502033094 08/22/2012

PATENT ASSIGNMENT

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

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| Wan-joo Maeng | 08/22/2012 |
| Seung-hoon Han | 08/22/2012 |

RECEIVING PARTY DATA

| Name: | Samsung Electronics Co., Ltd. | |
|-----------------|---|--|
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| City: | Suwon-si | |
| State/Country: | KOREA, REPUBLIC OF | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13591363 |

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Total Attachments: 2

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PATENT REEL: 028826 FRAME: 0898 OP \$40.00 13591363

502033094

ASSIGNMENT

For valuable consideration, we,

Wan-joo MAENG c/o Samsung Advanced Institute of Technology, San 14-1

Nongseo-dong, Giheung-gu, Yongin-si, Gyeonggi-do,

Republic of Korea

Seung-hoon HAN c/o Samsung Advanced Institute of Technology, San 14-1

Nongseo-dong, Gibeung-gu, Yongin-si, Gyeonggi-do,

Republic of Korea

hereby assign to:

SAMSUNG ELECTRONICS CO., LTD., a Republic of Korea

corporation having principal executive offices or a place of business at 416, Mactan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea

its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are the subject of U.S. Patent Application Number 13/591,363 filed August 22, 2012 in the U.S. Patent & Trademark Office signed by us and entitled:

ACOUSTO-OPTIC DEVICE HAVING NANOSTRUCTURE, AND OPTICAL SCANNER, OPTICAL MODULATOR, AND DISPLAY APPARATUS USING THE ACOUSTO-OPTIC DEVICE

We authorize and request the attorneys appointed in said application to hereafter complete this Assignment by inserting above the filing date and application serial number of said application when known, and to correct any typographical error that may be discovered in this Assignment; this Assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, Assignments, preliminary statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

IN TESTIMONY/WITNESS WHEREOF, we, the undersigned inventors (Assignors), intending to be legally bound, have hereto affixed our signatures.

This _____ day of _____ August _____, 2012

SSE SEATS

Wan-joo MAENG

This _____ day of _____, 2012

Seung-hoon HAN

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