

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT3133710

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|---|---|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| JAE CHUN LEE | 12/01/2014 |
| DUCK HWAN KIM | 12/01/2014 |
| CHUL SOO KIM | 12/01/2014 |
| HO SOO PARK | 12/01/2014 |
| SANG UK SON | 12/01/2014 |
| IN SANG SONG | 12/01/2014 |
| JEA SHIK SHIN | 12/01/2014 |
| MOON CHUL LEE | 12/01/2014 |
| JING CUI | 12/01/2014 |
| RECEIVING PARTY DATA | |
| Name: | SAMSUNG ELECTRONICS CO., LTD. |
| Street Address: | 129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO, 443-742 |
| City: | SUWON-SI |
| State/Country: | KOREA, REPUBLIC OF |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14382115 |
| CORRESPONDENCE DATA | |
| Fax Number: | (202)315-3758 |
| <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: | 202-429-0020 |
| Email: | pto@nsiplaw.com |
| Correspondent Name: | NSIP LAW |
| Address Line 1: | P.O. BOX 65745 |
| Address Line 4: | WASHINGTON, D.C. 20035 |
| ATTORNEY DOCKET NUMBER: | 012052.0855 |
| NAME OF SUBMITTER: | ALICIA M. CHOI |
| SIGNATURE: | /Alicia M. Choi/ |
| DATE SIGNED: | 12/04/2014 |

PATENT

Total Attachments: 5

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ASSIGNMENT

For valuable consideration, we,

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 Republic of Korea

KIM, Duck Hwan
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SHIN, Jea Shik
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LEE, Moon Chul
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CUI, Jing
 c/o Samsung Advanced Institute of Technology
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 Yongin-si, Gyeonggi-do 446-712
 Republic of Korea

hereby assign to:

Samsung Electronics Co., Ltd.
 129, Samsung-ro, Yeongtong-gu
 Suwon-si, Gyeonggi-do 443-742
 Republic of Korea

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the

subject of U.S. Patent Application Number 14/382,115 filed August 29, 2014 in the U.S. Patent & Trademark Office, signed by us and entitled:

FILTER USING BAWRS

We authorize and request the attorneys appointed in said application to hereafter complete this Assignment by inserting above the application number and filing date of said application when known, and to correct any typographical errors that may be discovered in this Assignment; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations, and like rights of exclusion, and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives, and assigns without further compensation to perform such lawful acts and to sign such further applications, Assignments, preliminary statements, and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

In TESTIMONY/WITNESS Whereof, we, the undersigned inventors (Assignors), intending to be legally bound, have hereto affixed our signatures.

This 1 day of December, 2014

Jae Chun Lee

LEE, Jae Chun

This _____ day of _____, 2014

KIM, Duck Hwan

This _____ day of _____, 2014

KIM, Chul Soo

This _____ day of _____, 2014

PARK, Ho Soo

This _____ day of _____, 2014

SON, Sang Uk

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the subject of U.S. Patent Application Number 14/382,115 filed August 29, 2014 in the U.S. Patent & Trademark Office, signed by us and entitled:

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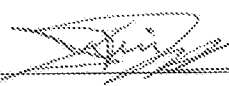
We authorize and request the attorneys appointed in said application to hereafter complete this Assignment by inserting above the application number and filing date of said application when known, and to correct any typographical errors that may be discovered in this Assignment; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations, and like rights of exclusion, and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives, and assigns without further compensation to perform such lawful acts and to sign such further applications, Assignments, preliminary statements, and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

In TESTIMONY/WITNESS Whereof, we, the undersigned inventors (Assignors), intending to be legally bound, have hereto affixed our signatures.

This _____ day of _____, 2014

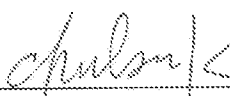
LEE, Jae Chun

This 1 day of December, 2014



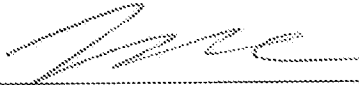
KIM, Duck Hwan

This 1 day of December, 2014



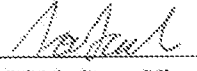
KIM, Chul Soo

This 1 day of December, 2014



PARK, Ho Soo


This 1 day of December, 2014


SON, Sang Uk

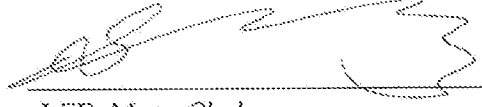
This 1 day of December, 2014


SONG, In Sang

This 1 day of December, 2014


SHIN, Jea Shik

This 1 day of December, 2014


LEE, Moon Chul

This _____ day of _____, 2014

CUI, Jing

This _____ day of _____, 2014

SON, Sang Uk

This _____ day of _____, 2014

SONG, In Sang


This _____ day of _____, 2014

SHIN, Jea Shik

This _____ day of _____, 2014

LEE, Moon Chul

This 1 day of December , 2014



CUI, Jing