502956831 08/29/2014 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3003429

		NEW ASSIGNMENT			
NATURE OF CONVEYA	NCE:	ASSIGNMENT			
CONVEYING PARTY D	ΑΤΑ				
		Name			Execution Date
MATTHEW C BOND					01/03/2011
CHARLES R GORDON					01/03/2011
WEIZHENG LIANG					01/03/2011
JAMES D REINKE					12/16/2010
JONATHAN P ROBERT	S				12/16/2010
RECEIVING PARTY DA	ATA				
Name:	Medtronio	c, Inc.			
Street Address:	710 Medt	ronic Parkway			
Internal Address:	Mail Stop	LC340			
City:	Minneapo	olis			
State/Country:	MINNES	MINNESOTA			
Postal Code:	55432				
PROPERTY NUMBERS	5 Total: 1				
		Number			
Property Type		Number 1473066			
Property Type Application Number:	14				
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Total Attachments: 8

PATENT REEL: 033640 FRAME: 0085

502956831

ASSIGNMENT OF APPLICATION

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

LOW-POWER SYSTEM CLOCK CALIBRATION BASED ON A HIGH-ACCURACY REFERENCE CLOCK

for which an application for a United States Patent is being filed contemporaneously herewith;

for which an application for a United States Patent identified as U.S. Patent Application No. 12/915,832; was filed on October 29, 2010;

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

Whereas, <u>Mcdtronic, 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 55432-5640</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 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, including any provisional application disclosing 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-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 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 4 Attorney Docket No.: P0039327.00/1111-251US01 Medironic, Inc., 710 Medironic Parkway, Minneapolis, MN 55432 PATENT

REEL: 033640 FRAME: 0087

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): Bond Matthew Inventor's Signature; Date: JAN 3, 2011 City and State: Country: Citizenship: Tempe, Arizona USA USA STATE OF ARIZONA SS. COUNTY OF <u>maricopa</u> On this $3_{\Lambda c}$ day of $, \mathfrak{Roll}$, before me personally anuary appeared the above-named Matthew Bond, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. SHEILA MAE BELL (Seal) NOTABY PUBLIC - ARIZONA MARICOPA COUNTY Notary Public My Commission Expires November 30, 2011 Given Name (first and middle initial [if any]): Family Name or Surname (last name): Gordon Charles R. Date: Inventor's Signature: Jan Charles K. 2011 Residence (City and State): Country: Citizenship: Phoenix, Arizona USA USA STATE OF ARIZONA SS. COUNTY OF Maricopa On this $3 \wedge d$ day of anuary. $\Rightarrow 01$, before me personally appeared the above-named Charles R. Gordon, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. SHEILA MAE BELL NOTARY PUBLIC - ARIZONA (Seal) MARICOPA COUNTY Notary Public My Commission Expires November 30, 2011

Assignment

 Page 2 of 4
 Attorney Docket No.: P0039327.00/1111-251US01

 Medironic, Inc., 710 Medironic Parkway, Minneapolis, MN 55432
 PATENT

REEL: 033640 FRAME: 0088

Given Name (first and middle initial [if any]):	Family Name or Surname (last name):			
Weizheng	Liang			
Inventor's Signature:	Date: / / 3 / 2011			
Residence (City and State):	Country:	Citizenship:		
Chandler, Arizona	USA	China		
Chandler, Arizona USA China STATE OF ARIZONA) ss. COUNTY OF Maricopa) ss. On this 3nd day of 3nd age of 3				
	F . 1 N O (1)	, <u></u>		
Given Name (first and middle initial [if any]): James D.	Family Name or Surname (Is Reinke	ist name);		
Inventor's Signature:	Date:			
Residence (City and State): Maple Grove, Minnesota	Country: USA	Citizenship: USA		
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this day of,, before me personally appeared the above-named James D. Reinke, and who executed the foregoing instrument, as said				
person's free act and deed, on the day and year aforesaid.				
(Seal)				
	Notary Public			

Page 3 of 4 Attorney Docket No.: P0039327,00/J111-251US01 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 PATENT REEL: 033640 FRAME: 0089

