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| PATENT ASSIGNMENT COVER SHEET |
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Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4974890

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|------------------------------|---|
| SUBMISSION TYPE: | CORRECTIVE ASSIGNMENT |
| NATURE OF CONVEYANCE: | Corrective Assignment to correct the ERROR IN NAME OF YOUNG-BIN CHANG CHANG previously recorded on Reel 036706 Frame 0970. Assignor(s) hereby confirms the CORRECT NAME IS YOUNG-BIN CHANG. |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| KYUNG-KYU KIM | 09/30/2015 |
| YOUNG-BIN CHANG | 09/30/2015 |
| SEUNG-HOON PARK | 09/30/2015 |
| SANG-KYU BAEK | 09/30/2015 |
| SUNG-JIN LEE | 09/30/2015 |

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 |
| Postal Code: | 16677 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|----------------------------|----------|
| Application Number: | 14781773 |

CORRESPONDENCE DATA

Fax Number: (312)775-8100
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: (312) 775-8000
Email: mhmpo@mcandrews-ip.com
Correspondent Name: MCANDREWS, HELD & MALLOY, LTD.
Address Line 1: 500 W. MADISON STREET, 34TH FLOOR
Address Line 4: CHICAGO, ILLINOIS 60661

| | |
|--------------------------------|-----------------------|
| ATTORNEY DOCKET NUMBER: | 29840US01 (P20973-US) |
| NAME OF SUBMITTER: | WILHELM L. RAO |
| SIGNATURE: | /Wilhelm L. Rao/ |
| DATE SIGNED: | 05/23/2018 |

Total Attachments: 4

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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3552516

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|---|-----------------------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| | |
| Name | Execution Date |
| KYUNG-KYU KIM | 09/30/2015 |
| YOUNG-BIN CHANG CHANG | 09/30/2015 |
| SEUNG-HOON PARK | 09/30/2015 |
| SANG-KYU BAEK | 09/30/2015 |
| SUNG-JIN LEE | 09/30/2015 |
| RECEIVING PARTY DATA | |
| Name: | SAMSUNG ELECTRONICS CO., LTD. |
| Street Address: | 129, SAMSUNG-RO |
| Internal Address: | YEONGTONG-GU |
| City: | SUWON-SI, GYEONGGI-DO |
| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 16677 |
| PROPERTY NUMBERS Total: 1 | |
| | |
| Property Type | Number |
| Application Number: | 14781773 |
| CORRESPONDENCE DATA | |
| Fax Number: | (312)775-8100 |
| <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: | (312) 775-8000 |
| Email: | mhmpto@mcandrews-ip.com |
| Correspondent Name: | MCANDREWS, HELD & MALLOY, LTD. |
| Address Line 1: | 500 W. MADISON STREET, 34TH FLOOR |
| Address Line 4: | CHICAGO, ILLINOIS 60661 |
| ATTORNEY DOCKET NUMBER: | 29840US01 (P20973-US) |
| NAME OF SUBMITTER: | WILHELM L. RAO |
| SIGNATURE: | /Wilhelm L. Rao/ |
| DATE SIGNED: | 10/01/2015 |
| Total Attachments: 3 | |

Attorney Docket No. (P20973)

ASSIGNMENT

AS A BELOW NAMED INVENTOR, I and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named ASSIGNEE is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: **SAMSUNG ELECTRONICS CO., LTD.**

ADDRESS: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677
Republic of Korea

Who is my ASSIGNEE, and to the successors and assigns of my ASSIGNEE, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

**TITLE : METHOD AND APPARATUS FOR PERFORMING STATE TRANSITION
FOR DEVICE-TO-DEVICE COMMUNICATION**

invented by me (*if only one inventor is named below*) or us (*if more than one inventor is named below*) and described in an application for a United States patent, the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an Attorney (P20973), or is more particularly identified as:

executed on even date herewith, or

Serial No. 14/781,773 filed in the U.S. Patent and Trademark Office on
October 1, 2015, or

executed on _____.

and in and to all United States patents which may be granted thereon and therefore, and in and to all certificates of corrections, divisions, continuations, continuations-in-part, divisionals, designs, appeals, reissues, reexaminations, substitutions and any extensions thereof; said interest being the entire ownership of the patent when granted, to be held and enjoyed by said **SAMSUNG ELECTRONICS CO., LTD.** my ASSIGNEE, its successors, assigns or other legal representatives, to the full end of the term, terms or any extension of renewal thereof, for which said patent or patents may be granted, as fully and entirely as the same would have been held and enjoyed by me or us if this assignment, sale and conveyance had not been made;

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the ASSIGNEE, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, reexamination, in any amendment, extension or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said ASSIGNEE;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said patent for said invention, or patents resulting therefrom, insofar as our interest is concerned, to the said ASSIGNEE of our entire right, title and interest.

Attorney Docket No. (P20973)

AND I further authorize and direct the ASSIGNEE and its attorney to insert above, the serial number and filing date of said application now identified as Attorney Docket No. (P20973), as soon as the same shall have been made known to them by the United States Patent and Trademark Office.

AND I further covenant that ASSIGNEE 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 ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto, and will promptly execute and deliver to ASSIGNEE 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.

IN WITNESS WHEREOF, I/we have set our hands and seals on the dates written beside my/our respective names:

INVENTOR 1

ASSIGNOR:

KYUNG-KYU KIM

Kyung-Kyu KIM

Date: September 30, 2015

Hyeran KIM

Witness Signature

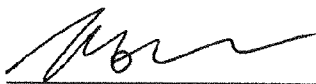
Date: September 30, 2015

Hye-Ran KIM

Witness Name (Printed)

INVENTOR 2

ASSIGNOR:



Young-Bin CHANG

Date: September 30, 2015

Hyeran KIM

Witness Signature

Date: September 30, 2015

Hye-Ran KIM

Witness Name (Printed)

INVENTOR 3

ASSIGNOR:

Attorney Docket No. (P20973)



Seung-Hoon PARK

Date: September 10, 2015

Hyeon Kim

Witness Signature

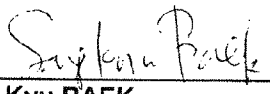
Date: September 10, 2015

Hye-Ran KIM

Witness Name (Printed)

INVENTOR 4

ASSIGNOR:



Sang-Kyu BAEK

Date: September 10, 2015

Hyeon Kim

Witness Signature


Date: September 10, 2015

Hye-Ran KIM

Witness Name (Printed)

INVENTOR 5

ASSIGNOR:



Sung-Jin LEE

Date: September 10, 2015

Hyeon Kim

Witness Signature

Date: September 10, 2015

Hye-Ran KIM

Witness Name (Printed)