PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| Shih-Chieh Yen | 06/17/2010 |
| Yao-Chi Wang | 05/27/2010 |
| Ming-Yu Hsieh | 05/25/2010 |

RECEIVING PARTY DATA

| Name: | MStar Semiconductor, Inc. |
|-----------------|------------------------------------|
| Street Address: | 4F-1, No. 26, Tai-Yuan St., Chupei |
| City: | Hsinchu Hsien |
| State/Country: | TAIWAN |
| Postal Code: | 302 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12862346 |

CORRESPONDENCE DATA

(509)944-4692 Fax Number:

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 509-324-9256 Email: Lynne@leehayes.com Correspondent Name: Lee & Hayes, PLLC

Address Line 1: 601 W. Riverside Ave, Suite 1400 Address Line 4: Spokane, WASHINGTON 99201

| ATTORNEY DOCKET NUMBER: | M027-0042US |
|-------------------------|-------------|
| NAME OF SUBMITTER: | Lynne Mahan |

Total Attachments: 2 source=NM0307#page1.tif source=NM0307#page2.tif

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REEL: 024880 FRAME: 0154

Attorney Docket No.: Mo27-0042US Client Docket No. .: MST0420-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| Serial Number 12/862, 34 6 Filing Date Rus 24, 2010 Inventorship |
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| Serial Number Russian Data Russian Data |
| Inventorship |
| Inventorship |
| Attornovic Docket No. V100-7-0042-1) S |
| Client Docket No. mst 220-US |
| Title: |
| PATENT ASSIGNMENT |
| PARTIES TO THE ASSIGNMENT |
| Assignor(s): |
| SHIH-CHIEH YEN; YAO-CHI WANG; MING-YU HSIEH |
| |
| Assignee: |
| MStar Semiconductor, Inc. |
| 4F-1, No. 26, Tai-Yuan Street |
| Chupei, Hsinchu Hsien, Taiwan 302 |
| Republic of China |
| |
| AGREEMENT |
| WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| "Frandwidth control Apparatus for Phase Lock Loop and Method Thereof |
| for which: |
| a provisional application for United States Letters Patent was filed on |
| and was given U.S. Serial No and/or |
| a non-provisional application for United States Letters Patent was: |
| filed on 08/24/2010 and was given U.S. Serial No. 12/862,346; or filed |
| concurrently herewith. Assignors hereby authorize and request ASSIGNEE's legal |
| representatives, of Lee & Hayes, PLLC, 601 W Riverside Ave, Suite 1400, Spokane, Washington |
| 99201, who are associated with customer number 29150, to insert in the caption above the serial |
| number and filing date of the patent application when known. |
| WHEREAS, MStar Semiconductor, Inc. (hereinafter referred to as ASSIGNEE), a |
| corporation of Taiwan, Republic of China having a place of business at 4F-1, No. 26, Tai-Yuan |
| Street, Chupei, Hsinchu Hsien, Taiwan 302, Republic of China, is desirous of acquiring the entire |
| right, title and interest in and to the invention and in and to any letters patent that may be |
| granted therefore in the United States and in any and all foreign countries; |
| NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of |
| which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE, |
| the entire right, title and interest in and to said invention, said application and any and all |
| letters patent which may be granted for said invention in the United States of America and its |
| territorial possessions and in any and all foreign countries, and in any and all divisions, reissues |
| and continuations thereof, including the right to file foreign applications directly in the name of |
| ASSIGNEE and to claim priority rights deriving from said United States application to which |

Page 1 of 2

said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S)

PATENT REEL: 024880 FRAME: 0155

Attorney Docket No.: Mo27-0042US Client Docket No. .: MST0420-US

had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefore.

| Inventor's Signature: State Click Girl | Date: 06/17/500 |
|--|---------------------------------|
| Residence: Hsinchu Hsien | , , |
| Citizenship: Taiwan, R.O.C. | |
| Mailing Address: 4F-1, No. 26, Tai-Yuan Street, ChuPei, Hs | inchu Hsien 302, Taiwan, R.O.C. |

| Inventor's Signature: Garo-Chi Wang | Date: 05/27/2010 |
|--|----------------------------------|
| Residence: Hsinchu Hsien | |
| Citizenship: Taiwan, R.O.C. | |
| Mailing Address: 4F-1, No. 26, Tai-Yuan Street, ChuPei, H. | sinchu Hsien 302, Taiwan, R.O.C. |

| Inventor's Signature: Ming-Yy Herely | Date: 05/25/20/0 |
|--------------------------------------|------------------|
| Residence: Hsinchu Hsien | |
| Citizenship: Taiwan, R.O.C. | |