

## PATENT ASSIGNMENT COVER SHEET

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| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                    |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                        |
| <b>CONVEYING PARTY DATA</b>   |                                   |
| <b>Name</b>   | <b>Execution Date</b>             |
| EVOLUTION ROBOTICS, INC.  | 05/22/2013                        |
| <b>RECEIVING PARTY DATA</b>   |                                   |
| <b>Name:</b>  | IROBOT CORPORATION                |
| <b>Street Address:</b>  | 8 CROSBY DRIVE                    |
| <b>City:</b>  | BEDFORD                           |
| <b>State/Country:</b>   | MASSACHUSETTS                     |
| <b>Postal Code:</b>   | 01730                             |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                   |
| <b>Property Type</b>  | <b>Number</b>                     |
| <b>Application Number:</b>  | 17011689                          |
| <b>CORRESPONDENCE DATA</b>  |                                   |
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| <b>ATTORNEY DOCKET NUMBER:</b>  | 09945-0281003                     |
| <b>NAME OF SUBMITTER:</b>   | KRISTI A. HOLMLUND                |
| <b>SIGNATURE:</b>   | /Kristi A Holmlund/               |
| <b>DATE SIGNED:</b>   | 06/30/2022                        |
| <b>Total Attachments: 8</b>   |                                   |
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**ASSIGNMENT**

WHEREAS, Evolution Robotics, Inc., a Delaware corporation having offices at 1055 E. Colorado Blvd., #340, Pasadena, CA 91106 (hereinafter "ASSIGNOR"), represents and warrants that it is the sole owner of the entire right, title, and interest to certain new and useful improvements for which ASSIGNOR has United States and foreign issued Letters Patents and applications for Letters Patents in the United States and other countries, as listed in Appendix A (hereinafter "the Patents and Patent Applications");

WHEREAS, iRobot Corporation, a Delaware corporation having offices at 8 Crosby Drive Bedford, MA 01730 (hereinafter "ASSIGNEE") desires to purchase the entire right, title, and interest in and to the inventions disclosed in the Patents and Patent Applications;

NOW, THEREFORE, in consideration of One Dollar (\$1.00) to ASSIGNOR, and other good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby further acknowledges that it has sold, assigned, and transferred, and by these presents does hereby sell, assign, and transfer, unto ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title, and interest throughout the world in, to, and under the said improvements, and the said Patents and Patent Applications and all Patents that may be granted thereon, and all provisional applications relating thereto, and all divisions, continuations, reissues, reexaminations, renewals, and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent that may hereafter be filed for said improvements or for the said Patents and Patent Applications in any country or countries foreign to the United States; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patents for said improvements and all Letters Patents resulting from the Patents and Patent Applications to ASSIGNEE, its successors, legal representatives, and assigns, in accordance with the terms of this Agreement.

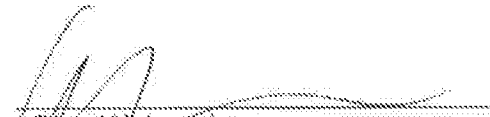
ASSIGNOR does hereby sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of the Letters Patents before or after issuance;

ASSIGNOR hereby covenants and agrees that it will communicate to ASSIGNEE, its successors, legal representatives, and assigns any facts known to ASSIGNOR respecting the Patents and Patent Applications immediately upon becoming aware of those facts, and that it will testify in any legal proceeding involving any of the Patents and Patent Applications, will sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and will generally do everything possible to aid ASSIGNEE, its successors, legal representatives, and assigns to obtain and enforce the Patents and Patent Applications in all countries.

IN WITNESS WHEREOF, Assignor has caused this Assignment to be signed in Assignor's name, with this Assignment effective as to Assignor as of the date of execution thereof.

