12/15/2015 503611829

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT3658460

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
DONGYOUN SEO	10/14/2015
HAKSEONG KIM	11/24/2015
YUNJUNG YI	09/21/2015
JOONKUI AHN	09/15/2015
HANBYUL SEO	09/15/2015

RECEIVING PARTY DATA

Name:	LG ELECTRONICS INC.
Street Address:	128, YEOUI-DAERO, YEONGDEUNGPO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	150-721

PROPERTY NUMBERS Total: 1

Property Type	Number		
Application Number:	14776176		

CORRESPONDENCE DATA

Fax Number: (703)205-8050

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.

Phone: 703-205-8000

tu.t.tan@bskb.com, mailroom@bskb.com Email: **Correspondent Name:** BIRCH, STEWART, KOLASCH & BIRCH, LLP

P.O. BOX 747 Address Line 1:

Address Line 4: FALLS CHURCH, VIRGINIA 22040-0747

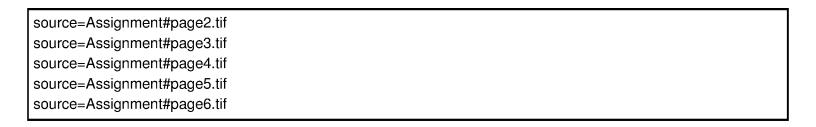
ATTORNEY DOCKET NUMBER:	5438-0711PUS1
NAME OF SUBMITTER:	TAN TU
SIGNATURE:	/Tu T. Tan/
DATE SIGNED:	12/15/2015

Total Attachments: 6

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PATENT REEL: 037292 FRAME: 0596

503611829



PATENT REEL: 037292 FRAME: 0597

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

Application No.	14/776,176 Filed September 14, 2015
Insert Name(s) of Inventor(s)	***(Given Name FAMILY NAME (ALL CAPS))***
S. 22. 32. (c)	WHEREAS, SEO, Dongyoun; KIM, Hakseong; YI, Yunjung; AHN, Joonkui and SEO, Hanbyul (hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in:
Insert Title of Invention	METHOD AND DEVICE FOR RECEIVING ACK/NACK IN WIRELESS COMMUNICATION SYSTEM
	for which an application for Letters Patent of the United States of America has been executed by the undersigned (except in the case of a provisional application)
Insert Date of Signing of Application	on September 15, 2015; September 21, 2015; Oct 14, 2015 and November 24, 2015; and
Insert Name	WHEREAS, LG ELECTRONICS INC.
of Assignce Insert Address of Assignee	of 128, Yeoui-daero, Yeongdeungpo-gu Seoul 150-721 Republic of Korea
CHECK BOX IF APPROPRIATE	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 x in any foreign countries.
II AIT KOI KIATE	NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents does 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.
continui connecti	The undersigned agree(s) to execute all papers necessary in connection with this application and any ng, divisional, conversion or reissue applications thereof and also to execute separate assignments in ion with such applications as the Assignee may deem necessary or expedient.
	The undersigned agree (s) to execute all papers necessary in connection with any interference which

necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be

may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s)

Page 1 of 2

and producing evidence and proceeding with such interference.

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 authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents 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 (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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

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

Date _	2015.10.14.	,	Name of Inventor	(signature) SEO, Dongyoun
Date _		,	Name of Inventor	(signature) KIM, Hakseong
Date _		,	Name of Inventor	(signature) YI, Yunjung
Date _		,	Name of Inventor	(signature) AHN, Joonkui
Date _		,	Name of Inventor	(signature) SEO, Hanbyul

