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U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

	Attorney Docket No.: 2101-3607		
To the Assistant Commissioner for Patents: Please re	cord the attached original documents or copy thereof.		
Name of conveying party(ies): Moon II LEE, Bin Chul IHM, Jin Young CHUN, Jse Won CHANG and Jin Hyuk JUNG Additional name(s) of conveying party(ies) attached? □ Yes ☒ No	Name and address of receiving party(ies): LG ELECTRONICS INC. 20, Yoido-dong, Youngdungpo-gu Seoul, Korea		
3, Nature of conveyance: Assignment	Additional name(s) & address(es) attached? □ Yes ⊠ No		
4. Application number(s) or patent number(s): A. Patent Application No.(s) 12/306,097	ment is being filed together with a new application. B. Patent No.(s) N/A		
Additional numbers attached? Yes No			
5. Name and address of party to whom correspondence concerning document should be malied: JONATHAN Y. KANG, ESQ. LEE, HONG, DEGERMAN, KANG & WAIMEY At the address associated with Customer No. 35884 Phone: (213) 623-2221	6. Total number of applications and patents involved: [1] 7. Total fee (37 CFR 3.41) \$40 ☐ Enclosed ☐ Authorized to be charged to deposit account		
Fax: (213) 623-2211	8. Deposit account number: 502290		
	(Attach duplicate copy of this page if paying by deposit account)		
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9. Statement and signature. To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document.			
HARRY S, LEE, REG. NO. 56,814	Date: October 30, 2009		
OMB No. 0551-0011 (exp. 4/94)			
Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450			

PATENT

REEL: 023453 FRAME: 0674

Attorney Docket No. 2101-3607

ASSIGNMENT

(1-8)	insert Name(s) of	
· · · .	Inventor(s)	

- (1) MOON IL LEE
- (5) JIN HYUK JUNG
- (2) BIN CHUL IHM
- (6)
- (3) JIN YOUNG CHUN
- (7)
- (4) JAE WON CHANG
- (8)

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

- (9) Insert name of Assignee
- (9) LG ELECTRONICS INC.
- (10) Insert state of Incorporation of Assignee
- (10) **Korea**
- (11) Insert address of Assignee
- (11) 20 Yoldo-dong, Youngdungpo-gu, Seoul, 150-010, Korea

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the Invention known as

(12) Insert identification of Invention, such as Title, Case Number or Foreign Application Number (12) DATA TRANSFER METHOD USING PHASE-SHIFT BASED PRECODING AND TRANSMITTER IMPLEMENTING THE SAME (Application No. 12/306,097)

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

- (13) Insert Date of Signing of Application
- (13) October 29, 2009
- 1) The undersigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and continuing United States and foreign applications for the above-identified invention and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.
- 2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.
- 5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed any agreement in conflict herewith.

The undersigned hereby appoints **the Attorneys associated with Customer No. 035884** 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 United States Patent and Trademark Office for recordation of this document.

Date:	Signature of Inventor	· · · · · · · · · · · · · · · · · · ·
Date:	Signature of Inventor	, , , , , , , , , , , , , , , , , , ,
Date:	Signature of Inventor	
Date: Oct. 29th, 2009	Signature of Inventor	
Date:	Signature of Inventor	****

Attorney Docket No. 2101-3607

ASSIGNMENT

(1-8) Insert Name(s) of Inventor(s)

- (1) MOONIL LEE
- (5) JIN HYUK JUNG
- (2) BIN CHUL IHM
- (6)
- (3) JIN YOUNG CHUN
- (7)
- (4) JAE WON CHANG
- (8)

In consideration of the sum of one dollar (\$1.00) and other good and valuable considerations paid to each of the undersigned, the undersigned agree(s) to assign, and hereby does assign, transfer and set over to

- (9) Insert name of Assignee
- (9) LG ELECTRONICS INC.
- (10) Insert state of Incorporation of Assignee
- (10) Korea
- (11) Insert address of Assignee
- (11) 20 Yoido-dong, Youngdungpo-gu, Seoul, 150-010, Korea

(hereinafter designated as the Assignee) the entire worldwide right, title and interest in the invention known as

(12) Insert Identification of Invention, such as Title, Case Number or Foreign Application Number (12) DATA TRANSFER METHODALS NO PHASE-SHIFT BASED PRECODING AND TRANSMITTER IMPLEMENTING THE SAME (Application 10. 12/306,097)

for which the undersigned has (have) executed an application for patent in the United States of America and all patent applications in foreign countries corresponding thereto or based thereon.

- (13) Insert Date of Signing of Application
- (13) October 26, 2009 and October 28, 2009
- The uncertigned agree(s) to execute all papers necessary in connection with any original, reissue, divisional and confliction exhibited states and foreign applications for the above-identified invention and also to execute separate usual manufacture with such applications as the Assignee may deem necessary or expedient.
- 2) The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.
- 3) The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.
- 5) The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed any agreement in conflict herewith.

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Date: 20th at 2019:

Signature of Inventor_

Date: Oct of 2-9

Signature of Inventor &

Date: Oct. 28, 2009

Signature of Inventor_

Date: _____

Signature of Inventor_

Date: 10d. 38 200)

Signature of inventor_

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