

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
DINA KATABI	03/30/2015
OMID SALEHI-ABARI	03/30/2015
EZZELDIN HAMED	03/08/2015
HAITHAM Z. AL-HASSANIEH	02/21/2015
LIXIN SHI	02/20/2015
ABHINAV AGARWAL	02/12/2015
ANANTHA CHANDRAKASAN	03/31/2015
VLADIMIR STOJANOVIC	03/30/2015
RECEIVING PARTY DATA	
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Street Address:	77 MASSACHUSETTS AVENUE
City:	CAMBRIDGE
State/Country:	MASSACHUSETTS
Postal Code:	02139
PROPERTY NUMBERS Total: 2	
Property Type	Number
Application Number:	14548238
PCT Number:	US2014066459
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<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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NAME OF SUBMITTER:	YUSHAN LUO

PATENT

SIGNATURE:	/Yushan Luo/
DATE SIGNED:	04/01/2015
Total Attachments: 9 source=MITX-6615_03US_Assignment#page1.tif source=MITX-6615_03US_Assignment#page2.tif source=MITX-6615_03US_Assignment#page3.tif source=MITX-6615_03US_Assignment#page4.tif source=MITX-6615_03US_Assignment#page5.tif source=MITX-6615_03US_Assignment#page6.tif source=MITX-6615_03US_Assignment#page7.tif source=MITX-6615_03US_Assignment#page8.tif source=MITX-6615_03US_Assignment#page9.tif	

ASSIGNMENT

DINA KATABI residing at 303 Third Street, Apt. 104, Cambridge, MA 02142; OMID SALEHI-ABARI residing at 70 Pacific Street, Apt. 943, Cambridge, MA 02139; EZZELDIN HAMED residing at 290 Vassar Street, Apt. E1, Cambridge, MA 02139; HAITHAM Z. AL-HASSANIEH residing at 143 Albany Street, Apt. 321B, Cambridge, MA 02139; LIXIN SHI residing at 550 Memorial Drive, Apt. 18B-1, Cambridge, MA 02139; ADHINAV AGARWAL residing at 28 Middlesex Circle, Apt. 9, Waltham, MA 02452; ANANTHA CHANDRAKASAN residing at 23 Sherman Street, Belmont, MA 02478; and VLADIMIR STOJANOVIC residing at 1409 Cypress Street, Berkeley, CA 94703 (referred to as "Assignor") has made an invention(s) (the "Invention(s)") set forth in an application for patent of the United States, entitled **INTEGRATED CIRCUIT IMPLEMENTATION OF METHODS AND APPARATUSES FOR MONITORING OCCUPANCY OF WIDEBAND GHz SPECTRUM, AND SENSING RESPECTIVE FREQUENCY COMPONENTS OF TIME-VARYING SIGNALS USING SUB-NYQUIST CRITERION SIGNAL SAMPLING**, and which is a:

- (1) ☐ provisional application
 (a) ☐ to be filed herewith; or
 (b) ☐ bearing Application No. _____, and filed on _____;
- (2) ☒ non-provisional application
 (a) ☐ to be filed herewith; or
 (b) ☒ bearing Application No. 14/548,238, and filed on November 19, 2014; and/or
- (3) ☒ PCT application
 (a) ☒ bearing Application No. PCT/US2014/066459, and filed on November 19, 2014.

WHEREAS, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, having its principal place of business at 77 Massachusetts Avenue, Cambridge, MA 02139 (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application for patent identified in paragraph (1), (2) and/or (3); the right to file applications for patent of the United States or other countries on the Invention(s); any application for patent of the United States or other countries claiming priority to these applications; any provisional or other right to recover damages, including royalties, for prior infringements of these applications; and any patent of the United States or other countries that may be granted therefor or thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

- (a) the Invention(s);
- (b) the application for patent identified in paragraph (1) (2) and/or (3);
- (c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property and under the Patent Cooperation Treaty;
- (d) any application(s) for patent of the United States or other countries claiming the Invention(s);
- (e) any application(s) for patent of the United States or other countries claiming priority to the application for patent identified in paragraph (1), (2) and/or (3) or any application(s) for patent claiming the Invention(s), including any division(s), continuation(s), and continuation(s)-in-part; and
- (f) any provisional or other right to recover damages, including royalties, for prior infringements of any application for patent identified in the preceding paragraphs (b)-(e); and
- (g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b) -- (e), including any reissue(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

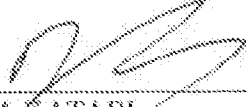
The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said applications, and said patents, including interference proceedings, without charge to the Assignor, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of **COOLEY LLP** to insert in the spaces provided above the filing date, the application number, and the attorney docket number of the application identified in paragraph (1), (2) and/or (3) when known.

The Assignor understands and agrees that the attorneys and agents of the law firm of **COOLEY LLP** do not personally represent Assignor or Assignor's legal interests. Since said attorneys and agents cannot provide legal advice to the Assignor with respect to this Assignment, Assignor acknowledges its right to seek its own independent legal counsel.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

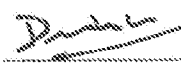
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Witness Signature:  Date: 3/30/2015

Print Witness Name: DEEPAK VASISHT

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Inventor Signature: Ezz El-Din Date: 3/8/2015
EZZELDIN HAMED

Witness Signature: Zachary Kabelac Date: 3/8/2015

Print Witness Name: Zachary Kabelac

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Inventor Signature: Hassam L. Al-Hassanieh Date: 2/21/2015
HASSAM L. AL-HASSANIEH

Witness Signature: Deepak Vasisht Date: 2/21/2015

Print Witness Name: DEEPAK VASISHT

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Inventor Signature: LIXIN SHI Date: 2/20/2015

Witness Signature: Zachary Kabelae Date: 2/20/2015

Print Witness Name: Zachary Kabelae

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Inventor Signature: _____ Date: _____
ABHINAV AGARWAL

Witness Signature: _____ Date: _____

Print Witness Name: _____

Address: _____

Inventor Signature: _____ Date: _____
LIXIN SHI

Witness Signature: _____ Date: _____

Print Witness Name: _____

Address: _____

Inventor Signature: _____ Date: 02/12/15
ABHINAV AGARWAL

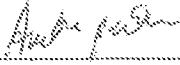
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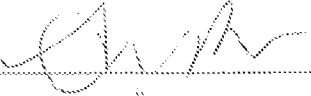
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ANANTHA CHANDRAKASAN

Witness Signature:  Date: 3/31/15

Print Witness Name: Andrena Reyes

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Lawrence, MA 01841

Inventor Signature: _____ Date: _____
VLADIMIR STOJANOVIC

Witness Signature: _____ Date: _____

Print Witness Name: _____

Address: _____

Inventor Signature: _____ Date: _____

ANANTHA CHANDRAKASAN

Witness Signature: _____ Date: _____

Print Witness Name: _____

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Inventor Signature: _____ Date: 03/30/15

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Witness Signature: _____ Date: 03/30/15

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