

FORM PTO-1595 (modified)

08-29-2001

(Rev 6-93)

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U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

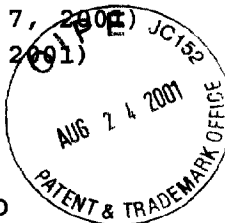
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To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copies thereof.

1. Name of conveying party(ies):

Simarjeet SAINI (August 7, 2001)
 Vijayanand VUSIRIKALA (August 6, 2001)
 Peter J. S. HEIM (August 7, 2001)
 Robert E. BARTOLO (August 7, 2001)
 Mario DAGENAIS (August 8, 2001)

8-24-01



2. Name and address of receiving party(ies):

UNIVERSITY OF MARYLAND
 Office of Technology Commercialization
 6200 Baltimore Avenue, Suite 300
 Riverdale, MD 20737

Additional conveying party(ies)

NO

3. Nature of conveyance:

ASSIGNMENT

Execution Date:

Noted above next to names of conveying
 parties

Additional name(s) & address(es)
 attached?

NO

4. Application number(s) or patent number(s):

If this is being filed together with a new application, the execution date of the application is:

A. Patent Application Number(s):

09/447,428

B. Patent Number(s):

Additional numbers attached? NO

5. Name and address of party to whom correspondence concerning document should be mailed:

Johnny A. Kumar
 FOLEY & LARDNER
 Washington Harbour
 3000 K Street, N.W., Suite 500
 Washington, D.C. 20007-5109

6. Total number of applications/patents involved:

1

7. Total fee (37 C.F.R. § 3.41): \$40.00

☒ Check Enclosed

Charge to deposit account

8. Deposit account number: 19-0741

DO NOT USE THIS SPACE

9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. The Commissioner is hereby authorized to charge any additional recordation fees which may be required in this matter to the above-identified deposit account.

Thomas G. Bilodeau
 for Johnny A. Kumar

Thomas G. Bilodeau

August 24, 2001

Name of person signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: 11

08/28/2001 LMUELLER 00000218 09447428

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PATENT
 REEL: 012106 FRAME: 0930

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS AGREEMENT by and between: **Simarjeet Saini**, an individual having a principal residence at **8935 Early April Way, Apartment H; Columbia, MD 21046** (hereinafter referred to as "Assignor"), and the University of Maryland, College Park having a principal office at Office of Technology Commercialization, 6200 Baltimore Avenue, Suite 300, Riverdale, MD 20737 (hereinafter referred to as "Assignee").

W I T N E S S E T H:

WHEREAS, Assignor has created and developed certain inventions, improvements, discoveries, software, or other intellectual property, as described in **Assignee Invention Disclosure Numbers PS-97-043 and PS-98-086** entitled **"RESONANTLY COUPLED WAVEGUIDES USING A TAPER"** and further described in application for Letters Patent in the United States serial number 09/447,428 Filed November 23, 1999 and for any and all application(s) for Letters Patent in the United States of America and throughout the world, and all divisional, continuation, continuation-in-part, substitutions, renewals, reissues, extensions and other applications pertaining to the foregoing which have or shall be filed in the United States, any foreign country and other jurisdictions (hereinafter collectively referred to as the "Works"); and

WHEREAS, Assignor agrees that, to the extent the Works are, by operation of law or otherwise, not deemed to be works made for hire within the meaning of the Copyright Act, (Title 17, U.S.C. Section 101, et seq.), Assignor agrees to assign all of his/her right, title and interest in and to the Works to Assignee, and further agrees to take such further actions and to execute such further instruments that Assignee might find reasonable or necessary to perfect or to evidence more clearly its right and claim to exclusive ownership of all of Assignor's worldwide intellectual property interests respecting the Works; and

WHEREAS, Assignor and Assignee now wish to perfect and to evidence more clearly the right and claim of Assignee to exclusive ownership of all of Assignor's intellectual property interests respecting the Works.

NOW, THEREFORE, in consideration of the rights granted to Assignor under the University of Maryland Patent Policy and Copyright Policy, as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time, and other good and valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, intending to be legally bound, do hereby covenant and agree as follows:

Section 1. Assignment of the Works.