**FOR ASSIGNOR:**  
EVOLUTION ROBOTICS, INC.

**FOR ASSIGNEE:**  
IROBOT CORPORATION

By:   
Name: Glen Weinsfein  
Title: EVP and Chief Legal Officer  
Date: 5-22-13


By:   
Name: Glen Weinstein  
Title: EVP and Chief Legal Officer  
Date: 5-22-13

EXHIBIT A

Patents

ISSUED PATENTS

| Title  | Country | Patent No. | Issue Date  |
|--|---------|------------|-------------|
| HARDWARE ABSTRACTION LAYER FOR A ROBOT   | US      | 6889118    | 03-May-2005 |
| HARDWARE ABSTRACTION LAYER (HAL) FOR A ROBOT   | US      | 7076336    | 11-Jul-2006 |
| HARDWARE ABSTRACTION LAYER (HAL) FOR A ROBOT   | US      | 7302312    | 27-Nov-2007 |
| HARDWARE ABSTRACTION LAYER (HAL) FOR A ROBOT   | US      | 7925381    | 12-Apr-2011 |
| SENSOR AND ACTUATOR ABSTRACTION AND AGGREGATION IN A HARDWARE ABSTRACTION LAYER FOR A ROBOT  | KR      | 10-0980793 | 01-Sep-2010 |
| PRESSURE SENSOR SYSTEMS AND METHODS FOR USE IN ROBOTIC DEVICES   | US      | 6606540    | 12-Aug-2003 |
| SYSTEMS AND METHODS FOR THE AUTOMATED SENSING OF MOTION IN A MOBILE ROBOT USING VISUAL DATA  | US      | 7162056    | 09-Jan-2007 |
| SYSTEMS AND METHODS FOR LANDMARK GENERATION FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING   | US      | 7774158    | 10-Aug-2010 |
| SYSTEMS AND METHODS FOR FILTERING POTENTIALLY UNRELIABLE VISUAL DATA FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                          | US      | 8150650    | 03-Apr-2012 |
| SYSTEMS AND METHODS FOR ADDING LANDMARKS FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING  | US      | 8086419    | 27-Dec-2011 |
| SYSTEMS AND METHODS FOR DETERMINING WHETHER TO ADD A LANDMARK FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                                 | US      | 8095338    | 10-Jan-2012 |
| SYSTEMS AND METHODS FOR FILTERING POTENTIALLY UNRELIABLE VISUAL DATA FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                          | US      | 7272467    | 18-Sep-2007 |
| SYSTEMS AND METHODS FOR INCREMENTALLY UPDATING A POSE OF A MOBILE DEVICE CALCULATED BY VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING TECHNIQUES | US      | 7015831    | 21-Mar-2006 |
| SYSTEMS AND METHODS FOR CORRECTION OF DRIFT VIA GLOBAL LOCALIZATION WITH A VISUAL LANDMARK   | US      | 7177737    | 13-Feb-2007 |
| SYSTEMS AND METHODS FOR USING MULTIPLE HYPOTHESES IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING SYSTEM                                     | US      | 7135992    | 14-Nov-2006 |
| SYSTEMS AND METHODS FOR USING MULTIPLE HYPOTHESES IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING SYSTEM                                     | US      | 7679532    | 16-Mar-2010 |
| SYSTEMS AND METHODS FOR CONTROLLING A DENSITY OF VISUAL LANDMARKS IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                            | US      | 7145478    | 05-Dec-2006 |
| SYSTEMS AND METHODS FOR CONTROLLING A DENSITY OF VISUAL LANDMARKS IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                            | US      | 7573403    | 11-Aug-2009 |

| Title  | Country | Patent No. | Issue Date  |
|--|---------|------------|-------------|
| SYSTEMS AND METHODS FOR COMPUTING A RELATIVE POSE FOR GLOBAL LOCALIZATION IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING SYSTEM | US      | 7162338    | 09-Jan-2007 |
| COMPUTER AND VISION-BASED AUGMENTED INTERACTION IN THE USE OF PRINTED MEDIA  | US      | 7283983    | 16-Oct-2007 |
| METHODS AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES  | US      | 7720554    | 18-May-2010 |
| METHODS AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES  | US      | 7996097    | 09-Aug-2011 |
| METHODS AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES  | US      | 8295955    | 23-Oct-2012 |
| APPARATUS FOR HOLDING A CLEANING SHEET IN A CLEANING IMPLEMENT   | US      | 8316499    | 27-Nov-2012 |
| CIRCUIT FOR ESTIMATING POSITION AND ORIENTATION OF A MOBILE OBJ  | US      | 7148458    | 12-Dec-2006 |
| SYSTEM AND METHOD OF INTEGRATING OPTICS INTO AN IC PACKAGE   | US      | 7535071    | 19-May-2009 |
| ROBUST SENSOR FUSION FOR MAPPING AND LOCALIZATION IN A SIMULTANEOUS LOCALIZATION AND MAPPING (SLAM) SYSTEM                         | US      | 7669321    | 30-Mar-2010 |
| VISION-ENABLED HOUSEHOLD APPLIANCES  | US      | 7903838    | 08-Mar-2011 |
| VISION-ENABLED HOUSEHOLD APPLIANCES  | US      | 8229161    | 24-Jul-2012 |
| SYSTEMS AND METHODS FOR USING MULTIPLE HYPOTHESES IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING SYSTEM                         | US      | 8274406    | 25-Sep-2012 |

