PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3111633

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

CONVEYING PARTY DATA

| Name | Execution Date |
|---------------|----------------|
| DONG IL CHO | 11/06/2014 |
| WOOK BAHN | 11/06/2014 |
| TAE IL KIM | 11/06/2014 |
| SANG HOON LEE | 11/05/2014 |

RECEIVING PARTY DATA

| Name: | SNU R&DB FOUNDATION |
|-----------------|----------------------------------|
| Street Address: | SAN 56-1, SILLIM-DONG, GWANAK-GU |
| City: | SEOUL |
| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 151-742 |
| Name: | RS AUTOMATION CO., LTD. |
| Street Address: | 348-2, CHEONGHO-RI, JINWI-MYEON |
| City: | PYEONGTAEK-SI, GYEONGGI-DO |
| State/Country: | KOREA, REPUBLIC OF |
| Postal Code: | 451-862 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14401808 |

CORRESPONDENCE DATA

Fax Number: (650)938-5200

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

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| ATTORNEY DOCKET NUMBER: | 27253-28121 |
|-------------------------|-------------------------------|
| NAME OF SUBMITTER: | JAE WON SONG, REG. NO. 59,070 |
| SIGNATURE: | /Jae Won Song/ |

REEL: 034192 FRAME: 0076 503065030

DATE SIGNED: 11/17/2014

Total Attachments: 2
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PATENT REEL: 034192 FRAME: 0077

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to SNU R&DB FOUNDATION, a Republic of Korea corporation, having a place of business at San 56-1, Sillim-dong, Gwanak-gu, Seoul 151-742, Republic of Korea ("ASSIGNEE"), and RS Automation CO., LTD., a Republic of Korea corporation, having a place of business at 348-2, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do 451-862, Republic of Korea ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

- 1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional or non-provisional application filed under 35 U.S.C. § 111, design application filed under 35 U.S.C. § 171, international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):
 - Application No. <u>14/401,808</u>, entitled "DIGITAL OPTO-ELECTRIC PULSE APPLICATION METHOD FOR CORRECTING BIT ERROR OF VERNIER-TYPE OPTICAL ENCODER," which is a National Phase Entry of International Application No. PCT/KR2013/003552, filed on April 25, 2013, which claims priority from a Republic of Korea patent application No. 10-2012-0052874, filed on May 18 2012 and claims priority from a Republic of Korea patent application No. 10-2013-0029118, filed on March 19, 2013.
- 2. The entire worldwide right, title, and interest in and to:

 (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION;
 (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto that have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) that may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights,

1 of 2

27253/01000/DOCS/3530500.1

| Title: | DIGITAL OPTO-ELECTRIC PULSE APPLICATION METHOD FOR CORRECTING BIT ERROR | | |
|----------------|---|--------------------|--|
| *** | OF VERNIER-TYPE OPTICAL ENCODER | L | Wanted to the second se |
| Filed: | November 17, 2014 | Attorney Docket #: | 27253-28121 US |
| Application #: | 14/401,808 | Client Ref #: | OF13P046/US/JSY |

titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

| Name and Signature | Date of Signature | | |
|--------------------|---|--|--|
| - JZ | 06.11. 2014 | | |
| Dong II CHO | | | |
| Name and Signature | Date of Signature | | |
| 45 | Ol. 11, 2014, | | |
| Wook BAHN | 400400000000000000000000000000000000000 | | |
| Name and Signature | Date of Signature | | |
| - Air | 06 11 2014 | | |
| Tae II KIM | *************************************** | | |
| Name and Signature | Date of Signature | | |
| Shydforn Cu | 11/05/2014 | | |
| Sang Hoon LEE | ************************************** | | |

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