

Form PTO-1595 (Rev. 09/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

## RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)/Execution Date(s):**

RAJARISHI SINHA (03/17/2008), PETER  
LEDEL GAMMEL (02/22/2008), AND HUGO  
SAFAR (03/01/2008)

Execution Date(s): in parentheses after inventor name

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

**3. Nature of Conveyance:**

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other

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

Name: RENAISSANCE WIRELESS CORP.

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

425 N. CRAIG STREET  
SUITE 500

City: PITTSBURGH

State: PENNSYLVANIA

Country: United States of America Zip: 15213

Additional name(s) & address(es) attached? ☐ Yes ☒ No

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

A. Patent Application No.(s)

12/002,524

☐ This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Richard J. Botos  
LENER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK, LLP

Internal Address: Atty. Dkt.: \_\_\_\_\_

Street Address: 600 South Avenue West

City: Westfield

State: NJ Zip: 07090

Phone Number: (908) 654-5000

Fax Number: (908) 654-0415

Email Address: rbotos@ldlkm.com

**6. Total number of applications and patents involved:**

1

**7. Total fee (37 CFR 1.21(h) & 3.41) \$** 40.00

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number 12-1095  
Authorized User Name Richard J. Botos

**9. Signature:**

Richard J. Botos  
Signature

August 10, 2011

Date

Richard J. Botos - 32,016  
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 4

Former PTO/SB/15 (8-00) Modified (DI KAM)

<b>ASSIGNMENT OF UTILITY APPLICATION</b>	Docket Number (Optional) <b>RENWIR 3.0-002</b>
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Whereas, I, Rajarishi Sinha of  
5829 Holden Street; Pittsburgh, Pennsylvania 15232  
 hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**INTEGRATED ACOUSTIC BANDGAP DEVICES FOR ENERGY CONFINEMENT AND METHODS OF FABRICATING SAME**  
☒ for which an application for a United States Letters Patent was filed on December 17, 2007  
 Application Number 12/002,524  
☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
 and \_\_\_\_\_

Whereas, Renaissance Wireless Corp.  
 a corporation of Delaware herein referred to as "assignee" whose mailing address is  
425 N. Craig Street; Suite 500; Pittsburgh, Pennsylvania 15213  
 is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

03/17/2008 (Date)
 
Rajarishi Sinha (Signature)

State of Pennsylvania ) SS:  
 County of Allegheny )

On this 12 day of MARCH, 2008 before me personally came the above-named Rajarishi Sinha, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/hor of his/her own free will for the purposes therein set forth.

Lee Douglass  
 (Notary Public)

**NOTARIAL SEAL**  
 LEE DOUGLASS, Notary Public  
 City of Pittsburgh, Allegheny County  
 My Commission Expires 9/2/2010

☒ \*Total of 4 forms are submitted.

former PTO/SB/15 (8-00) Modified LDLKM

## ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

RENWIR 3.0-002

Whereas, I, Peter Ledel Gammel of  
58 Whittingham Terrace; Millburn, New Jersey 07041

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
INTEGRATED ACOUSTIC BANDGAP DEVICES FOR ENERGY CONFINEMENT AND  
METHODS OF FABRICATING SAME

☒ for which an application for a United States Letters Patent was filed on December 17, 2007

Application Number 12/002,524

☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
 and \_\_\_\_\_

Whereas, Renaissance Wireless Corp.  
 a corporation of Delaware herein referred to as "assignee" whose mailing address is

425 N. Craig Street; Suite 500; Pittsburgh, Pennsylvania 15213

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

8/22/2008

(Date)

Peter L. Gammel

(Signature)

State of New Jersey ) ss:  
 County of Middlesex )

On this 22<sup>nd</sup> day of February, 2008 before me personally came the above-named Peter Ledel Gammel, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

Donna Oshrin  
 (Notary Public)

☒ \*Total of 4 forms are submitted.

former PTO/SB/15 (A 60) Modified 101 K&amp;M

## ASSIGNMENT OF UTILITY APPLICATION

Docket Number (Optional)

RENWIR 3.0-002

Whereas, I, Hugo Safar of709 Oak Avenue; Westfield, New Jersey 07090

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**INTEGRATED ACOUSTIC BANDGAP DEVICES FOR ENERGY CONFINEMENT AND  
 METHODS OF FABRICATING SAME**

☒ for which an application for a United States Letters Patent was filed on December 17, 2007

Application Number 12/002,524

☐ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_  
 and \_\_\_\_\_

Whereas, Renaissance Wireless Corp.a corporation of Delaware herein referred to as "assignee" whose mailing address is425 N. Craig Street, Suite 500; Pittsburgh, Pennsylvania 15213

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, continuation-in-part, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

3-1-08

(Date)

(Signature)

State of NJ ) SS:  
 County of Somerset )

On this 1st day of March, 2008 before me personally came the above-named Hugo Safar, to me personally known as the individual who executed the foregoing instrument, who acknowledged to me that the same was executed by him/her of his/her own free will for the purposes therein set forth.

(Notary Public)

ANNA R. ADURATO  
 NOTARY PUBLIC  
 STATE OF NEW JERSEY  
 MY COMMISSION EXPIRES DECEMBER 11, 2010

☒ \*Total of 4 forms are submitted.