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| Steven C. Tidrow Frank Crowne | Name: The United States of America as represented by the | | | | | | |
| Daniel Potrepka Bernard J. Rod | Internal Address: Secretary of the Army | | | | | | |
| Additional name(s) of conveying party(ies) attached? Yes X No | | | | | | | |
| 3. Nature of conveyance/Execution Date(s): | Street Address: | | | | | | |
| Execution Date(s) 10/2/2009, 10/7/2009 | · | | | | | | |
| Assignment Merger Change of Name | City: Washington | | | | | | |
| Security Agreement | | | | | | | |
| Joint Research Agreement Government Interest Assignment | State: DC | | | | | | |
| Executive Order 9424, Confirmatory License | Country: USA Zip: 20310 | | | | | | |
| Other | No. 100 In the Indian I | | | | | | |
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| A. Patent Application No.(s) | document is being filed together with a new application. B. Patent No.(s) | | | | | | |
| 7. Tatom reproductives (e) | | | | | | | |
| 12/427,295 | | | | | | | |
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| | ached? Yes X No | | | | | | |
| 5. Name and address to whom correspondence concerning document should be mailed: | 6. Total number of applications and patents involved: 1 | | | | | | |
| Name: <u>U.S. Army Research Laboratory</u> | 7. Total fee (37 CFR 1.21(h) & 3.41) \$_40.00 | | | | | | |
| Internal Address: Attn: RDRL-LOC-I/Guy M. Miller | 11 10 10 10 (CT CT X 11 2 1 (11) CT CT X 1 | | | | | | |
| | X Authorized to be charged to deposit account | | | | | | |
| Street Address: 2800 Powder Mill Road | Enclosed | | | | | | |
| Oticet Address. 2000 Fowder Milli Noad | None required (government interest not affecting title) | | | | | | |
| City: Adelphi | 8. Payment Information | | | | | | |
| State: Maryland Zip: 20783 | | | | | | | |
| Phone Number: 301-394-3791 | Day of Assessed March 20 | | | | | | |
| Fax Number: 301-394-3972 | Deposit Account Number 19-2201 | | | | | | |
| Email Address:_guy.m.miller@arl.army.mil | Authorized User Name Guy M. Miller | | | | | | |
| 9. Signature: 14, 2 2 | m-7-n9 | | | | | | |
| Signature | Date | | | | | | |
| 7 Guy M. Miller, Reg. No. 32,333 | Total number of pages including cover 4 | | | | | | |
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PATENT REEL: 023343 FRAME: 0563

ARL 03-93

ASSIGNMENT AND AGREEMENT

Title of Invention: Ferroelectric Radiation Detector Employing Frequency Modulated Readout

Inventor(s): Steven C. Tidrow, Frank Crowne, Daniel Potrepka, and Bernard J. Rod

Date Declaration Executed:

10/01/2009, 10/07/2009

*Application Serial No.: 12/427,295

*Filing Date: April 21, 2009

(*Data not known at execution may be added later for better identification.)

I (We), the undersigned inventor(s), in consideration of the rights of the Government of the United States acquired by virtue of circumstances under which the above-identified invention was made, hereby:

- 1. Assign to the Government of the United States, as represented by the Secretary of the Army, the entire right, title, and interest throughout the United States, its Territories, Possessions, and Puerto Rico, in and to the above-entitled invention and application for patent and all Letters Patent issuing thereon, and any continuation, continuation-in-part or division of said application and any reissue or extension of said Letters Patent.
- 2. Agree to assign to the Government upon its request, title and interest in the invention in those foreign countries in which the Government, within eight months of the filing of the United States application for patent, determines to cause an application to be filed; provided that if the Government determines not to cause an application to be filed in any particular foreign country or fails to make such a determination, within the said eight months, all right, title and interest in the invention in such foreign country shall remain in me (us), subject to a nonexclusive, irrevocable, royalty-free license to the Government in any patent in which may issue on the invention in such foreign country, including the power to issue sublicenses for use in behalf of the Government and/or furtherance of the foreign policies of the Government.
- 3. Agree to provide any further information within my (our) knowledge and to execute any further documents necessary to the prosecution of patent applications on the invention, the prosecution and settlement of interferences and recording of title to patent applications and patents issuing thereon.

