s), or the entity upon behalf of which the person(s)
	KarenAnn I- Notary Pu Minnesc sion Expires Janua	iblic ota	WITNESS my hand and official seal. Signature of Notary Public My Commission Expires: Samuar 31, 2010
Date: 귍	1 DEL 06		Carl D. Wahlstrand
Notary Possibasis of sand acknowledge by his/he	ublic, personall atisfactory evic owledged to me	day of Decem y appeared Carl lence) to be the pethat he/she/theye on the instrume	D. Wahlstrand personally known to me (or proved to me on the person(s) whose name is/are subscribed to the within instrument executed the same in his/her/their authorized capacity, and that ent the person(s), or the entity upon behalf of which the person(s)
	MELEN M. Notary Minne My Commission Expire	Public sota	WITNESS my hand and official seal. Helen M. Terway Signature of Notary Public My Commission Expires: 01/31/2007

RECORDED: 01/22/2007

ASSIGNMENT OF APPLICATION(S)

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

	UNWRAPPED 2D VIEW OF A STIMULATION LEAD WITH COMPLEX ELECTRODE ARRAY GEOMETRY
	for which an application for a United States Patent or a U.S. Provisional Application is being filed contemporaneously herewith;
\boxtimes	for which an application for a United States Patent identified as U.S. Patent Application No. $14/954,298$; was filed on November 30, 2015;
	for which an application for a U.S. Provisional Application No; was filed on;
\boxtimes	for which above application claims priority to U.S. Provisional Patent Application No. 60/776,454, filed on February 24, 2006;
	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 a

Whereas, <u>Medtronic</u>, <u>Inc.</u>, a corporation organized and existing under the laws of the State of Minnesota and having a principal 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, which include the right to claim priority based on the filling date of said application(s), 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 1 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 Attorney Docket No.:

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.

1 ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Family Name or Surname (las Hegland	et name):
Inventor's Signature: Myland	Date: 05 - c	94-16
City and State:	Country:	Citizenship:
Mounds View, MN	USA	USA
STATE OF MINNESOTA)) ss. COUNTY OF ANOKA) On this Lyth day of Mull Michael T. Hegland, and who executed the free year aforesaid.	, 2016, before me personally a foregoing instrument, as said p	ppeared the above-named person's free act and deed, on the day and
(Seal) KARLA K. WEIS Notary Public State of Minnesota My Commission Expires January 31, 2020	Notary Public	X M

Given Name (first and middle initial [if any]): Gabriela C.	Family N Molnar	ame or Surname (las	t name):	
Inventor's Signature: Laluda C. Molner	I	Date: 4 MAY	rolb	
Residence (City and State): Blaine, MN		Country: USA		Citizenship: USA
STATE OF MINNESOTA) ss. COUNTY OF ANOKA) On this Hill day of May Eath rela C , and who executed the foreg aforesaid. Manav	, 2016, b oing instrum	efore me personally a nent, as said person's	appeared free act ar	the above-named nd deed, on the day and year
(Seal) KARLA K. WEIS Notary Public State of Minnesota My Commission Expire January 31, 2020		Notary Public		JUNS

Given Name (first and middle initial [if any]): James M.	Family Name or Surname (last Olsen	name):	
Inventor's Signature: Danib y Ohen	Date: May	26, 20/6	
Residence (City and State):	Country:	/ Citizenship:	
Plymouth, MN	USA	USA	
	016, before me personally appeare erson's free act and deed, on the de	d the above-named, and year aforesaid.	AV and
(Seal) KARLA K. WEIS Notary Public State of Minnesota My Commission Expires January 31, 2020	Notary Public	Knew	

RECORDED: 05/22/2020 REEL: 052736 FRAME: 0788