503888342 06/24/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3934991

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHANGHEE LEE	06/23/2016
TAESOO KWON	06/23/2016
JAE HEUNG KIM	06/23/2016
JUNG-IM KIM	06/23/2016
OK-SUN PARK	06/23/2016
JAESHEUNG SHIN	06/23/2016
SUNG-MIN OH	06/23/2016
HYUN-YONG HWANG	06/23/2016

RECEIVING PARTY DATA

Name:	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE
Street Address:	218 GAJEONG-RO, YUSEONG-GU
City:	DAEJEON
State/Country:	KOREA, REPUBLIC OF

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15192328

CORRESPONDENCE DATA

Fax Number:

(630)323-0335

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:	6309087652
Email:	uspto.actions@wpapat.com
Correspondent Name:	WILLIAM PARK & ASSOCIATES LTD.
Address Line 1:	930 N. YORK ROAD, SUITE 201
Address Line 4:	HINSDALE, ILLINOIS 60521

ATTORNEY DOCKET NUMBER:	PA2901-0
NAME OF SUBMITTER:	WOOCHOON W. PARK
SIGNATURE:	/Woochoon W. Park/
DATE SIGNED:	06/24/2016

	This document serves as an Oath/Declaration (37 CFR 1.63).		
Total Attachments: 8			
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source=PA2901-0_Declaration_Assignment#page2.tif			
source=PA2901-0_Declaration_Assignment#page3.tif			
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PR20150414US_Pan

		XXXX/C/XXY/G/XXXX/
Title of Invention	METHOD AND APPARATUS FOR C OPPORTUNITY IN MOBILE COMML	
	As the below named inventor(s). I h	ereby declare that:
	The declaration is directed to:	•
	The attached application, c	x
		or PCT international application number
		8
Declaration	The above-identified application wa	s made or authorized to be made by me.
	I believe that I am the original or a application.	n original joint inventor of a claimed invention in the
		willful false statement made in this declaration is fine or imprisonment of not more than five (5) years
		ion of the sum of one dollar (\$1), the receipt whereof valuable consideration, I, by these presents do sell, e(s)
	ELECTRONICS AND TELECO	MMUNICATIONS RESEARCH INSTITUTE
		-gu, Daejeon, 34129, Republic of Korea
Assignment	and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.	
	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.	
	I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.	
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.	
	Inventor Name (First Middle LAST):	Changhee LEE
Legal Name Of Inventor	Inventor Signature:	<u> </u>
	Date:	June 23, 2016
The same at 5	supplemental sheet(s) are attached he	

A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

Page 1

PATENT REEL: 039006 FRAME: 0794

PR20150414US Pan

Title of Invention	METHOD AND APPARATUS FOR C OPPORTUNITY IN MOBILE COMMU		
Declaration	filed o The above-identified application wa I believe that I am the original or a application. I hereby acknowledge that any v	or or PCT international application number	
		on of the sum of one dollar (\$1), the receipt whereof valuable consideration, I, by these presents do sell, e(s)	
5 5 7 7 7 7	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE		
	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea		
Assignment	and exclusive right to the said im possessions and in any and all forei entire rights, title and interest in an therefore in the United States. I her Patent and Trademark Office to issue entire right, title, and interest in and legal representatives, to the full end of fully and entirely as the same would I not been made.	and legal representatives of the assignee(s) the full vention in the United States and in its territorial ign countries any and all improvements thereof, the nd to any and all Patents which may be granted reby authorize and request the Director of the U.S. said United States Patent to said assignee(s), of the to the same, for his sole use and for the use of his of the term for which said Patent may be granted, as have been held by me had this assignment and sale	
	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.		
		conflict with this assignment and sale.	
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.		
	Inventor Name (First Middle LAST):	Taesoo KWON	
Legal Name Of Inventor	Inventor Signature:	- A	
	Date:	June 23, 2016	

A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

PR20150414US Pan Title of METHOD AND APPARATUS FOR CONTROLLING RANDOM ACCESS OPPORTUNITY IN MOBILE COMMUNICATION SYSTEM Invention As the below named inventor(s), I hereby declare that: The declaration is directed to: XThe attached application, or United States application or PCT international application number __ filed on _____ Declaration The above-identified application was made or authorized to be made by me. I believe that I am the original 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. NOW. THEREFORE, in consideration of the sum of one dollar (\$1), the receipt whereof is acknowledge, and other good and valuable consideration, I, by these presents do seil, assign and transfer unto said assignee(s) ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE 218 Galeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. Assignment I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary. I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale. I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof. Inventor Name (First Middle LAST): Jae Heung KIM Legal Name Of Inventor Inventor Signature: Data June 23, 2016