Assignor hereby assigns, transfers and conveys to Assignee, its successors, assigns or other legal representatives, without the necessity of any consideration in addition to that recited herein, all of Assignor's right, title and interest in and to the Works. This assignment shall be operative with

respect to all intellectual property rights in and to the Works, including (without limitation), (i) all copyrights in the United States and elsewhere, including all rights of registration, publication, renewal, rights to create derivative works and all other rights incident to copyright ownership, for the residue now unexpired of the present term of any and all such copyrights and any term thereafter granted during which the Works are entitled to copyright; (ii) all trade secrets, inventions, know-how, ideas and confidential information embodied or reflected in the Works, including any shop rights, for the longest period of protection accorded to such interest under applicable law; and (iii) all patent rights in the United States and elsewhere, including all rights of registration, publication, renewal, and all other works incident to copyright ownership, for the longest period of protection accorded to such interests under applicable law.

Section 2. University of Maryland Copyright and Patent Policies.

The assignment of rights perfected hereunder shall be governed by the University of Maryland Patent Policy and Copyright Policy as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time. Royalty income shall be allocated as set forth in those policies.

Section 3. Warranty.

Assignor warrants and covenants that he/she is an author or inventor of the Works and that as of the date of this Assignment, has taken no action respecting the Works which purports or attempts to transfer or encumber any right, title or interest in or to the Works to any other party; and covenants not to take such action in the future.

Section 4. Jurisdiction.

The validity, interpretation, and effect of this agreement shall be governed by the laws of the State of Maryland and of the United States of America. Any legal proceedings involving claims or disputes regarding this agreement shall be brought in the appropriate court in the State of Maryland.

WHEREAS, the parties have caused this Assignment to be executed on the dates below.

ASSIGNOR

Agreed to by: _____

Printed Name: Simarjeet Sajni

Date: _____

08/07/01

ASSIGNEE (The University of Maryland)

Acknowledged and Agreed to by:

Printed Name: _____

Title: _____

James A. Poulos, III
Executive Director

Date: _____

8-10-01

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS AGREEMENT by and between: **Vijayanand Vusirikala**, an individual having a principal residence at **17 Chandler Road, Westford, MA 01886** (hereinafter referred to as "Assignor"), and the University of Maryland, College Park having a principal office at Office of Technology Commercialization, 6200 Baltimore Avenue, Suite 300, Riverdale, MD 20737 (hereinafter referred to as "Assignee").

W I T N E S S E T H :

WHEREAS, Assignor has created and developed certain inventions, improvements, discoveries, software, or other intellectual property, as described in **Assignee Invention Disclosure Numbers PS-97-043 and PS-98-086 entitled "RESONANTLY COUPLED WAVEGUIDES USING A TAPER "** and further described in application for Letters Patent in the United States serial number 09/447,428 Filed November 23, 1999 and for any and all application(s) for Letters Patent in the United States of America and throughout the world, and all divisional, continuation, continuation-in-part, substitutions, renewals, reissues, extensions and other applications pertaining to the foregoing which have or shall be filed in the United States, any foreign country and other jurisdictions (hereinafter collectively referred to as the "Works"); and

WHEREAS, Assignor agrees that, to the extent the Works are, by operation of law or otherwise, not deemed to be works made for hire within the meaning of the Copyright Act, (Title 17, U.S.C. Section 101, et seq.), Assignor agrees to assign all of his/her right, title and interest in and to the Works to Assignee, and further agrees to take such further actions and to execute such further instruments that Assignee might find reasonable or necessary to perfect or to evidence more clearly its right and claim to exclusive ownership of all of Assignor's worldwide intellectual property interests respecting the Works; and

WHEREAS, Assignor and Assignee now wish to perfect and to evidence more clearly the right and claim of Assignee to exclusive ownership of all of Assignor's intellectual property interests respecting the Works.

NOW, THEREFORE, in consideration of the rights granted to Assignor under the University of Maryland Patent Policy and Copyright Policy, as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time, and other good and valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, intending to be legally bound, do hereby covenant and agree as follows:

Section 1. Assignment of the Works.

Assignor hereby assigns, transfers and conveys to Assignee, its successors, assigns or other legal representatives, without the necessity of any consideration in addition to that recited herein, all of Assignor's right, title and interest in and to the Works. This assignment shall be operative with

respect to all intellectual property rights in and to the Works, including (without limitation), (i) all copyrights in the United States and elsewhere, including all rights of registration, publication, renewal, rights to create derivative works and all other rights incident to copyright ownership, for the residue now unexpired of the present term of any and all such copyrights and any term thereafter granted during which the Works are entitled to copyright; (ii) all trade secrets, inventions, know-how, ideas and confidential information embodied or reflected in the Works, including any shop rights, for the longest period of protection accorded to such interest under applicable law; and (iii) all patent rights in the United States and elsewhere, including all rights of registration, publication, renewal, and all other works incident to copyright ownership, for the longest period of protection accorded to such interests under applicable law.

Section 2. University of Maryland Copyright and Patent Policies.