### PENDING APPLICATIONS

| Title   | Country | Pub. No.        | App. No.       | Filing/<br>Pub. Date       |
|---|---------|-----------------|----------------|----------------------------|
| HARDWARE ABSTRACTION LAYER (HAL) FOR A ROBOT                                  | US      | 2012/0041592 A1 | 13/084350      | 11-Apr-2011<br>16-Feb-2012 |
| METHODS AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES   | US      |                 | 13/651080      | 12-Oct-2012                |
| METHOD AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES    | GERMANY |                 | 112005000738.3 | 25-Mar-2005                |
| METHOD AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES    | JAPAN   |                 | 2007-506413    | 25-Mar-2005                |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT | US      | 2011/0167574 A1 | 12/940871      | 05-Nov-2010<br>14-Jul-2011 |

| Title  | Country               | Pub. No.        | App. No.                          | Filing/<br>Pub. Date       |
|--|-----------------------|-----------------|-----------------------------------|----------------------------|
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                                      | BRAZIL                |                 | Unassigned<br>[PCT/US2010/055740] | 05-Nov-2010                |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                                      | CHINA                 | CN 102713779 A  | 201080058150.1                    | 05-Nov-2010<br>03-Oct-2012 |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                                      | EPC                   | 2496995         | 10829201.2                        | 05-Nov-2010<br>12-Sep-2012 |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                                      | JAPAN                 |                 | 2012-538055                       | 05-Nov-2010                |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                                      | RUSSIAN<br>FEDERATION |                 | 2012122469                        | 05-Nov-2010                |
| LOCALIZATION BY LEARNING OF WAVE-SIGNAL DISTRIBUTIONS  | US                    | 2011/0125323 A1 | 12/940937                         | 05-Nov-2010<br>26-May-2011 |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS                  | US                    | 2009/0281661 A1 | 12/429963                         | 24-Apr-2009<br>12-Nov-2009 |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS                  | BRAZIL                |                 | PI0910450-0                       | 24-Apr-2009                |
| ROBOTIC FLOOR CLEANING APPARATUS WITH SHELL CONNECTED TO THE CLEANING ASSEMBLY AND SUSPENDED OVER THE DRIVE SYSTEM | US                    | 2011/0153081 A1 | 12/976786                         | 22-Dec-2010<br>23-Jun-2011 |
| ARTICULATED JOINT AND THREE AREAS OF CONTACT   | US                    | 2011/0160903 A1 | 12/976698                         | 22-Dec-2010<br>30-Jun-2011 |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS                  | CHINA                 | CN 102083352 A  | 200980124250.3                    | 24-Apr-2009<br>01-Jun-2011 |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS                  | EPC                   | 2303085         | 09734436.0                        | 24-Apr-2009<br>06-Apr-2011 |

