

10-26-2005

SHEET

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10/20/05



103107435

Attorney's Docket No. 030681-876

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

1. Bum-seok SEO  
2. Jung-hyun LEE

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

3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other

Execution Date: September 20, 2005

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

Name: SAMSUNG ELECTRONICS CO., LTD.

Address:  
416, Maetan-dong, Yeongtong-gu, Suwon-si,  
Gyeonggi-do, Republic of Korea

Additional name(s) & addresses attached?  Yes  No

113013 U.S. PTO  
11/253693



4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: September 20, 2005

A. Patent Application No.(s)

Additional numbers attached?  Yes  No

B. Patent No.(s)

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

Name: Charles F. Wieland III

Address:  
Buchanan Ingersoll PC  
Including attorneys from Burns, Doane, Swecker & Mathis  
Customer Number 2 1 8 3 9  
P.O. Box 1404  
Alexandria, VA 22313-1404

6. Total number of applications and patents involved: 1

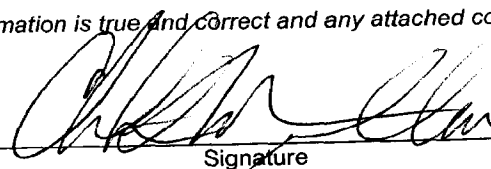
7. Total fee (37 CFR 3.41).....\$ \$40.00 (8021)

Enclosed  
 Authorized to be charged to deposit account  
 Credit card. Form PTO-2038 is attached.

8. Deposit account number:  
02-4800  
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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.

Charles F. Wieland III 33,096  October 20, 2005  
Name of Person Signing Reg. No. Signature Date

Total number of pages including cover sheet, attachments, and documents: 3

Mail documents to be recorded with required cover sheet information to:  
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10/24/2005 FFANAI2 0000043 11253693  
05 FC:8021 (40.00 OF)

# ASSIGNMENT

## (JOINT)

THIS ASSIGNMENT, by (1) Bum-seok SEO, and (2) Jung-hyun LEE, residing at (1) Seoul, Republic of Korea; and (2) Yongin-si, Gyeonggi-do, Republic of Korea (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in GE PRECURSOR, GST THIN LAYER FORMED USING THE SAME, PHASE-CHANGE MEMORY DEVICE INCLUDING THE GST THIN LAYER, AND METHOD OF MANUFACTURING THE GST THIN LAYER set forth in an application for Letters Patent of the United States, which is a

- (1)  provisional application
  - (a)  bearing Application No. \_\_\_\_\_, and filed on \_\_\_\_\_;
  - (b)  to be filed herewith; or
  
- (2)  non-provisional application
  - (a)  bearing Application No. \_\_\_\_\_, and filed on \_\_\_\_\_;
  - (b)  having an oath or declaration executed on even date herewith prior to filing of application;
  - (c)  having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, SAMSUNG ELECTRONICS CO., LTD., a corporation duly organized under and pursuant to the laws of Republic of Korea and having a principal place of business at 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignor has sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

**Buchanan Ingersoll PC**

Attorneys  
1000 Connecticut Avenue, North Building, Suite 2000, Washington, D.C. 20036

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AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

AND the Assignors hereby authorize and request the attorneys of Buchanan Ingersoll PC (including attorneys from Burns, Doane, Swecker & Mathis) to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known.

AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said invention, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

DATE 09/20/2005

  
\_\_\_\_\_  
BUM-SEOK SEO

DATE 09/20/2005

  
\_\_\_\_\_  
JUNG-HYUN LEE