

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3729494

| | |
|---|--------------------------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| SUN-HEUI RYOO | 02/04/2016 |
| SOENG-HUN KIM | 02/04/2016 |
| JUNG-SOO JUNG | 02/04/2016 |
| JUNG-MIN MOON | 02/04/2016 |
| ANSHUMAN NIGAM | 02/04/2016 |
| SUNG-JIN LEE | 02/04/2016 |
| RECEIVING PARTY DATA | |
| Name: | SAMSUNG ELECTRONICS CO., LTD. |
| Street Address: | 129, SAMSUNG-RO, YEONGTONG-GU |
| City: | SUWON-SI, GYEONGGI-DO |
| State/Country: | KOREA, REPUBLIC OF |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14910580 |
| CORRESPONDENCE DATA | |
| Fax Number: | |
| <i>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.</i> | |
| Phone: | 202-293-0804 |
| Email: | usdocketing@jeffersonip.com |
| Correspondent Name: | JEFFERSON IP LAW, LLP |
| Address Line 1: | 1130 CONNECTICUT AVE., NW, SUITE 420 |
| Address Line 4: | WASHINGTON, D.C. 20036 |
| ATTORNEY DOCKET NUMBER: | 0201-1568 |
| NAME OF SUBMITTER: | JOHN A. LEBLANC |
| SIGNATURE: | /John A. LEBLANC/ |
| DATE SIGNED: | 02/05/2016 |
| Total Attachments: 7 | |
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RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)
 1) Sun-Heui RYOO, 2) Soeng-Hun KIM, 3) Jung-Soo JUNG,
 4) Jung-Min MOON, 5) Anshuman NIGAM, and 6) Sung-Jin LEE

Additional name(s) of conveying party(ies) attached? Yes No

2. Name and address of receiving party(ies)
 Name: Samsung Electronics Co., Ltd.
 Internal Address: _____

 Street Address: 129, Samsung-ro, Yeongtong-gu

 City: Suwon-si, Gyeonggi-do
 State: _____
 Country: Republic of Korea Zip: _____
 Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):
 Execution Date(s) February 4, 2016

Assignment Merger
 Security Agreement Change of Name
 Joint Research Agreement
 Government Interest Assignment
 Executive Order 9424, Confirmatory License
 Other _____

4. Application or patent number(s): This document is being filed together with a new application.
 A. Patent Application No.(s)
14/910,580
 B. Patent No.(s)

 Additional numbers attached? Yes No

5. Name and address to whom correspondence concerning document should be mailed:
 Name: Jefferson IP Law, LLP
 Internal Address: John A. LeBlanc

 Street Address: 1130 Connecticut Ave., NW, Suite 420

 City: Washington
 State: District of Columbia Zip: 20036
 Phone Number: 202-293-0804
 Fax Number: 202-403-3587
 Email Address: usdocketing@jeffersonip.com

6. Total number of applications and patents involved: One

7. Total fee (37 CFR 1.21(h) & 3.41) \$ _____
 Authorized to be charged by credit card
 Authorized to be charged to deposit account
 Enclosed
 None required (government interest not affecting title)

8. Payment Information
 a. Credit Card Last 4 Numbers _____
 Expiration Date _____
 b. Deposit Account Number _____
 Authorized User Name _____

9. Signature: _____ /John A. LEBLANC/ Reg. #64,611 _____ February 5, 2016
 Signature Date
 _____ John A. LeBlanc _____ Total number of pages including cover
 Name of Person Signing sheet, attachments, and documents: 7

DOCKET NO.: 0201-1568
CLIENT REF.: P21263-US1/DMC
SAMSUNG REF.: MJ-201307-030-1-US1

Assignment

WHEREAS, the following inventor, namely 1) Sun-Heui RYOO citizen of the Republic of Korea, and 2) Soeng-Hun KIM citizen of the Republic of Korea, and 3) Jung-Soo JUNG citizen of the Republic of Korea, and 4) Jung-Min MOON citizen of the Republic of Korea, and 5) Anshuman NIGAM citizen of the India, and 6) Sung-Jin LEE citizen of the Republic of Korea (hereinafter called "Assignor"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

"SECURITY KEY GENERATION AND MANAGEMENT METHOD OF PDCP DISTRIBUTED STRUCTURE FOR SUPPORTING DUAL CONNECTIVITY"

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on February 5, 2016, and assigned Serial No. 14/910,580; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any foreign application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignor if this sale, assignment and transfer had not been made.

Assignor covenants and agrees, without further compensation to said Assignor but at Assignee's expense:

a. to execute:

DOCKET NO.: 0201-1568

CLIENT REF.: P21263-US1/DMC

SAMSUNG REF.: MJ-201307-030-1-US1

- i. all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
- ii. all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional, continuing, substitute or reissue application thereof, as may be necessary or expedient;
- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

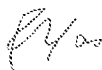
Assignor hereby authorizes and requests the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignor hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are binding upon Assignor's heirs, legal representative s and/or administrators and assigns.