Given Name (first and middle initial [if any]): Jonathan P.	Family Name or Surname (last name): Roberts				
Inventor's Signature:	Date:				
Residence (City and State): Coon Rapids, Minnesota	Country: USA	Citizenship: USA			
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY)					
On this day of,, before me personally appeared the above-named Jonathan P. Roberts, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.					
(Seal)	Notary Public	·			

Page 4 of 4 Attorney Docket No.: P0039327.00/1111-251US01 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432 PATENT REEL: 033640 FRAME: 0090

ASSIGNMENT OF APPLICATION

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

LOW-POWER SYSTEM CLOCK CALIBRATION BASED ON A HIGH-ACCURACY REFERENCE CLOCK

for which an application for a United States Patent is being filed contemporaneously herewith;

for which an application for a United States Patent identified as U.S. Patent Application No. 12/915,832; was filed on October 29, 2010;

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

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 55432-5640</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 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, including any provisional application disclosing 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 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 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 4 Attorney Docket No.: P0039327.00/1111-251US01 Medtronic, Inc., 710 Medtronic Parkway, Minneepolls, MN 55432

PATENT REEL: 033640 FRAME: 0091

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 assignce of the entire right, title, and interest therein.

Given Name (first and middle initial [if any]): Matthew	Family Name or Surname (last name): Bond		
Inventor's Signature:	Date:		
City and State: Tempe, Arizona	Country: USA	Citizenship: USA	
STATE OF ARIZONA)) ss. COUNTY OF)			
On this day of appeared the abovc-named Matthew Bond, and w free act and deed, on the day and year aforesaid.	ho executed the fore	, before me personally egoing instrument, as said person's	
(Seal)	Notary Public		
Given Name (first and middle initial [if any]): Charles R.	Family Name or Sur Gordon	mame (last name):	
Inventor's Signature:	Date:		
Residence (City and State): Phoenix, Arizona	Country: USA	Citizenship: USA	
STATE OF ARIZONA)) ss. COUNTY OF) On thisday of appeared the above-named Charles R. Gordon, ar person's free act and deed, on the day and year af	,, ,, , ,, , , , , , , , , , , , , , , , , , , ,	, before me personally foregoing instrument, as said	
(Seal)	Notary Public		

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Assignment

Page 2 of 4 Attorney Docket No.: P0039327.00/1111-251US01 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

PATENT REEL: 033640 FRAME: 0092

Given Name (first and middle initial [if any]): Family Name or Surname (last name):			
Weizheng	Liang		
Inventor's Signature:	Date:		
Residence (City and State): Chandler, Arizona	Country: USA	Citizenship: China	
STATE OF ARIZONA)) ss. COUNTY OF)			
On this <u>day of</u> <u>day of</u> <u>day of</u> <u>day of</u> <u>day of</u> <u>day appeared the above-named Weizheng Liang</u> , and we person's free act and deed, on the day and year afor	vho executed the foregoin	efore me personally g instrument, as said	
(Seal)	Notary Public		
Given Name (first and middle initial [if any]): James D.	Family Name or Sumame (I Reinke	last name):	
Inventor's Signature:	Date: 12/16/201	0	
Residence (City and State): Maple Grove, Minnesota	Country: USA	Citizenship: USA	
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY On this Uth day of <u>December</u> appeared the above-named James D. Reinke, and y person's free act and deed, on the day and year afo		efore me personally ng instrument, as said	
(Seal) MADDNNA M. SCHROEDER Notary Public-Minnesota My Commission Expires Jan 31, 2015	Notary Public	relez	

Assignment

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Page 3 of 4 Attorney Docket No.: P0039327.00/1111-251US01 Medtronic, Inc., 710 Medtronic Parkway, Minneapolis, MN 55432

Given Name (first and middle initial [if any]): Jonathan P.				
Inventor's Signature:	Date: 12/16/2010			
Residence (City and State): Coon Rapids, Minnesota	Country: USA	Citizenship: USA		
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this 1044 day of 2010, before me personally appeared the above-named Jonathan P. Roberts, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.				
(Seal) MADONNA M. SCHROEDER Notary Public-Minnesota My Commession Explines Jan 31, 2015				

Assignment

Page 4 of 4 Attorney Docket No.: P0039327.00/1111-251US01 Medironic, Inc., 710 Medironic Parkway, Minneapolis, MN 55432