| Signature of 1st Inventor: | (First name) | (Middle I | nitial) | (Last Name) | |
|--|--------------|-----------|-----------------------|-----------------|--|
| Duty Address: 615 5 | Sugar RL, A | lpt. 13 | Hidalgo County) | Texas | |
| Date: 10/2/2009 | J | , | ventor: Steven C. Tid | (State) Irow | |
| *******(notarizing preferred)****** | | | | | |
| State of: 12x65 SS. County of: 11:dalg [place where acknowledgement is taken] | | | | | |

On the above date known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed. In witness whereof I hereunto set my hand and official seal.

SHAUN DAWSON
Notary Public, State of Texas
My Commission Expires
OCT. 17, 2010

(Printed or typewritten name of notary public)

(Signature of notary public)

My Commission expires on 10-17-10

| \mathcal{L} | ARL 03-93 |
|--|---|
| Signature of 2 nd Inventor: (First name) | (Middle Initial) (Last Name) |
| Duty Address: | Alelahi Mentgouvy Co, MD (State) |
| Date: 10 -7-09. | Typed name of Inventor: Frank Crowne |
| *** | ******(notarizing preferred)******* |
| State of: Mary (cup) SS. County of: Managameny) [pi | lace where acknowledgement is taken] |
| | e individual described in and who executed the foregoing instrument duly to me that the same as his own free act and deed. In witness whereof I |
| international state of the stat | Nadine L. Loman |
| | (Printed or typewritten name of notary public) |
| | (Signature of notary public) |
| / O (SÉAL) | (Signature of notary public) |
| Commence Commence | My Commission expires on February 27, 2011 |
| Signature of 3rd Inventor: | el M. Potreplea |
| (First name) | (Middle Initial) (Last Name) |
| Duty Address: ARL | Montgomery MD |
| (Locality) Date: Oct 7, 2009 | (State) |
| Date: Oct 7, 2009. | Typed name of Inventor: Daniel Potrepka |
| | *****(notarizing preferred)******* |
| State of: <u>Maylaun</u>) SS. County of: <u>Wontgomey</u>) [plo | ace where acknowledgement is taken] |
| | e individual described in and who executed the foregoing instrument duly o me that the same as his own free act and deed. In witness whereof I |
| | Nadine L. Loman |
| Market Comments | (Printed or typewritten name of notary public) |
| A Committee of the Comm | Madui Long |
| (SEAL) | (Signature of notary public) |
| 4. 7 6 5 5 0 3 C | My Commission expires on February 27, 2011 |

| | | | | ARL 03-93 | | |
|--|------------------------------------|--------------------------|------------|-----------|--|--|
| Signature of 4 th Inventor: | Bernard (First name) | (Mistale Initial) | Rod | Name) | | |
| | 000 | | • | | | |
| Duty Address: | (Locality) Adelph | (County) | lomely | (State) | | |
| Date: 10-07-09. Typed name of Inventor: Bernard J. Rod | | | | | | |
| *******(notarizing preferred)****** | | | | | | |
| State of: Marylan | | | | | | |
| County of: | mሊ<u>ዛ</u>) [place where . | acknowledgement is taker | <i>i</i>] | | | |

On the above date known to me to be the individual described in and who executed the foregoing instrument duly appeared before me and acknowledged to me that the same as his own free act and deed. In witness whereof I hereunto set my hand and official seal.

(SEAL)

Nadine L. Loman
(Printed or typewritten name of notary public)

(Signature of notary public)

My Commission expires on February 27, 2011