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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WOORAM SHIN	04/11/2014
HYUN-JAE KIM	04/11/2014
YONG SU LEE	04/11/2014
ANSEOK LEE	04/11/2014
KWANG JAE LIM	04/11/2014
DONGSEUNG KWON	04/11/2014

RECEIVING PARTY DATA

Name:	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE
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City:	DAEJEON
State/Country:	KOREA, REPUBLIC OF
Postal Code:	305-700

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14268456

CORRESPONDENCE DATA

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Email: firm@rabinberdo.com RABIN & BERDO, P.C. **Correspondent Name:** Address Line 1: 1101 14TH ST., N.W.

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ATTORNEY DOCKET NUMBER:	PAN-224
NAME OF SUBMITTER: ROBERT H. BERDO, JR.	
SIGNATURE:	/Robert H. Berdo, Jr./
DATE SIGNED:	05/02/2014
	This document serves as an Oath/Declaration (37 CFR 1.63).

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REEL: 032811 FRAME: 0277

Total Attachments: 3

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Attorney Reference:		
Audinov Notorchec.		

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ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS, Shin, Wooram; Kim, Hyun-jae; LEE, Yong Su; Lee, Anseok; Lim, Kwang Jae; Kwon, DongSeung hereinafter referred to collectively as the assignor and inventor, has invented a certain improvement relating to

METHOD AND APPARATUS FOR BEAMFORMING IN WIRELESS COMMUNICATION SYSTEM

V] said application be	ing attached hereto; ving been filed in the United States Patent and Trademark Office on	
, 1	, as Application Serial No, and was amende	d
วก	(if applicable);	
1 the specification of Serial No.	which was filed under the Patent Cooperation Treaty on, the United States of America being designated.	
AND WHEREAS	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE of	

AND WHEREAS ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE of 218 Gaieong-ro, Yuseong-gu, Dacjeon, 305-700, Republic of Korea hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assigner, the receipt of which is hereby acknowledged, said assigner hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge 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.

Address all correspondence and telephone calls to Rabin & Berdo, P.C., 1101 14th Street, N.W., Suite 500, Washington, D.C. 20005, Telephone: (202) 371-8976; Fax: (202) 408-0924, Customer No. 23995.

Continued -Page 2 ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WITNESS:		ASSIGNOR (SOLE ON PIRST INVENTOR).
Signature:		Signature:
Name:		Legal Name: Shin, Wooram
Address:		Date: <u>April 11, 2014</u>
WITNESS:		ASSIGNOR (SECOND INVENTOR):
Signature:		Signature:
Name:	:	Legal Name: Kim. Hvun-jae
Address:		Date: April 11, 2014
WITNESS:		ASSIGNOR (THIRD INVENTOR):
Signature:		Signature: LEL, Tay Su
Name:		Legal Name: <u>LEE, Yong Su</u>
Address:		Date: <u>April 11, 2014</u>
WITNESS:		ASSIGNOR (FOURTH INVENTOR):
Signature:		Signature:
Name:		Legal Name: <u>Lee, Anseok</u>
Address:	:	Date: April 11, 2014

PATENT REEL: 032811 FRAME: 0280

Continued -Page 2 ASSIGNMENT OF AND DECLARATION FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WITNESS:	ASSIGNOR (FIFTH INVENTOR):
Signature:	Signature: Kaxmun Lim, Kwang Jae
Name:	Date: April 11, 2014
WITNESS:	ASSIGNOR (SIXTH INVENTOR):
Signature: Name: Address:	Signature:

RABIN & BERDO, P.C., Washington, D.C.

PATENT REEL: 032811 FRAME: 0281

RECORDED: 05/02/2014