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

Application No.	14/776,176	Filed	September 14, 2015
Insert Name(s) of Inventor(s)	***(Given Na	\PS))***	
()	WHEREAS, SEO, Dongyoun; (hereinafter designated as the improvements in:	KIM, Hakseong ; YI, Yu indersigned) has (have) in	njung; AHN, Joonkui and SEO, Hanbyul vented certain new and useful
Insert Title of Invention	METHOD AND DEVICE COMMUNICATION SYS	FOR RECEIVING ACTEM	CK/NACK IN WIRELESS
	for which an application for Let undersigned (except in the case o	ters Patent of the United S f a provisional application)	tates of America has been executed by the
Insert Date of Signing of Application	onSeptember 15, 2015	; <u>September 21, 2015; Oct</u>	14, 2015 and November 24, 2015; and
Insert Name	WHEREAS, LG ELECTRONIC	CS INC.	
of Assignee Insert Address of Assignee	of 128, Yeoui-daero, Yeongdeur		public of Korea
CHECK BOX IF APPROPRIATE	its heirs, successors, legal repredesirous of acquiring the entire ri Patent(s) that may be granted ther in any foreign countries.	gnt, title and interest in and	ereinafter designated as the Assignee) is to said invention and in and to any Letters America and
	undersigned has (have) sold, ass transfer unto said Assignee the f America, its territories, dependence and all Letters Patent(s) which m	reby acknowledged, and o signed and transferred, and full and exclusive right to sites and possessions and the fay be granted therefor in the	collars (\$10.00) to the undersigned in hand ther good and valuable consideration, the d by these presents does sell, assign and the said invention in the United States of centire right, title and interest in and to any the United States of America, its territories, ated, in any and all foreign countries;
	and to any and all divisions, reissuor terms for which the same may be	nes, continuations, conversi ne granted.	ons and extensions thereof for the full term
continuir connectio	The undersigned agree(s) to execuse, divisional, conversion or reission with such applications as the As	ie applications thereof and	connection with this application and any also to execute separate assignments in or expedient.
may be o	The undersigned agree (s) to execute clared concerning this application or reissue patent issued thereon are	on or continuation, division	n connection with any interference which n, conversion or reissue thereof or Letter

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s)

Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining

necessary in connection with claims or provisions of the International Convention for the Protection of Industrial

The undersigned agree(s) to execute all papers and documents and to perform any act which may be

Page 1 of 2

and producing evidence and proceeding with such interference.

Property or similar agreements.

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 authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents 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 (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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

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

Date,	Name of Inventor	
		(signature) SEO, Dongyoun
Date 11/24/20/5	Name of Inventor	7 L 23 Ad-
		(ossimilar) Trivi, Harscong
Date,	Name of Inventor	(signature) YI, Yunjung
Date,	Name of Inventor	(signature) AHN, Joonkui
Date,	Name of Inventor	(signature) SEO, Hanbyul

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR
UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

Application No.	14/776,176	Filed	September 14, 2015			
Insert Name(s) of Inventor(s)	***(Given Name FAMILY NAME (ALL CAPS))***					
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Insert Title of Invention	METHOD AND DEVICE COMMUNICATION SYS		CK/NACK IN WIRELESS			
	for which an application for Let undersigned (except in the case of		States of America has been executed by the			
Insert Date of Signing of Application	on September 15, 2015	; September 21, 2015; Oct	14, 2015 and November 24, 2015; and			
Insert Name	WHEREAS, LG ELECTRONIC	CS INC.				
of Assignee Insert Address of Assignee	of 128, Yeoui-daero, Yeongdeur	ngpo-gu Seoul 150-721 Re	public of Korea			
CHECK BOX IF APPROPRIATE		ight, title and interest in an	hereinafter designated as the Assignee) is d to said invention and in and to any Letters f America and			
II AITNOINIAIL	NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents does 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, reiss or terms for which the same may		sions and extensions thereof for the full term			

The undersigned agree (s) 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 Letter 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 agree(s) 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

The undersigned agree(s) 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.

Page 1 of 2

connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or 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.

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

Date _		,	Name of Inventor	
				(signature) SEO, Dongyoun
Date _		,	Name of Inventor	(signature) KIM, Hakseong
Date _	20ts. P. 21	,	Name of Inventor	(signature) YI, Yunjung
Date _	2015. 9. 15		Name of Inventor	(signature) AHN, Joonkui
Date _	9/15/2015		Name of Inventor	(signature) SEO. Hanbyul