| Title   | Country   | Pub. No.        | App. No.                          | Filing/<br>Pub. Date       |
|---|-----------|-----------------|-----------------------------------|----------------------------|
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS | INDIA     |                 | 8256/DELNP/2010                   | 24-Apr-2009                |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS | KOREA     |                 | 10-2010-7026278                   | 24-Apr-2009                |
| MOBILE ROBOT FOR CLEANING   | US        | 2011/0202175 A1 | 12/930260                         | 30-Dec-2010<br>18-Aug-2011 |
| APPARATUS FOR HOLDING A CLEANING SHEET IN A CLEANING IMPLEMENT                                    | US        |                 | 13/685476                         | 26-Nov-2012                |
| SYSTEM FOR LOCALIZATION AND OBSTACLE DETECTION USING A COMMON RECEIVER                            | US        | 2011/0166707 A1 | 12/985194                         | 05-Jan-2011<br>07-Jul-2011 |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | US        | 2012/0121161 A1 | 13/244221                         | 23-Sep-2011<br>17-May-2012 |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | AUSTRALIA |                 | Unassigned<br>[PCT/US2011/053122] | 28-Mar-2013                |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | CANADA    |                 | Unassigned<br>[PCT/US2011/053122] | 22-Mar-2013                |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | EPC       |                 | 11827663.3                        | 23-Apr-2013                |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | JAPAN     |                 | Unassigned<br>[PCT/US2011/053122] | 25-Mar-2013                |
| SYSTEM AND METHOD FOR AUTONOMOUS MOPPING OF A FLOOR SURFACE                                       | US        |                 | 12/928965<br>23-Dec-2010          |                            |
| DEBRIS GUARD FOR A WHEEL ASSEMBLY   | US        | 2012/0267943 A1 | 13/455353                         | 25-Apr-2012<br>25-Oct-2012 |
| MOPPING ASSEMBLY FOR A MOBILE ROBOT   | US        |                 | 13/495912                         | 13-Jun-2012                |
| METHODS AND SYSTEMS FOR OBSTACLE DETECTION USING STRUCTURED                                       | US        |                 | 11/584355                         | 20-Oct-2006                |
| SYSTEM AND METHOD FOR MANAGING SEARCH RESULTS INCLUDING GRAPHICS                                  | US        |                 | 13/615381                         | 13-Sep-2012                |
| SCALING VECTOR FIELD SLAM TO LARGE ENVIRONMENTS   | PCT       |                 | PCT/US2012/064553                 | 09-Nov-2012                |
| WALL FOLLOWING SYSTEM   | US        |                 | 61/657357                         | 08-Jun-2012                |
| CARPET DRIFT ESTIMATION USING DIFFERENTIAL SENSORS AND VISUAL MEASUREMENTS                        | US        |                 | 61/657399                         | 08-Jun-2012                |
| ROBOTIC GAME SYSTEMS AND METHODS  | US        | 2009/0081923 A1 | 12/234565                         | 19-Sep-2008<br>26-Mar-2009 |
| TRANSFERABLE INTELLIGENT  | US        | 2009/0082879 A1 | 12/234543                         | 19-Sep-2008                |



| Title  | Country | Pub. No.        | App. No.  | Filing/<br>Pub. Date       |
|--|---------|-----------------|-----------|----------------------------|
| CONTROL DEVICE   |         |                 |           | 26-Mar-2009                |
| SYSTEMS AND METHODS FOR USING MULTIPLE HYPOTHESES IN A VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING SYSTEM | US      | 2013/0006420 A1 | 13/615174 | 13-Sep-2012<br>03-Jan-2013 |

**INACTIVE/ABANDONED/EXPIRED APPLICATIONS**

| Title   | Country | App. No.          | Filing Date |
|---|---------|-------------------|-------------|
| ROBOT CONTROL ARCHITECTURE  | US      | 60/334142         | 28-Nov-2001 |
| ROBOT CONTROL ARCHITECTURE  | US      | 60/355624         | 08-Feb-2002 |
| ROBOT CONTROL ARCHITECTURE  | US      | 60/374309         | 19-Apr-2002 |
| SENSOR AND ACTUATOR ABSTRACTION AND AGGREGATION IN HARDWARE ABSTRACTION LAYER FOR A ROBOT   | JAPAN   | 2003-547121       | 27-Nov-2002 |
| SENSOR AND ACTUATOR ABSTRACTION AND AGGREGATION IN A HARDWARE ABSTRACTION LAYER FOR A ROBOT | PCT     | PCT/US2002/038280 | 27-Nov-2002 |
| METHODS AND SYSTEMS FOR CHARGING A ROBOTIC APPARATUS  | US      | 60/355728         | 08-Feb-2002 |
| SYSTEMS AND METHODS FOR CONFIGURING THE BEHAVIOR OF A ROBOT VIA A USER INTERFACE            | US      | 60/382504         | 21-May-2002 |
| SYSTEMS AND METHODS FOR CONFIGURING THE BEHAVIOR OF A ROBOT VIA A USER INTERFACE            | US      | 60/405854         | 22-Aug-2002 |
| VISUAL STOP AND COLLISION DETECTION   | US      | 60/404348         | 16-Aug-2002 |
| SYSTEMS AND METHODS FOR THE AUTOMATED SENSING OF MOTION IN A MOBILE ROBOT USING VISUAL DATA | PCT     | PCT/US2003/025666 | 15-Aug-2003 |
| METHODS AND SYSTEMS FOR IMAGE RECOGNITION OF HAND-DRAWN                                     | US      | 60/439039         | 09-Jan-2003 |
| VISUAL LOCALIZATION AND MAPPING FOR ROBOTICS  | US      | 60/434269         | 17-Dec-2002 |
| VISUAL LOCALIZATION AND MAPPING   | US      | 60/439049         | 09-Jan-2003 |
| SYSTEMS AND METHODS FOR VISUAL SIMULTANEOUS LOCALIZATION AND MAPPING                        | US      | PCT/US2003/039996 | 17-Dec-2003 |
| COMPUTER AND VISION-BASED AUGMENTED INTERACTION IN THE USE OF PRINTED MEDIA                 | US      | 60/439050         | 09-Jan-2003 |
| COMPUTER AND VISION-BASED AUGMENTED INTERACTION IN THE USE OF PRINTED MEDIA                 | PCT     | PCT/US2004/000414 | 09-Jan-2004 |
| VISION-BASED PROGRAMMING OF MOBILE ROBOTS   | US      | 10/754917         | 09-Jan-2004 |
| VISION- AND ENVIRONMENT-BASED PROGRAMMING OF ROBOTS AND COMPUTER SYSTEMS                    | US      | 60/439047         | 09-Jan-2003 |
| VISION-AND ENVIRONMENT-BASED  | PCT     | PCT/US2004/000413 | 09-Jan-2004 |

