

**ASSIGNMENT RECORDATION FORM COVER SHEET** *Patents Only*

To: Commissioner for Patents:

Date: January 18, 2005  
Attorney Docket No. 5649-1398

Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

[1.] Young-tae Kim  
 [2.] Young-nam Hwang  
 [3.] Tai-kyung Kim  
 [4.] Won-young Chung  
 [5.] Keun-ho Lee

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

## 2. Name and address of receiving party(ies):

Samsung Electronics Co., Ltd.  
 416 Maetan-dong, Yeongtong-gu  
 Suwon-si, Gyeonggi-do  
 Republic of Korea

## 3. Nature of conveyance:

☒ Assignment  
☐ Merger  
☐ Security Agreement  
☐ Change of Name  
☐ Other \_\_\_\_\_

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

Execution Date: [1.] 11/15/2004 [2.] 11/15/2004  
 [3.] 11/15/2004 [4.] 11/15/2004 [5.] 11/15/2004

4. Application Serial No. 11/017,594 Patent No. \_\_\_\_\_

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Additional numbers attached? Yes ☐ No ☒

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Scott, C. Hatfield  
 Myers Bigel Sibley & Sajovec  
 P. O. Box 37428  
 Raleigh NC 27627

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) \$40.00  
☐ Enclosed  
☒ Authorized to be charged to deposit account

8. Deposit account number: 50-0220

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## 9. Statement and signature

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Scott C. Hatfield, Reg. No. 38,176

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments and document: 4

## CERTIFICATION OF FACSIMILE TRANSMISSION

UNDER 37 CFR § 1.8

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office via facsimile number 703-306-5995 on January 18, 2005.

Joyce Paoli

CH \$40.00 600220 11017694

Attorney Docket No. 5649-1398

## ASSIGNMENT

THIS ASSIGNMENT, made by us, **Young-tae Kim**, citizen of the Republic of Korea, residing at 103-508, Dongsuwon LG Village, Mangpo-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea; **Young-nam Hwang**, citizen of the Republic of Korea, residing at 303-904, Shinyeongtong Hyundai Apt., Banwol-ri, Taeon-eub, Hwaseong-si, Gyeonggi-do, Republic of Korea; **Tai-kyung Kim**, citizen of the Republic of Korea, residing at 707-505, Mongnyeon Woosung Apt., Beomgye-dong, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea; **Won-young Chung**, citizen of the Republic of Korea, residing at 402-201, Shinyeongtong Hyundai Apt., Banwol-ri, Taeon-eub, Hwaseong-si, Gyeonggi-do, Republic of Korea; and **Keun-ho Lee**, citizen of the Republic of Korea, residing at 103-1309, Yuwon Apt., Seocho 4-dong, Seocho-gu, Seoul, Republic of Korea;

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in **PHASE CHANGE MEMORY DEVICES INCLUDING MEMORY ELEMENTS HAVING VARIABLE CROSS-SECTIONAL AREAS**, for which an application for United States Letters Patent has been filed, or is being filed concurrently, in the United States Patent and Trademark Office. We hereby authorize and request Myers Bigel Sibley & Sajovec, P.A., to insert here in parentheses (Application No. 11/017,594, filed 12/20/2004) the filing date and application number of said application when known or to file this Assignment concurrently with the application; and

WHEREAS, Samsung Electronics Co., Ltd., a Korean corporation having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in said application, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

NOW, THEREFORE, To Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we have sold and by these presents do hereby sell, assign, transfer, and convey unto the said assignee, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any and all continuations, continuations-in-part, or divisions thereof, and in and to any and all Letters Patent of the United States of America and all

foreign countries or reissues or other forms of protection thereof which may be granted therefor or thereon, for the full end of the term for which said Letters Patent may be granted along with any term extensions thereon or therefor, together with the right to claim the priority of said application in all foreign countries in accordance with the International Convention, the same to be held and enjoyed by said assignee, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made.

We hereby request that said Letters Patent be issued in accordance with this assignment.

We further covenant and agree that, at the time of the execution and delivery of these presents, we possess full title to the invention and application above-mentioned, and that we have the unencumbered right and authority to make this assignment.

We further covenant and agree to promptly communicate to said assignee or its representatives any facts known to us relating to said invention, to testify in any interference or legal proceedings involving said invention, to execute any additional papers which may be requested to confirm the right of the assignee, its representatives, successors, or assigns to secure patent or similar protection for the said invention in all countries and to vest in the assignee complete title to the said invention and Letters Patent, without further compensation, but at the expense of said assignee, its successors, assigns, and other legal representatives; and we hereby instruct, and further covenant and agree to bind our heirs, legal representatives, and assigns, to do same, without further compensation, but at the expense of said assignee or its representatives.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this 15  
day of 11, 2004.

Young-tae Kim (SEAL)  
Young-tae Kim

Young-nam Hwang (SEAL)  
Young-nam Hwang

Tai-kyung Kim (SEAL)  
Tai-kyung Kim

Won-young Chung (SEAL)  
Won-young Chung

Keun-ho Lee (SEAL)  
Keun-ho Lee

Witnessed by:

\_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Date: \_\_\_\_\_