

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5341348

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HYUN-SEOK RYU	08/14/2018
ANIL AGIWAL	08/14/2018
JEONG-HO PARK	08/14/2018
WON-JUN HWANG	08/14/2018
KYUNG-KYU KIM	08/14/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAMSUNG ELECTRONICS CO., LTD.
<b>Street Address:</b>	129, SAMSUNG-RO, YEONGTONG-GU
<b>City:</b>	SUWON-SI, GYEONGGI-DO
<b>State/Country:</b>	KOREA, REPUBLIC OF
<b>Postal Code:</b>	16677
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15999822
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	
<b>Email:</b>	usdocketing@jeffersonip.com
<b>Correspondent Name:</b>	JEFFERSON IP LAW, LLP
<b>Address Line 1:</b>	1130 CONNECTICUT AVE., NW, SUITE 420
<b>Address Line 4:</b>	WASHINGTON, D.C. 20036
<b>ATTORNEY DOCKET NUMBER:</b>	0201-1996
<b>NAME OF SUBMITTER:</b>	MAENG-HO SHIN
<b>SIGNATURE:</b>	/Maeng-Ho SHIN/
<b>DATE SIGNED:</b>	01/24/2019
<b>Total Attachments: 13</b>	
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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) Hyun-Seok RYU, 2) Anil AGIWAL, 3) Jeong-Ho PARK,  
4) Won-Jun HWANG, and 5) Kyung-Kyu KIM

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: 16677

Additional name(s) & address(es) attached?  Yes  No

**3. Nature of conveyance/Execution Date(s):**

Execution Date(s) August 14, 2018

- 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):**

A. Patent Application No.(s)  
15/999,822

This document is being filed together with a new application.

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: Maeng-Ho Shin

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

City: Washington

State: DC 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:**

\_\_\_\_\_  
/Maeng-Ho SHIN/ Reg. #53,859  
Signature Date

\_\_\_\_\_  
Maeng-Ho Shin  
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 13

DOCKET NO.: 0201-1996  
CLIENT REF.: P23118-US/DMC  
SAMSUNG REF.: MJ-201506-050-1-US0

## Assignment

*WHEREAS*, the following inventors, namely 1) **Hyun-Seok RYU**, citizen of Republic of Korea, 2) **Anil AGIWAL**, citizen of INDIA, 3) **Jeong-Ho PARK**, citizen of Republic of Korea, 4) **Won-Jun HWANG**, citizen of Republic of Korea and 5) **Kyung-Kyu KIM**, citizen of 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:

### **"LOCATION DETECTION APPARATUS AND METHOD IN COMMUNICATION SYSTEM SUPPORTING DEVICE-TO-DEVOCE SCHEME"**

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on August 20, 2018, and assigned Serial No. 15/999,822; 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, 16677, Republic of Korea (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, Assignors do 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 Assignors if this sale, assignment and transfer had not been made.

Assignors covenant and agree, without further compensation to said Assignors but at Assignee's expense:

- a. to execute:
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- 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.

Assignors hereby authorize and request 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.

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Signature of Inventor:

Hyun-Seok Ryu 08/ 14 / 2018  
Hyun-Seok RYU Date

Signature of Inventor:

Anil Agiwal 08/ 14 / 2018  
Anil AGIWAL Date

Signature of Inventor:

Jeong-Ho PARK Date

Signature of Inventor:

Won-Jun HWANG Date

Signature of Inventor:

Kyung-Kyu KIM Date

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*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, 16677, Republic of Korea(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, Assignors do 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 Assignors if this sale, assignment and transfer had not been made.

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Signature of Inventor:

\_\_\_\_\_  
Hyun-Seok RYU

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Anil AGIWAL

\_\_\_\_\_  
Date

Signature of Inventor:

*Jeong-Ilo PARK*  
\_\_\_\_\_  
Jeong-Ilo PARK

\_\_\_\_\_  
08/ 14 / 2018

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Won-Jun HWANG

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Kyung-Kyu KIM

\_\_\_\_\_  
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Signature of Inventor:

\_\_\_\_\_  
Hyun-Seok RYU

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Anil AGIWAL


\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Jeong-Ho PARK

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\_\_\_\_\_  
Won-Jun HWANG

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08/ 14 / 2018

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Kyung-Kyu KIM

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Signature of Inventor:

\_\_\_\_\_  
Hyun-Seok RYU

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Anil AGIWAL

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Jeong-Ho PARK

\_\_\_\_\_  
Date

Signature of Inventor:

\_\_\_\_\_  
Won-Jun HWANG

\_\_\_\_\_  
Date

Signature of Inventor:

*Kyung-Kyu KIM*  
\_\_\_\_\_  
Kyung-Kyu KIM

*KIM*

*2018.08.14*

\_\_\_\_\_  
Date