A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

Page 3

·····		PR20150414US_Pan	
Title of Invention	METHOD AND APPARATUS FOR C OPPORTUNITY IN MOBILE COMMU		
	As the below named inventor(s), I h The declaration is directed to: The attached application, of United States application of filed o	or or PCT international application number	
Declaration	The above-identified application wa I believe that I am the original or a application.	ns made or authorized to be made by me. n original joint inventor of a claimed invention in the willful false statement made in this declaration is	
		fine or imprisonment of not more than five (5) years	
	is acknowledge, and other good and assign and transfer unto said assigne		
	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUT		
	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea		
Assignment	and the heirs, successors, assigns and legal representatives of the assignee(s) the ful and exclusive right to the said invention in the United States and in its territoria possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.		
Assignment	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney. Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.		
	I hereby covenant that no assignment, sale agreement or encumbrance has been or wi be made or entered into which would conflict with this assignment and sale.		
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.		
	Inventor Name (First Middle LAST):	Jung-Im KIM	
Legal Name Of Inventor	Inventor Signature:	Kinjugin	
	Date:	June 23, 2016	

Page 4

		PR20150414US Pan	
Title of Invention	METHOD AND APPARATUS FOR C OPPORTUNITY IN MOBILE COMMU	ONTROLLING RANDOM ACCESS	
Declaration	filed of The above-identified application wa I believe that I am the original or a application. I hereby acknowledge that any		
	is acknowledge, and other good and assign and transfer unto said assigne	•	
	}	MMUNICATIONS RESEARCH INSTITUTE	
	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea		
Assignment	and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.		
	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.		
		ent, sale agreement or encumbrance has been or will	
	be made or entered into which would conflict with this assignment and sale. I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.		
	Inventor Name (First Middle LAST):	Ok-Sun PARK	
Legal Name Of Inventor	Inventor Signature:	UM S	
	Date:	June 23, 2016	

A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

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PR20150414US_Pan

Title of Invention	METHOD AND APPARATUS FOR C OPPORTUNITY IN MOBILE COMMU		
Declaration	As the below named inventor(s), I hereby declare that: The declaration is directed to: Directed application, or United States application or PCT international application number filed on The above-identified application was made or authorized to be made by me. I believe that I am the original 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.		
	NOW, THEREFORE, in consideration of the sum of one dollar (\$1), the receipt whereof is acknowledge, and other good and valuable consideration, I, by these presents do sell, assign and transfer unto said assignee(s)		
	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE		
	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea		
Assignment	and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, tills and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patient and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.		
	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.		
	I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.		
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.		
Legal Name Of Inventor	Inventor Name (First Middle LAST):	JacSheung SHIN	
	Inventor Signature;	Chin Jac 6-2-	
	Data:	June 23, 2016	

[]] A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

PR20150414US_Pan

Title of Invention	METHOD AND APPARATUS FOR CONTROLLING RANDOM ACCESS OPPORTUNITY IN MOBILE COMMUNICATION SYSTEM	
Declaration	filed of The above-identified application was I believe that I am the original or a application. I hereby acknowledge that any v	
	NOW, THEREFORE, in consideration of the sum of one dollar (\$1), the receipt whereof is acknowledge, and other good and valuable consideration, I, by these presents do sell, assign and transfer unto said assignee(s)	
	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE	
Assignment	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea	
	and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thereof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S. Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney. Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary. I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.	
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.	
Legal Name Of Inventor	Inventor Name (First Middle LAST):	Sung-Min OH
	Inventor Signature:	Surg-Min dh
	Date:	June 23, 2016
A total of 1	supplemental sheet(s) are altached he	ereto for additional inventors, if any.

Page 7

		PR20150414US_Par	
Title of Invention	METHOD AND APPARATUS FOR CONTROLLING RANDOM ACCESS OPPORTUNITY IN MOBILE COMMUNICATION SYSTEM		
Declaration	As the below named inventor(s), I hereby declare that: The declaration is directed to: The attached application, or United States application or PCT international application number		
		n mada as subtariand to be made by an	
	The above-identified application was made or authorized to be made by me. I believe that I am the original 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.		
	NOW, THEREFORE, in consideration of the sum of one dollar (\$1), the receipt whereo is acknowledge, and other good and valuable consideration, I, by these presents do sell assign and transfer unto said assignee(s)		
	ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE		
	218 Gajeong-ro, Yuseong-gu, Daejeon, 34129, Republic of Korea		
Assignment	and the heirs, successors, assigns and legal representatives of the assignee(s) the full and exclusive right to the said invention in the United States and in its territorial possessions and in any and all foreign countries any and all improvements thersof, the entire rights, title and interest in and to any and all Patents which may be granted therefore in the United States. I hereby authorize and request the Director of the U.S Patent and Trademark Office to issue said United States Patent to said assignee(s), of the entire right, title, and interest in and to the same, for his sole use and for the use of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.		
	I agree promptly upon request of the assignee(s), its heirs, successors, assigns and legal representatives of the assignee(s) to communicate any facts known to it respecting the patent and the invention set forth therein, and to execute and deliver without further compensation any power of attorney, Assignment, application, whether original, continuation, divisional or reissue, or other papers that may be necessary.		
	I hereby covenant that no assignment, sale agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.		
	I further covenant that assignee(s) will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to me and will testify as to the same in any litigation related thereto and will promptly execute and deliver to assignee(s) or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.		
Legal Name Of Inventor	Inventor Name (First Middle LAST):	Hyun-yong HWANG	
	Inventor Signature:	4Pong-	
	Date:	1	

C A total of 1 supplemental sheet(s) are attached hereto for additional inventors, if any.

Page 8

RECORDED: 06/24/2016