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2-6-04 RE 102897345.cuments or copy thereof. To the Honorable Commissioner of Patents and Trademarks: 1. Name of conveying party(ies 2. Name and address of receiving party(ies): Han-il LEE, In-chul HWANG Name: SAMSUNG ELECTRONICS CO., LTD. Additional name(s) of conveying party(ies) Internal Address: 416, Maetan-dong, attached?

Yes

No Yeongtong-gu, Suwon-si, Gyeonggi-do, 3. Nature of conveyance: Republic of Korea Assignment ☐ Merger Additional name(s) & address(es) attached: ☐ Security Agreement ☐ Change of Name ☐ Yes ☑ No □ Other Execution Date: November 30, 2004 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: B. Patent No.(s) A. Patent Application No.(s) 10/942,119 Additional numbers attached?

Yes No 6. Total number of applications and 5. Name and address of party to whom correspondence concerning document patents involved: should be mailed: 7. Total fee (37 C.F.R. §3.41): \$40.00 Name: Frank Chau, Esq. ☑ Enclosed - Credit Card Payment Form PTO-2038 Street Address: F. CHAU & ASSOCIATES, LLC ☐ Authorized to be charged to deposit 130 Woodbury Road account City: Woodbury State: NY Zip: 11797 8. Deposit account number: 12/07/2004 GTON11 00000046 10942119 (Attach duplicate copy of this page if 40.00 OP 01 FC:8021 paying by deposit account) DO NOT USE THIS SPACE 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. Reid Drith-X Richard D. Ratchford, Jr. Registration No. 53,865 Name of Person Signing Total number of pages including cover sheet, attachments and documents: Do not detach this portion Mail documents to be recorded with required cover sheet information to: Mail Stop Assignment Recordation Services Director of the US Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450

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PATENT REEL: 016042 FRAME: 0413 AS A BELOW NAMED INVENTOR, I, and each of us, individually hereby declare that: IN CONSIDERATION of the sum of TEN (\$10.00) dollars or the equivalent thereof, and other good and valuable consideration, the receipt of which from the hereinafter named Assignee is hereby acknowledged, I do hereby sell, assign and forever grant and convey unto:

ASSIGNEE: Samsung Electronics Co., Ltd.

ADDRESS: 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do,

Republic of Korea

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Who is my Assignce, and to the successes and assigns of my Assignce, all my right, title and interest, in and for the United States of America and all other countries, including all rights of priority, in and to the invention entitled:

7/TLE: A FREQUENCY SYNTHESIZER USING A WIDE-BAND VOLTAGE CONTROLLED OSCILLATOR AND A FAST ADAPTIVE FREQUENCY CALIBRATION METHOD

invented by me (if only one inventor is named below) or us (if more than one inventor is named below) and described in an application for a United States patent the specification of which is either attached hereto or otherwise accompanies this Assignment or indicates an attorney docket no. 8021-253 (SS-20085-US), or is more particularly identified as:

	executed on even date herewith, or
	Serial No. 10/942,119 filed in the U.S. Patent & Trademark Office on September 15, 2004
	or
	executed on,
certific patente grantes aucces or rene	and to all United States patents which may be granted thereon and therefore, and in and to all cates of corrections, divisions, continuations, continuations-in-part, reissued and re-examined, and to any extensions thereof, said interest being the entire ownership of the patent when it, to be held and enjoyed by said SAMSUNG ELECTRONICS CO., LTD., my Assignee, its sors, assigns or other legal representatives, to the full end of the term, terms, or any extension wal thereof, for which said patent or patents may be granted, as fully and entirely as the same have been held and enjoyed by me or us if this assignment, sale and conveyance had not been

AND I hereby covenant and agree to sign and execute any further documents or instruments which may from time-to-time be either necessary, lawful, proper or requested by the Assignee, in the prosecution of the above-named application or in the preparation and prosecution of any certificate of correction, division, continuation, continuation-in-part, reissue, re-examination, in any amendment, extension, or interference proceeding, whether administrative or judicial, or otherwise, to secure the title hereto in said Assignee;

AND I do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Patent or Patents to the Assignee, and I hereby appoint as my, or our attorney, and authorize and request <u>Frank Chau, Reg. No. 34,136</u>, to insert on this Assignment any further identification or to complete such identification which may be either necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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PATENT REEL: 016042 FRAME: 0414 IN WITNESS WHEREOF, I and we have set our hands and seals on the dates written beside my and our respective names:

INVENTOR(S)	Date Signed	Witness(cs)
1) Huil Lee (S Han-il LEE	ical)11/30/04	
2) In Clark Strang (S	leal) 11/30/04	

RECORDED: 12/06/2004

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