PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3222055

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SUBHAM GHOSH	12/04/2014
JEFFREY GILLBERG	12/01/2014
MANFRED JUSTEN	12/02/2014
ERIC SCHILLING	12/02/2014

RECEIVING PARTY DATA

Name:	MEDTRONIC, INC.	
Street Address:	reet Address: 710 MEDTRONIC PARKWAY N.E.	
City: MINNEAPOLIS		
State/Country: MINNESOTA		
Postal Code: 55432-5604		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14227919

CORRESPONDENCE DATA

Fax Number: (612)305-1228

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: 612-305-2476

Email: dschurmann@mrgs.com **Correspondent Name:** MARK J. GEBHARDT

Address Line 1: MUETING, RAASCH & GEBHARDT P.A.

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Address Line 4: MINNEAPOLIS, MINNESOTA 55401

ATTORNEY DOCKET NUMBER: C00005189.USU3/134.0736 NAME OF SUBMITTER: MARK J. GEBHARDT SIGNATURE: /Mark J. Gebhardt/ **DATE SIGNED:** 02/11/2015

Total Attachments: 3

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PATENT REEL: 034939 FRAME: 0357

Attorney Docket No.: C00005189.USU3

(134.07360101)

ASSIGNMENT OF APPLICATION

Whereas we, the below named inventors, with residence and citizenship as indicated below, have made an invention in

L	STSTEMS, METHODS AND INTERFACES FOR IDENTIFYING OPTIMAL ELECTRICAL VECTORS
	for which an application for a United States Patent is being filed contemporaneously herewith;
\boxtimes	for which an application for a United States Patent identified as U.S. Patent Application No. 14/227,919 was filed on March 27, 2014;
\boxtimes	for which above application claims priority to U.S. Provisional Patent Application No. 61/817,480 filed on April 30, 2013; and to U.S. Provisional Patent Application No. 61/913,784 filed on December 9, 2013.
	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
havi	ing a principle place of business at 710 Medtronic Parkway N.E., Minneapolis, Minnesota 55432-5604, hereinafte
refe	rred to as "Corporation," is desirous of acquiring the entire right, title and interest in and to said invention for the
Uni	ted States and for all foreign countries and in and to any and all foreign and domestic Letters Patent which may be

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 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 us 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 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

granted therefore;

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Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

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.

Family Name or Surname (last name):

In witness whereof, we have signed our names on the day and year set forth below.

Given Name (first and middle initial [if any]):

Subham

Inventor's Signature:

Inventor's Signature:	Date: 12/4/2014			
City and State:	Country:	Citizenship:		
Blaine, MN	US			
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this				
Given Name (first and middle initial [if any]): Family Name or Surname (last name): Gillberg				
Inventor's Signature:	Date: 12/11/4	eta ap id a sana ana dala ana a		
City and State:	Country:	Citizenship:		
Coon Rapids, MN	US	US		
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this day of Decression of the above-named, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. SUSAN M. NIENABER Notary Public Minnesota Notary Public Minnesota Notary Public				

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ven Name (first and middle initial [if any]): Family Name or Surname (last name):				
Manfred Ju	Justen			
Inventor's Signature: ///	Date:			
1/4 2	12 -2	14		
City and State:	Country:	Citizenship:		
Lino Lakes, MN	US	DE		
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this day of December , 20(4), before me personally appeared the above-named,				
and who executed the foregoing instrument, as said pe		ne day and year aforesaid.		
(Seal) SUSAN M. NIENABER Notary Public-Minnesota Notary Public Notary Public				
Given Name (first and middle initial [if any]): Eric Family Name or Surname (last name): Schilling				
Inventor's Signature: Date: 12/2/14				
City and State:	Country:	Citizenship:		
Ham Lake, MN	US	US		
STATE OF MINNESOTA)) ss.				
COUNTY OF RAMSEY)				
On this aday of December, 2014, before me personally appeared the above-named,				
and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.				
the second secon				
(Seal) SUSAN M. NIENABER Notary Public-Minnesota Notary Public Notary Public				

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