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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

ASSIGNMENT REC 1-31-92 P8835.00

| | To the Honorable Commissi | unei di Fatents and Trademarks. F | lease record | ne anach | eu ongmai u | ocuments o | ı çopy t | Hereur. | |
|---------|--|--|--|------------------------------|--------------------|-----------------|---------------|------------------|--|
| 1. | Name of conveying party(ies | s): | 2. Name and address of receiving party(ies): | | | | | | |
| | Paul A. laizzo | | Name: | | MEDTRON | IC. INC | | | |
| | Timothy G. Laske | | | Address: | M.S. LC 340 | | | | |
| | Woohyek Choi | | Street A | ddress: | 710 Medtror | | | | |
| | | | City: | | MINNEAPO | LIS State | : MN | Zip: 55432 | |
| | Additional name(s) of conveying | ng party(ies) attached? []Yes [X]No |) | | | | | | |
| 3. | Nature of conveyance: | | | | | | | | |
| | | | [] Sec | ignment curity Agre er | | [] | Merge Chan | er ge of Name | |
| | Execution Date: 11/29/2001 11/29/2001 12/03/2001 | Paul A. laizzo Timothy G. Laske Woohyek Choi | Addition | al name(s |) & address(| | | s [X]No | |
| | A | | | | | Will. | | | |
| ₽. | Application number(s) or partification filed to the state of the state | ogether with a new application, the | execution date | e of the ap | oplication is: | | ું સ્ | 200a | |
| ۹. | Patent Application No.(s) Additional numbers attached | ? []Yes [X]No | | | | | · · | Q) | |
| 5. | Name and address of party to whom correspondenc concerning document should be mailed: | | Total number of applications and patents involved: | | | | | | |
| | Name <u>Beth L. McMahor</u> | 1 | 7. Tot | al fee (37 | CFR 3.41):. | | \$40 | .00 | |
| | Address: MEDTRONIC, | | | inclosed | | | | | |
| | 710 Medtronic M.S. LC 340 | c Parkway | [X] | Authorize | d to be charq | ged to depos | sit accou | unt | |
| | | Minnesota 55432 | | | ount Numbe | | | | |
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|). | Statement and signature. | | | | | | | | |
| | To the best of my knowled original document. | dge and belief, the foregoing inform | nation is true a | nd correct | and any att | ached copy | is a true | e copy of the | |
| | ŭ | Beth I 1 | mahi |) | Dan | 7,3 | 10001 | | |
| | Beth L. McMahon Name of Person Signing | Signature | raya | 197 | Date | · ') | 200 [| | |
| ٠. | AP No. 0054 0044 (our 4/04) | Total no | umber of page | s includino | g cover shee | t, attachmer | nts and | document: 5 | |
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| _ | - | | signments on, D.C. 20231 | | | | | | |
| | document and gathering the data need | sample cover sheet is estimated to average ded, and completing and reviewing the samp nation systems, PK2-1000C, Washington, D | about 30 minutes le cover sheet. Se | and commen | its regarding this | s burden estima | ite to the l | U.S. Patent | |

PATENT REEL: 012462 FRAME: 0587

ASSIGNMENT

WHEREAS, WE, <u>Paul A. Iaizzo</u>, <u>Timothy G. Laske and Woohyek Choi</u>, are the inventors of <u>IMPROVED SYSTEM AND METHOD FOR DETERMINING TISSUE CONTACT OF AN IMPLANTABLE MEDICAL DEVICE WITHIN A BODY</u> for which we have executed an application for filing in the United States Patent and Trademark Office preparatory to obtaining Letters Patent of the United States on September 14, 2001, therefor; 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 "Medtronic," and University of Minnesota, with an address at Office of Patents and Licensing, Minnesota Technology Center, 1100 Washington Avenue South, Suite 201, Minneapolis, Minnesota 55415-1226, hereinafter referred to as "University of Minnesota", 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 Medtronic and University of Minnesota, 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 Medtronic and University of Minnesota 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, for the consideration aforesaid, we materially represent to Medtronic and University of Minnesota, 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 Medtronic and University of Minnesota, 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 Medtronic and University of Minnesota, its successors or assigns, but at Medtronic and University of Minnesota's expense.

ASSIGNMENT Page 1 of 4

PATENT REEL: 012462 FRAME: 0588

| Patent to Medtronic and University of Minnesota in accordance with this instrument. |
|--|
| IN WITNESS WHEREOF, I have hereunto set my hand on this 29 day of November , 2001. Paul A. laizzo |
| On this |
| MOLLY CHLEBECK NOTARY PUBLIC-MINNESOTA My Comm. Expires Jan. 31, 2006 |

ASSIGNMENT Page 2 of 4

| Patent to Medtronic and University of Minnesota in accordance with this instrument. |
|---|
| IN WITNESS WHEREOF, I have hereunto set my hand on this |
| Timothy G. Laske |
| Timothy G. Laske |
| |
| On this |
| IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written. |
| - Mally Chlebeck |
| MOLLY CHLEBECK Notary Public NOTARY PUBLIC-MINNESOTA |

ASSIGNMENT Page 3 of 4

| Patent to Medtronic and University of Minnesota in accordance with this instrument. |
|---|
| IN WITNESS WHEREOF, I have hereunto set my hand on this3 rd day of |
| Woohyek Choi |
| On this 3 day of Security, 2001, before me personally appeared Woohyek Choi, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his 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. |
| BETTYLOU VISKOCIL Notary Public Minnessoria My Contemps Sag 21, 2006 |

ASSIGNMENT Page 4 of 4 DOCKET NO: P-8835.00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TRANSMITTAL

In re Application of: Paul A. laizzo

For: IMPROVED SYSTEM AND METHOD FOR DETERMINING TISSUE CONTACT OF AN IMPLANTABLE MEDICAL DEVICE WITHIN A BODY

Serial No.: 09/952,869 Filed: September 14, 2001

Filed: September 14, 2001 CERTIFICATE OF MAILING UNDER 37 CFR 1.8: I hereby certify that this TRANSMITTAL and the paper(s), as described herein, Signature Printed Name Commissioner for Patents Washington, D.C. 20231 Attn: Box Assignment We are transmitting herewith the attached: Assignment Assignment Cover Sheet Х Return Postcard Applicant hereby petitions for a _____ month(s) extension of time. If an additional extension of time is required, please consider this a petition therefor. Please charge Deposit Account 13-2546 \$40 for Assignment Recordal Fee for a Total of \$40.00. Applicant believes that no extension of term is required. However, if an extension of time is required, please consider this a petition therefor Х to provide for the possibility that applicant has inadvertently overlooked the need for an extension of time and charge same to Deposit Account 13-2546.

> Beth L. McMahon Reg. No. 41,987 MEDTRONIC, INC.

710 Medtronic Parkway N.E. Minneapolis, Minnesota 55432-5604

Telephone: (763) 514-3066

RECORDED: 01/09/2002

PATENT REEL: 012462 FRAME: 0592