PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3093834

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SANG-DOO YUN	10/16/2014
HA-WOOK JEONG	10/16/2014
JIN-YOUNG CHOI	10/16/2014
BYEONG-HO HEO	10/16/2014
SEONG-TAEK HWANG	10/13/2014

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
Name:	SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION
Name: Street Address:	SEOUL NATIONAL UNIVERSITY R&DB FOUNDATION 1 GWANAK-RO, GWANAK-GU

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14532483

CORRESPONDENCE DATA

Fax Number:

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: 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:	0502-0128
NAME OF SUBMITTER:	ANDREW L. DUNLAP
SIGNATURE:	/Andrew L. DUNLAP/
DATE SIGNED:	11/04/2014

503047235 REEL: 034100 FRAME: 0075

Total Attachments: 8 source=0502-0128 Assignment As Filed#page1.tif source=0502-0128 Assignment As Filed#page2.tif source=0502-0128 Assignment As Filed#page3.tif source=0502-0128 Assignment As Filed#page4.tif source=0502-0128 Assignment As Filed#page5.tif source=0502-0128 Assignment As Filed#page6.tif source=0502-0128 Assignment As Filed#page7.tif source=0502-0128 Assignment As Filed#page8.tif

Form **PTO-1595** (Rev. 07/05) OMB No. 0651-0027 (exp. 6/30/2008)

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) Sang-doo YUN, 2) Ha-wook JEONG, 3) Jin-young CHOI, 4) Byeong-ho HEO, 5) Seong-taek HWANG	2. Name and address of receiving party(ies) Name: Samsung Electronics Co., Ltd. Internal Address:			
Additional name(s) of conveying party(ies) attached? Yes No 3. Nature of conveyance/Execution Date(s): Execution Date(s) October 13, 2014; October 16, 2014 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 A. Patent Application No.(s) 14/532,483	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 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 6. Total number of applications and patents				
concerning document should be mailed: Name:Jefferson IP Law, LLP	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)			
Internal Address: Andrew L. Dunlap				
Street Address: 1130 Connecticut Ave., NW, Suite 420				
City: Washington	8. Payment Information a. Credit Card Last 4 Numbers Expiration Date			
State: DC Zip:20036				
Phone Number: 202-293-0804				
Fax Number: <u>202-403-3587</u>	b. Deposit Account Number Authorized User Name			
Email Address: usdocketing@jeffersonip.com				
9. Signature: /Andrew L. DUNLAP/ Reg. No Signature Andrew L. Dunlap Name of Person Signing	November 4, 2014 Date Total number of pages including cover sheet, attachments, and documents: 8			

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

Additional name and address of receiving parties:

Name: Seoul National University R&DB Foundation

Address: 1 Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea

CLIENT REF.: **SH-47706-US-DMC** SAMSUNG REF.: **MG-201306-014-1-US0**

Assignment

WHEREAS, the following inventors, namely 1) Sang-doo YUN, 2) Ha-wook JEONG, 3) Jin-young CHOI, 4) Byeong-ho HEO, and 5) Seong-taek HWANG, all, citizens of the Republic of Korea (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

METHOD AND APPARATUS FOR PROCESSING IMAGE,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on November 4, 2014 and assigned Serial No. 14/532,483; 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, 443-742 and Seoul National University R&DB Foundation, a corporation duly organized under the laws of the Republic of Korea, located and doing business at 1 Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea (hereinafter called "Assignees"), are 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 Assignees 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 Assignees' expense:

- a. to execute:
 - i. all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignees may deem necessary or expedient, and

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CLIENT REF.: **SH-47706-US-DMC** SAMSUNG REF.: **MG-201306-014-1-US0**

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 Assignees 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 Assignees 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 Assignees the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignees 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 Assignees, its legal representatives, successors and assigns.

Assignors each 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 Assignors' heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant 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.

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CLIENT REF.: SH-47706-US-DMC

SAMSUNG REF.: MG-201306-014-1-US0

Signature of Inventor:		
	Woo-sung KANG	Date
Signature of Inventor:	Sang-doo YUN	Oct. 16. 2014 Date
Signature of Inventor:	Ha-wook JEONG	Oct 16.2014 Date
Signature of Inventor:	Jin-young CHOI	Oct. 16.2014 Date
Signature of Inventor:	Byeong-ho HEO	Oct 16.2014 Date
Signature of Inventor:		
	Seong-tack HWANG	Date

CLIENT REF.: SH-47706-US-DMC SAMSUNG REF.: MG-201306-014-1-US0

Assignment

WHEREAS, the following inventors, namely 1) Sang-doo YUN, 2) Ha-wook JEONG, 3) Jin-young CHOI, 4) Byeong-ho HEO, and 5) Seong-taek HWANG, all, citizens of the Republic of Korea (hereinafter called "Assignors"), having made or discovered certain new, useful and non-obvious improvements in an invention having a working title of:

METHOD AND APPARATUS FOR PROCESSING IMAGE,

for which a United States Patent Application is being filed concurrently herewith or, if not being concurrently filed, was filed on November 4, 2014, and assigned Serial No.14/532,483; 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, 443-742 and Seoul National University R&DB Foundation, a corporation duly organized under the laws of the Republic of Korea, located and doing business at 1 Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea (hereinafter called "Assignees"), are 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 Assignees 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 Assignees' expense:

- a. to execute:
 - i. all papers to be used in connection with this application and any divisional, continuing, substitute or reissue application thereof, as the Assignees may deem necessary or expedient, and

1

CLIENT REF.: **SH-47706-US-DMC** SAMSUNG REF.: **MG-201306-014-1-US0**

- 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 Assignees 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 Assignees 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 Assignees the complete title to the inventions and discoveries and Letters Patent hereby conveyed and to enable Assignees 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 Assignees, its legal representatives, successors and assigns.

Assignors each 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 Assignors' heirs, legal representatives and/or administrators and assigns.

Assignors hereby grant 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.

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CLIENT REF.: SH-47766-US-DMC SAMSUNG REF.: MG-201306-014-1-US0

Signature of Inventor: Woo-sung KANG Date Signature of Inventor: Sang-doo YUN Date Signature of Inventor: Ha-wook JEONG Date Signature of Inventor: Jin-young CHOI Date Signature of Inventor: Bycong-ho HEO Date Signature of Inventor: <u> Wang Contack</u> Seong-tack HWANG

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