The assignment of rights perfected hereunder shall be governed by the University of Maryland Patent Policy and Copyright Policy as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time. Royalty income shall be allocated as set forth in those policies.

Section 3. Warranty.

Assignor warrants and covenants that he/she is an author or inventor of the Works and that as of the date of this Assignment, has taken no action respecting the Works which purports or attempts to transfer or encumber any right, title or interest in or to the Works to any other party; and covenants not to take such action in the future.

Section 4. Jurisdiction.

The validity, interpretation, and effect of this agreement shall be governed by the laws of the State of Maryland and of the United States of America. Any legal proceedings involving claims or disputes regarding this agreement shall be brought in the appropriate court in the State of Maryland.

WHEREAS, the parties have caused this Assignment to be executed on the dates below.

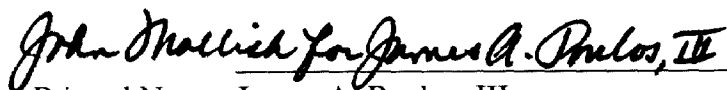
ASSIGNOR

Agreed to by: 
Printed Name: Vijayanand Vusirikala

Date: 6 Aug 2001

ASSIGNEE (The University of Maryland)

Acknowledged and Agreed to by:


Printed Name: James A. Poulos, III
Title: Executive Director

Date: 8-10-01

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS AGREEMENT by and between: **Peter J.S. Heim**, an individual having a principal residence at **1359 A St. NE; Washington, DC 20002** (hereinafter referred to as "Assignor"), and the University of Maryland, College Park having a principal office at Office of Technology Commercialization, 6200 Baltimore Avenue, Suite 300, Riverdale, MD 20737 (hereinafter referred to as "Assignee").

WITNESSETH:

WHEREAS, Assignor has created and developed certain inventions, improvements, discoveries, software, or other intellectual property, as described in **Assignee Invention Disclosure Numbers PS-97-043 and PS-98-086** entitled **"RESONANTLY COUPLED WAVEGUIDES USING A TAPER"** and further described in application for Letters Patent in the United States serial number 09/447,428 Filed November 23, 1999 and for any and all application(s) for Letters Patent in the United States of America and throughout the world, and all divisional, continuation, continuation-in-part, substitutions, renewals, reissues, extensions and other applications pertaining to the foregoing which have or shall be filed in the United States, any foreign country and other jurisdictions (hereinafter collectively referred to as the "Works"); and

WHEREAS, Assignor agrees that, to the extent the Works are, by operation of law or otherwise, not deemed to be works made for hire within the meaning of the Copyright Act, (Title 17, U.S.C. Section 101, et seq.), Assignor agrees to assign all of his/her right, title and interest in and to the Works to Assignee, and further agrees to take such further actions and to execute such further instruments that Assignee might find reasonable or necessary to perfect or to evidence more clearly its right and claim to exclusive ownership of all of Assignor's worldwide intellectual property interests respecting the Works; and

WHEREAS, Assignor and Assignee now wish to perfect and to evidence more clearly the right and claim of Assignee to exclusive ownership of all of Assignor's intellectual property interests respecting the Works.

NOW, THEREFORE, in consideration of the rights granted to Assignor under the University of Maryland Patent Policy and Copyright Policy, as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time, and other good and valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, intending to be legally bound, do hereby covenant and agree as follows:

Section 1. Assignment of the Works.

Assignor hereby assigns, transfers and conveys to Assignee, its successors, assigns or other legal representatives, without the necessity of any consideration in addition to that recited herein, all of Assignor's right, title and interest in and to the Works. This assignment shall be operative with

respect to all intellectual property rights in and to the Works, including (without limitation), (i) all copyrights in the United States and elsewhere, including all rights of registration, publication, renewal, rights to create derivative works and all other rights incident to copyright ownership, for the residue now unexpired of the present term of any and all such copyrights and any term thereafter granted during which the Works are entitled to copyright; (ii) all trade secrets, inventions, know-how, ideas and confidential information embodied or reflected in the Works, including any shop rights, for the longest period of protection accorded to such interest under applicable law; and (iii) all patent rights in the United States and elsewhere, including all rights of registration, publication, renewal, and all other works incident to copyright ownership, for the longest period of protection accorded to such interests under applicable law.

Section 2. University of Maryland Copyright and Patent Policies.

The assignment of rights perfected hereunder shall be governed by the University of Maryland Patent Policy and Copyright Policy as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time. Royalty income shall be allocated as set forth in those policies.

Section 3. Warranty.

