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Randolph Building 401 Dulany Street Alexandria, VA 22314 Atty. Docket No.: 2557-000243/US/CPA Page 1 of 1

To the Honorable Commission Please record the attached orig	er of Patents and Trademarks: inal documents or copy thereof.
1. Name of conveying party(ies): Hyo-san LEE, Hyung-ho KO, Chang-ki HONG and Sang-jun CHOI Additional name(s) of conveying party(ies) attached? YES NO 3. Nature of conveyance: Assignment Merger Security Agreement Change of Name Other: Correction Execution Date: March 30, 2005 March 28, 2005, March 30, 2005 Frame: 0778	 Name and address of receiving party(ies) Name: SAMSUNG ELECTRONICS CO., LTD. International Address: 416 Maetan-dong, Yeongtong-gu, Suwon-si Gyeonggi-do, Republic of Korea Additional name(s) & address(es) attached? ☐ YES ☒ NO
 and March 30, 2005 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:
A. Patent Application No(s). 10/976,161 Additional numbers atta 5. Name and address of party to whom correspondence concerning document should be mailed: Name: HARNESS, DICKEY & PIERCE, P.L.C. Street Address: P.O. BOX 8910 City: RESTON State: VA ZIP: 20195 Country: USA	B. Patent No.(s). ached? YES NO 6. Total No. of applications/patents involved: One (1) 7. Total fee (37 C.F.R. § 3.41): \$40.00 Enclosed Authorized to be charged to deposit account, if no fee attached. 8. Deposit account number: 08-0750 (Attach triplicate copy of this page if paying by deposit account)
O. Statement and signature	SE THIS SPACE information in true and correct and any attached copy is a true copy March 13, 2006 Signature Date
Total number of pages including cover	r sheet, attachments, and document: eight (8)

TSA/cm

PATENT REEL: 017334 FRAME: 0923

Total number of pages including cover sheet, attachments, and document: (5)

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TSA/krf

ASSIGNMENT

Atty, Docket No. 2557-000243/US/CPA

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

PAA-BASED ETCHANT, METHODS OF USING SAME, AND RESULTANT STRUCTURES

			AND RESCEIMENT THE PROPERTY OF
for whi	ich Ast	signor is	about to make or has made United States or International application for
patent	(a)		executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration and Power of Attorney);
	(b)		executed on,; or
	(c)	\boxtimes	filed on <u>10/29/2004</u> , and assigned Serial No. <u>10/978,161;</u>
	(d)		U.S. Patent No, issued; and
princi	WHI pal pli blic of	EREAS, ace of Korea	SAMSUNG ELECTRONICS CO., LTD., a corporation of Korea having a business at 418 Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do hereinafter referred to as Assignee, is destrous of acquiring an interest

therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor by these presents does sell, essign and transfer unite Assignee and its successors in interest, the full and exclusive right, title and interest in the United Assignee and all foreign countries, including the right to claim priority under the laws of the United States, the Peris Convention, and any foreign countries, to the said invention as described in the aforesald application, said application for patent and all Letters Patent therefor to be held and enjoyed by Assignee to the full end of the term for which said Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by

Assignor had this assignment and sale not been made, and the right to recover for past infringements of, or liabilities for, any of the rights relating to any of said applications or patents

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale or agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the Commissioner of Patents and Trademarks to issue sald Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.

The undersigned hereby grant(s) the law firm of Harness, Dickey & Pierce, P.L.C. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

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PATENT REEL: 017334 FRAME: 0925

ASSIGNMENT

First Inventor - Hyo-san LEE

<u> Нуозап Lee</u>

Dated

MAR. 30.2005

Second Inventor - Hung-ho KO

Dated

Third Inventor - Chang-ki HONG

Dated /// 2

Fourth Inventor - Sang-jun CHO

Dated Life to root

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ASSIGNMENT

Atty. Docket No. 2557-000243/US/CPA

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

PAA-BASED ETCHANT, METHODS OF USING SAME. AND RESULTANT STRUCTURES

for which Assignor is about to make or has made United States or International application for patent

(a)		executed on even date preparatory to thing (each investion and this Assignment on the same day as he/she signs the Declaration and Power of Attorney);
(b)		executed on,, or
(c)	⊠	filed on 10/29/2004, and assigned Serial No. 10/976,161;
(d)		U.S. Patent No, issued; and
WHE	REAS,	SAMSUNG ELECTRONICS CO., LTD., a corporation of Korea having &

WHEREAS, SAMSUNG ELECTRONICS CO., LTD., a corporation of Korea having a principal place of business at 416 Maetan-dong, Yeongtong-gu, Suwon-sl, Gyeonggi-do, Republic of Korea, hereinafter referred to as Assignee, is desirous of acquiring an Interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor by these presents does sell, assign and transfer unto Assignee and its successors in Interest, the full and exclusive right, title and Interest in the United States of America and all foreign countries, Including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the said invention as described in the aforesaid application, said application for patent and all Letters Patent therefor to be held and enjoyed by Assignee to the full end of the term for which said Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to recover for past infringements of, or liabilities for, any of the rights relating to any of said applications or patents resulting therefrom:

Assignor hereby covenents and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without turner or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale or agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid to issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.

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PATENT REEL: 017334 FRAME: 0927 **ASSIGNMENT**

First Inventor - Hyo-san LEE

Dated

Second Inventor - Hyung-ho KO

3/28/2005

Dated

Third Inventor - Chang-ki HONG

Dated

Fourth Inventor - Sang-jun CHOI

Dated

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