Assignor hereby grants to the law firm of Jefferson IP Law, LLP of Washington, DC and its attorneys and agents as associated with Customer No. 68103 the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

Signature of Inventor:



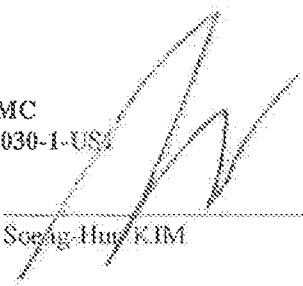
Sun-Heui RYOO

February 4, 2016

Date


DOCKET NO.: 0201-1568
CLIENT REF.: P21263-US1/DMC
SAMSUNG REF.: MJ-201307-030-1-US1

Signature of Inventor:


Seong-Hun KIM


February 4, 2016
Date

Signature of Inventor:


Jang-Soo JUNG

February 4, 2016
Date

Signature of Inventor:


Jung-Min MOON

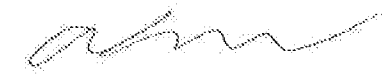
February 4, 2016
Date

Signature of Inventor:

Anshuman NIGAM

Date

Signature of Inventor:


Sung-Jin LEE

February 4, 2016
Date

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WHEREAS, the following inventor, namely 1) Sun-Heui RYOO citizen of the Republic of Korea, and 2) Soeng-Hun KIM citizen of the Republic of Korea, and 3) Jung-Soo JUNG citizen of the Republic of Korea, and 4) Jung-Min MOON citizen of the Republic of Korea, and 5) Anshuman NIGAM citizen of the India, and 6) Sung-Jin LEE citizen of the Republic of Korea (hereinafter called "Assignor"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

"SECURITY KEY GENERATION AND MANAGEMENT METHOD OF PDCP DISTRIBUTED STRUCTURE FOR SUPPORTING DUAL CONNECTIVITY"

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on February 5, 2016, and assigned Serial No. 14/910,580; and,

WHEREAS, Samsung Electronics Co., Ltd., a corporation duly organized under the laws of the Republic of Korea, located and doing business at 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, 16677 (hereinafter called "Assignee"), is desirous of acquiring the entire right, title and interest therein;

NOW, THEREFORE, BE IT KNOWN that for and in good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby sell, assign and transfer unto said Assignee the entire and exclusive worldwide right, title and interest in and to all said inventions and discoveries disclosed in said application, and in and to said application, any and all substitutions, divisions, provisionals, conversions of provisionals and continuations thereof, and in and to all Letters Patent, United States and foreign, that may be granted for said inventions and discoveries, and in and to all extensions, renewals and reissues thereof; and the right to file any foreign application and/or claim priority under the provisions of any international treaty or convention arising from this application or any divisional, continuing, substitute or reissue application therefrom. The aforesaid assignment includes the right in and to all income, royalties, damages and payments, now or hereafter due or payable with respect to any Letters Patent which may be granted, and in and to all causes of action (either in law or in equity), and the right to sue, counterclaim, and recover for past, present and future infringement of the rights assigned or to be assigned under this Assignment, as fully and entirely as the same would have been held and enjoyed by Assignor if this sale, assignment and transfer had not been made.

Assignor covenants and agrees, without further compensation to said Assignor but at Assignee's expense:

a. to execute:

DOCKET NO.: 0201-1568

CLIENT REF.: P21263-US1/DMC

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- i. all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignee may deem necessary or expedient, and
- ii. all papers in connection with any interference, litigation, mediation, arbitration or other proceeding relating to this application or any divisional, continuing, substitute or reissue application thereof, as may be necessary or expedient;
- b. to cooperate with the Assignee in every way possible in obtaining evidence and going forward in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof;
- c. to communicate to the Assignee any facts relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof, including evidence for any interference, litigation, mediation, arbitration or other proceeding relating to said invention, whenever requested;
- d. to testify in any interference, litigation, mediation, arbitration or other proceeding relating to said invention, said application and any divisional, continuing, substitute or reissue application thereof whenever requested; and
- e. to perform all other affirmative acts which may be necessary or desirable to secure full and complete protection of the inventions and discoveries or that may be necessary or desirable to vest in Assignee the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignee to record title.

Assignor hereby authorizes and requests the United States Patent and Trademark Office or any other issuing authority to issue any and all Letters Patent that may be granted upon this invention and/or this application or any divisional, continuing, substitute or reissue application thereof to the Assignee, its legal representatives, successors and assigns.

Assignor hereby represents, covenants and warrants that he or she has the full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

The provisions of this Assignment are binding upon Assignor's heirs, legal representative s and/or administrators and assigns.

Assignor hereby grants to the law firm of Jefferson IP Law, LLP of Washington, DC and its attorneys and agents as associated with Customer No. 68103 the authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent and Trademark Office or a Patent Office of any foreign country.

Signature of Inventor:

.....
Sun-Hwi RYOO

.....
Date

Signature of Inventor:

Soeng-Hun KIM

Date

Signature of Inventor:

Jung-Soo JUNG


Date

Signature of Inventor:

Jung-Min MOON

Date

Signature of Inventor:


Anshuman NIGAM

February 4, 2016
Date

Signature of Inventor:

Sung-Jin LEE

Date