Assignor warrants and covenants that he/she is an author or inventor of the Works and that as of the date of this Assignment, has taken no action respecting the Works which purports or attempts to transfer or encumber any right, title or interest in or to the Works to any other party; and covenants not to take such action in the future.

Section 4. Jurisdiction.

The validity, interpretation, and effect of this agreement shall be governed by the laws of the State of Maryland and of the United States of America. Any legal proceedings involving claims or disputes regarding this agreement shall be brought in the appropriate court in the State of Maryland.

WHEREAS, the parties have caused this Assignment to be executed on the dates below.

ASSIGNOR

Agreed to by: Peter J.S. Heim

Printed Name: Peter J.S. Heim

Date: 8/7/01

ASSIGNEE (The University of Maryland)

Acknowledged and Agreed to by:

John Mallish for James A. Poulos, III

Printed Name: James A. Poulos, III

Title: Executive Director

Date: 8-10-01

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS AGREEMENT by and between: **Robert E. Bartolo**, an individual having a principal residence at **400 Seward Square, Apartment 33; Washington, DC 20003** (hereinafter referred to as "Assignor"), and the University of Maryland, College Park having a principal office at Office of Technology Commercialization, 6200 Baltimore Avenue, Suite 300, Riverdale, MD 20737 (hereinafter referred to as "Assignee").

WITNESSETH:

WHEREAS, Assignor has created and developed certain inventions, improvements, discoveries, software, or other intellectual property, as described in **Assignee Invention Disclosure Numbers PS-97-043 and PS-98-086 entitled "RESONANTLY COUPLED WAVEGUIDES USING A TAPER "** and further described in application for Letters Patent in the United States serial number 09/447,428 Filed November 23, 1999 and for any and all application(s) for Letters Patent in the United States of America and throughout the world, and all divisional, continuation, continuation-in-part, substitutions, renewals, reissues, extensions and other applications pertaining to the foregoing which have or shall be filed in the United States, any foreign country and other jurisdictions (hereinafter collectively referred to as the "Works"); and

WHEREAS, Assignor agrees that, to the extent the Works are, by operation of law or otherwise, not deemed to be works made for hire within the meaning of the Copyright Act, (Title 17, U.S.C. Section 101, et seq.), Assignor agrees to assign all of his/her right, title and interest in and to the Works to Assignee, and further agrees to take such further actions and to execute such further instruments that Assignee might find reasonable or necessary to perfect or to evidence more clearly its right and claim to exclusive ownership of all of Assignor's worldwide intellectual property interests respecting the Works; and

WHEREAS, Assignor and Assignee now wish to perfect and to evidence more clearly the right and claim of Assignee to exclusive ownership of all of Assignor's intellectual property interests respecting the Works.

NOW, THEREFORE, in consideration of the rights granted to Assignor under the University of Maryland Patent Policy and Copyright Policy, as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time, and other good and valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, intending to be legally bound, do hereby covenant and agree as follows:

Section 1. Assignment of the Works.

Assignor hereby assigns, transfers and conveys to Assignee, its successors, assigns or other legal representatives, without the necessity of any consideration in addition to that recited herein, all of Assignor's right, title and interest in and to the Works. This assignment shall be operative with respect to all intellectual property rights in and to the Works, including (without limitation), (i) all

copyrights in the United States and elsewhere, including all rights of registration, publication, renewal, rights to create derivative works and all other rights incident to copyright ownership, for the residue now unexpired of the present term of any and all such copyrights and any term thereafter granted during which the Works are entitled to copyright; (ii) all trade secrets, inventions, know-how, ideas and confidential information embodied or reflected in the Works, including any shop rights, for the longest period of protection accorded to such interest under applicable law; and (iii) all patent rights in the United States and elsewhere, including all rights of registration, publication, renewal, and all other works incident to copyright ownership, for the longest period of protection accorded to such interests under applicable law.

Section 2. University of Maryland Copyright and Patent Policies.

_____ Rights protected hereunder shall be governed by the University of Maryland Patent Policy and Copyright Policy as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time. Royalty income shall be allocated as set forth in those policies.

Section 3. Warranty.

Assignor warrants and covenants that he/she is an author or inventor of the Works and that as of the date of this Assignment, has taken no action respecting the Works which purports or attempts to transfer or encumber any right, title or interest in or to the Works to any other party; and covenants not to take such action in the future.

Section 4. Jurisdiction.

The validity, interpretation, and effect of this agreement shall be governed by the laws of the State of Maryland and of the United States of America. Any legal proceedings involving claims or disputes regarding this agreement shall be brought in the appropriate court in the State of Maryland.

WHEREAS, the parties have caused this Assignment to be executed on the dates below.