| Title   | Country | App. No.          | Filing Date |
|---|---------|-------------------|-------------|
| PROGRAMMING OF ROBOTS AND/OR COMPUTER SYSTEMS   |         |                   |             |
| MECHANICAL ARRANGEMENT AND COMPONENTS FOR REDUCING ERROR IN DEDUCED RECKONING                       | US      | 10/818756         | 06-Apr-2004 |
| METHOD AND SYSTEM FOR FLOOR COVERAGE FOR AN AUTONOMOUS MOBILE ROBOT                                 | US      | 60/575129         | 28-May-2004 |
| SYSTEMS AND METHODS FOR AN OPTICAL DISTANCE SENSOR  | US      | 10/857429         | 28-May-2004 |
| VISION-ENABLED HOUSEHOLD APPLIANCES   | US      | 60/540905         | 30-Jan-2004 |
| METHODS FOR ROBUST SENSOR FUSION  | US      | 60/544486         | 13-Feb-2004 |
| SENSING DEVICE AND METHOD FOR MEASURING POSITION AND ORIENTATION RELATIVE TO MULTIPLE LIGHT SOURCES | PCT     | PCT/US2005/010200 | 25-Mar-2005 |
| METHODS AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES                         | US      | 60/557252         | 29-Mar-2004 |
| METHOD AND APPARATUS FOR POSITION ESTIMATION USING REFLECTED LIGHT SOURCES                          | PCT     | PCT/US2005/010244 | 25-Mar-2005 |
| SYSTEMS AND METHODS FOR RETAIL CHECK-OUT MERCHANDISE DETECTION USING UNDER-CART SCANNING            | US      | 60/548565         | 27-Feb-2004 |
| MOBILE COMPUTING DEVICE WITH IMAGING CAPABILITY   | PCT     | PCT/US2007/011120 | 08-May-2007 |
| METHOD AND SYSTEM FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                         | US      | 61/280678         | 06-Nov-2009 |
| METHODS AND SYSTEMS FOR COMPLETE COVERAGE OF A SURFACE BY AN AUTONOMOUS ROBOT                       | PCT     | PCT/US2010/055740 | 05-Nov-2010 |
| LOCALIZATION BY LEARNING OF WAVE-SIGNAL DISTRIBUTIONS   | US      | 61/280677         | 06-Nov-2009 |
| APPLICATION OF LOCALIZATION, POSITIONING & NAVIGATION SYSTEMS FOR ROBOTIC ENABLED MOBILE PRODUCTS   | PCT     | PCT/US2009/041728 | 24-Apr-2009 |
| VSLAM   | US      | 61/404001         | 24-Sep-2010 |
| SYSTEMS AND METHODS FOR VSLAM OPTIMIZATION  | PCT     | PCT/US2011/053122 | 23-Sep-2011 |
| SCALING VECTOR FIELD SLAM TO LARGE ENVIRONMENTS   | US      | 61/558831         | 11-Nov-2011 |

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