

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT5660390

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
AYKUT BULTAN	11/13/2017
NARAYANAN BHARATH	11/13/2017
SAM HEIDARI	11/13/2017
HOSSEIN DEGHAN	11/13/2017
<b>RECEIVING PARTY DATA</b>	
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<b>Street Address:</b>	1704 AUTOMATION PARKWAY
<b>Internal Address:</b>	MAILDROP A700
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95131
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16429731
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(602)244-3169
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<b>Phone:</b>	6022443574
<b>Email:</b>	patents@onsemi.com
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<b>Address Line 2:</b>	MAILDROP A700
<b>Address Line 4:</b>	PHOENIX, ARIZONA 85008
<b>ATTORNEY DOCKET NUMBER:</b>	QTNA105CP01US
<b>NAME OF SUBMITTER:</b>	SHARRON CASTILLO
<b>SIGNATURE:</b>	/Sharron Castillo/
<b>DATE SIGNED:</b>	08/08/2019
<b>Total Attachments: 5</b>	

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## ASSIGNMENT OF PATENT APPLICATION

Whereas I/we the undersigned inventor(s) have invented certain new and useful improvements as set forth in the patent application entitled:

### **ACOUSTIC SPATIAL DIAGNOSTICS FOR SMART HOME MANAGEMENT**

(Atty. Docket No.: **QtnaP105usCIP1**) for which I (we) have executed an application for a United States Letters Patent filed 11/12/2017 and allocated USSN 15/810,129

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I/We the undersigned inventor(s) hereby:

- 1) Sell(s), assign(s) and transfer(s) to **QUANTENNA COMMUNICATIONS, INC.**, a Delaware corporation having a place of business at **1704 Automation Parkway, San Jose, CA 95131 United States**, (hereinafter referred to as "ASSIGNEE"), the entire right title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
- 2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that I/we have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
- 6) Assignors hereby grant assignee or assignee's designee the right to insert the U.S. Patent Application number and filing date where space is provided above at any time subsequent to the date of the assignor's signature below.

Signed on the date(s) indicated beside my (our) signature(s).

1. Inventor Signature:  Date: 11-13-2017  
Aykut BULTAN

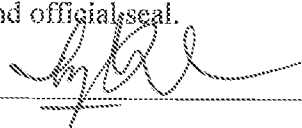
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State of California  
County of SANTA CLARA

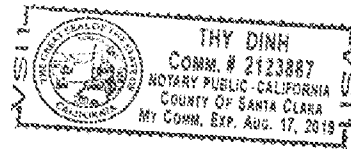
On 11/13/17 before me, THY DINH, Notary Public, personally appeared Aykut BULTAN, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Signature   
THY DINH

(SEAL)



2. Inventor Signature: Narayanan Bharath - Date: 11-13-2017  
Narayanan BHARATH

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State of California  
County of SANTA CLARA

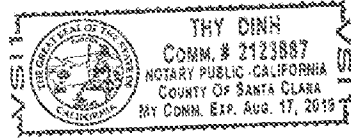
On 11/13/17 before me, THY DINH Notary Public, personally appeared Narayanan BHARATH, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

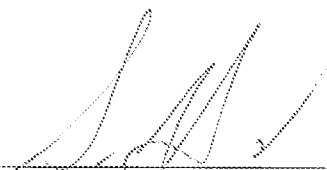
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Signature Thy Dinh  
THY DINH

(SEAL)



3. Inventor Signature:  Date: 11-13-2017  
Sam HEIDARI

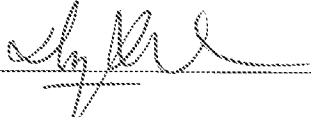
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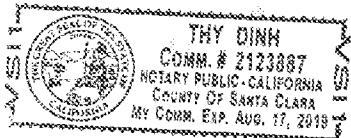
On 11/13/17 before me, THY DINH, Notary Public, personally appeared Sam HEIDARI, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Signature   
THY DINH

(SEAL)



4. Inventor Signature: *[Signature]* Date: 11-13-2017  
Hossein DEHGHAN

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California  
County of SANTA CLARA

On 11/15/17 before me, THY DINH, Notary Public, personally appeared Hossein DEHGHAN, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Signature *[Signature]*  
THY DINH

(SEAL)