ASSIGNOR

Agreed to by: Robert E. Bartolo Date: 8-7-01
Printed Name: Robert E. Bartolo

ASSIGNEE (The University of Maryland)

Acknowledged and Agreed to by:

John Mallick for James A. Poulos III Date: 8-10-01
Printed Name: James A. Poulos, III
Title: Executive Director

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS AGREEMENT by and between: **Mario Dagenais**, an individual having a principal residence at **5301 Dorset Avenue, Chevy Chase, MD 20815** (hereinafter referred to as "Assignor"), and the University of Maryland, College Park having a principal office at Office of Technology Commercialization, 6200 Baltimore Avenue, Suite 300, Riverdale, MD 20737 (hereinafter referred to as "Assignee").

WITNESSETH:

WHEREAS, Assignor has created and developed certain inventions, improvements, discoveries, software, or other intellectual property, as described in **Assignee Invention Disclosure Numbers PS-97-043 and PS-98-086** entitled **"RESONANTLY COUPLED WAVEGUIDES USING A TAPER"** and further described in application for Letters Patent in the United States serial number 09/447,428 Filed November 23, 1999 and for any and all application(s) for Letters Patent in the United States of America and throughout the world, and all divisional, continuation, continuation-in-part, substitutions, renewals, reissues, extensions and other applications pertaining to the foregoing which have or shall be filed in the United States, any foreign country and other jurisdictions (hereinafter collectively referred to as the "Works"); and

WHEREAS, Assignor agrees that, to the extent the Works are, by operation of law or otherwise, not deemed to be works made for hire within the meaning of the Copyright Act, (Title 17, U.S.C. Section 101, et seq.), Assignor agrees to assign all of his/her right, title and interest in and to the Works to Assignee, and further agrees to take such further actions and to execute such further instruments that Assignee might find reasonable or necessary to perfect or to evidence more clearly its right and claim to exclusive ownership of all of Assignor's worldwide intellectual property interests respecting the Works; and

WHEREAS, Assignor and Assignee now wish to perfect and to evidence more clearly the right and claim of Assignee to exclusive ownership of all of Assignor's intellectual property interests respecting the Works.

NOW, THEREFORE, in consideration of the rights granted to Assignor under the University of Maryland Patent Policy and Copyright Policy, as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time, and other good and valuable consideration furnished by Assignee to Assignor, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee, intending to be legally bound, do hereby covenant and agree as follows:

Section 1. Assignment of the Works.

Assignor hereby assigns, transfers and conveys to Assignee, its successors, assigns or other legal representatives, without the necessity of any consideration in addition to that recited herein, all of Assignor's right, title and interest in and to the Works. This assignment shall be operative with

respect to all intellectual property rights in and to the Works, including (without limitation), (i) all copyrights in the United States and elsewhere, including all rights of registration, publication, renewal, rights to create derivative works and all other rights incident to copyright ownership, for the residue now unexpired of the present term of any and all such copyrights and any term thereafter granted during which the Works are entitled to copyright; (ii) all trade secrets, inventions, know-how, ideas and confidential information embodied or reflected in the Works, including any shop rights, for the longest period of protection accorded to such interest under applicable law; and (iii) all patent rights in the United States and elsewhere, including all rights of registration, publication, renewal, and all other works incident to copyright ownership, for the longest period of protection accorded to such interests under applicable law.

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The assignment of rights perfected hereunder shall be governed by the University of Maryland Patent Policy and Copyright Policy as approved by the Board of Regents of the University of Maryland, and as amended by them from time to time. Royalty income shall be allocated as set forth in those policies.

Section 3. Warranty.

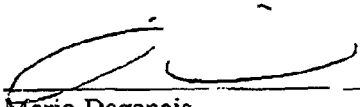
Assignor warrants and covenants that he/she is an author or inventor of the Works and that as of the date of this Assignment, has taken no action respecting the Works which purports or attempts to transfer or encumber any right, title or interest in or to the Works to any other party; and covenants not to take such action in the future.

Section 4. Jurisdiction.

The validity, interpretation, and effect of this agreement shall be governed by the laws of the State of Maryland and of the United States of America. Any legal proceedings involving claims or disputes regarding this agreement shall be brought in the appropriate court in the State of Maryland.

WHEREAS, the parties have caused this Assignment to be executed on the dates below.


ASSIGNOR

Agreed to by: 
Printed Name: Mario Dagenais

Date: 8/8/01

ASSIGNEE (The University of Maryland)

Acknowledged and Agreed to by:


Printed Name: James A. Poulos, III
Title: Executive Director

Date: 8-10-01