#### 505184543 11/09/2018

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5231312

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
HYUKJIN CHAE	10/30/2018
HANBYUL SEO	10/30/2018

#### **RECEIVING PARTY DATA**

Name:	LG ELECTRONICS INC.	
Street Address:	Street Address: 128, YEOUI-DAERO YEONGDEUNGPO-GU	
City:	SEOUL	
State/Country:	KOREA, REPUBLIC OF	
Postal Code:	07336	

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number		
Application Number:	16300409		

#### **CORRESPONDENCE DATA**

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Address Line 4: FALLS CHURCH, VIRGINIA 22042

 ATTORNEY DOCKET NUMBER:
 0465-6759PUS1

 NAME OF SUBMITTER:
 TAN T. TU

 SIGNATURE:
 /Tan T. Tu/

 DATE SIGNED:
 11/09/2018

#### **Total Attachments: 3**

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PATENT 505184543 REEL: 047465 FRAME: 0466

Attorney Docket No.: 0465-6759PUS1

LGE Ref.: 17ASL357PC01US01\_syc

### BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. Box 747 • Falls Church, Virginia 22040-0747 Telephone: (703) 205-8000 • Facsimile: (703) 205-8050 • Email: mailroom@bskb.com

### **DECLARATION AND ASSIGNMENT** FOR PATENT AND DESIGN APPLICATIONS

UNITED STATES PATENT RIGHTS, OR

		UNITED STATES FLOS ALL FOREIGN FATENT RIGHTS
Title of Invention	c	METHOD FOR PERFORMING BEAM SEARCH OR BEAM TRANSMISSION IN WIRELESS COMMUNICATION SYSTEM
		As a below named inventor (hereinafter designated as the undersigned), I hereby declare that:
		This declaration is directed to the application attached hereto.
Application not Attached	ď,	If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above and/or the following:
Enter Appln. No.	4	United States Application Number or PCT International Appln. No. PCT/KR2017/004945
Enter Filing Date	c)	filed on 12 May 2017
		The above-identified application was made or authorized to be made by me.
		I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
		I have reviewed and understand the contents of the above-identified application, including the claims.
		I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations $\S$ 1.56.
		WHEREAS, the undersigned has invented certain new and useful improvements described in the application identified.
Insert Name of Assignee	¢	WHEREAS, LG ELECTRONICS INC.
Insert Address of Assignee	4	of 128, Yeoui-daero Yeongdeungpo-gu Seoul 07336 , Republic of Korea,
		its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America and
Check Box if Appropriate	4	in any foreign countries.
		NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned and transferred, and by these presents does (do) sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or

terms for which the same may be granted.

PATENT **REEL: 047465 FRAME: 0467**  The undersigned agrees to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agrees to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of (a) valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorizes and requests the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patent(s) resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has the full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grants the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

* *** * *	27 62 677	C373 X3 T1	TEN PERSON
LEGAL	NAME	OF IN	VENTOR

inventor's Name ⇒ Inventor:

CHAE, Hyukjin

Inventor's Signature - Signature:

Date: 10/36/2018

An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use a separate form for each inventor; or check the box below and complete the attached page(s) to list additional inventors.

Additional inventors are being named on the 1 supplemental sheet(s) attached hereto.

REEL: 047465 FRAME: 0468

LGE Ref.: 17ASL357PC01US01\_syc

**RECORDED: 11/09/2018** 

# SUPPLEMENTAL SHEET FOR DECLARATION AND ASSIGNMENT

# ADDITIONAL INVENTOR(S) Supplemental Sheet Page $\underline{1}$ of $\underline{1}$

# LEGAL NAME OF JOINT INVENTOR, IF ANY

Inventor's Name > Inv	SEC	), Hanbyul	Date:	10/30/2018
	Name of the Address o	0. 2		
Inventor's Signature Sig	gnature:	7000	-	
LF	EGAL NAME	OF JOINT INVENTOR, IF ANY		
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lavontar's Name ⇔In	nventor:		Date: _	
Inventor's Signature ⇒Si	ignature:			
I.	EGAL NAME	OF JOINT INVENTOR, IF ANY		
	nventor:	25.12.	Date:	
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	LEGAL NAM	e of joint inventor, if any	-	
Inventor's Name 🗢	Inventor:		Date:	
Inventor's Signature - ⇔	⇒Signature:			

hyukin.chae/체혁전/10.0.1.33/2018-16 30 IS:54 **PATENT** 

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