502467289 08/22/2013

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Ajit P. Yoganathan | 08/14/2013 |
| Choon-Hwai Yap | 08/14/2013 |

RECEIVING PARTY DATA

| Name: | Georgia Tech Research | |
|-----------------|-----------------------|--|
| Street Address: | 505 Tenth Street NW | |
| City: | Atlanta | |
| State/Country: | GEORGIA | |
| Postal Code: | 30332-0415 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 13990247 | |

CORRESPONDENCE DATA

Fax Number: 9143320615

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 9143320222

Email: elissa.deluccy@philips.com

Correspondent Name: Philips Intellectual Property & Standard

Address Line 1: 345 Scarborough Road

Address Line 2: P.O. Box 3001

Address Line 4: Briarcliff Manor, NEW YORK 10510

| ATTORNEY DOCKET NUMBER: | 2011P00445WOUS |
|-------------------------|-------------------------|
| NAME OF SUBMITTER: | W. Brinton Yorks, Jr. |
| Signature: | /W. Brinton Yorks, Jr./ |
| Date: | 08/22/2013 |

Total Attachments: 2

source=2011P00445WOUS_Assignment#page1.tif source=2011P00445WOUS_Assignment#page2.tif

PATENT REEL: 031058 FRAME: 0505 CH \$40.00 13990

For good and valuable consideration, of which I/we acknowledge receipt, I/we as a below-named Assignor(s), hereby sell,

| 30332-041 | m, naving a place of business at | lusive right, title, and interest in the follow the Georgia Institute of Technology, 505 egal representatives, including any nomine | ing to Georgia Tech Research |
|---|---|--|--|
| □ was exe | uted concurrently herewith | ······································ | |
| | 30 0M | , having a Serial No. | · · · · · · · · · · · · · · · · · · · |
| EZ was me | 30 00. 2011-Dec-16, having an I | nternational Application No. PCT/IB2011 | /055744, |
| provisional | s divisions, continuations, conti ity thereto, and the entire and ex | d all other United States, foreign and interrity therefrom including, but not limited to, mustions-in-part, re-examinations, reissues clusive right, title, and interest in and to at | any and all provisionals, non- |
| I/We author any and ali legal repress | | Office officials in the United States and in a lely to the Assignee(s), for its sole use, and | any and all foreign countries to issue that of its successors, assigns, and |
| legal procee | dings including patent prosecut estrable, or convenient for secur | able the Assignee to enjoy the foregoing ri Assignee, I/we agree to execute all papers, ion actions and infringement actions, and d ting and maintaining patents on the foregoi | take all rightful onths, testify in all |
| I/We certify | that I/we have the full right to c | onvey the above rights. | |
| 78 /1 6 1 Date | (sign name here) (print name here) | AJIT P. YOUTANATHAN | Assignor |
| Date | (Sign name here) (print name here) | Choon-Hwai YAP | .Assignor |

PATENT REEL: 031058 FRAME: 0506

(print name here)

RECORDED: 08/22/2013

and assign, and transfer the entire and exclusive right, title, and interest in the following to Georgia Tech Research Corporation, having a place of business at the Georgia Institute of Technology, 505 Tenth Street, NW, Atlanta, Georgia 30332-0415, its successors, assigns, and legal representatives, including any nominees (collectively "the Assignee") my/our invention for which an application: is executed concurrently herewith was executed by me/us on was filed on. , having a Serial No. was filed on. 2011-Dec-16, having an International Application No. PCT/IB2011/055744, and all rights in and to said application, and all other United States, foreign and international patent applications associated therewith, based thereon, or claiming priority therefrom including, but not limited to, any and all provisionals, nonprovisionals divisions, continuations, continuations-in-part, re-examinations, reissues, and extensions thereof, and the right to claim priority thereto, and the entire and exclusive right, title, and interest in and to any and all patents granted on these applications. I/We authorize and request that the Patent Office officials in the United States and in any and all foreign countries to issue any and all Letters Patent when granted, solely to the Assignee(s), for its sole use, and that of its successors, assigns, and legal representatives. I/We will provide my/our cooperation to enable the Assignee to enjoy the foregoing right, title, and interest to the fullest extent. Upon request at the expense of the Assignee, I/we agree to execute all papers, take all rightful oaths, testify in all legal proceedings including patent prosecution actions and infringement actions, and do all other such acts which may be necessary, desirable, or convenient for securing and maintaining patents on the foregoing invention or for perfecting title thereto in the Assignee. I/We certify that I/we have the full right to convey the above rights. (sign name here) Assignor Date (print name here) Aiit P. YOGANATHAN (sign name here) . Assignor

Choon-Hwai YAP

For good and valuable consideration, of which I/we acknowledge receipt, I/we as a below-named Assignor(s), hereby sell,

PATENT REEL: 031058 FRAME: 0507