PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KYUNG HWAN YOO	10/07/2014
JOO SUNG MOON	08/17/2015
JEONG GON SONG	08/13/2015
SEUNG IL HAN	08/13/2015

RECEIVING PARTY DATA

Name:	SAMSUNG ELECTRONICS CO., LTD	
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU	
City:	SUWON-SI, GYEONGGI-DO	
State/Country:	KOREA, REPUBLIC OF	
Postal Code:	16677	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14090270

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ATTORNEY DOCKET NUMBER: 2294.1891

NAME OF SUBMITTER: BRIAN W. AVERY

SIGNATURE: /Brian W. Avery/

DATE SIGNED: 08/17/2015

Total Attachments: 4

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> PATENT REEL: 036338 FRAME: 0971

Docket No. 2294 1891

U.S. ASSIGNMENT

UATA TOOL

IN CONSIDERATION of the sum of One Dollar (\$1,00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter, "ASSIGNOR") by

SAMSUNG ELECTRONICS CO., LTD: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742 Republic of Korea

(hereinafter, "ASSIGNEE"), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled (Title of Invention).

CLEANING ROBOT AND CONTROL METHOD THEREOF

elating to international Patent Application PCT/KR <u>/</u> States was executed on even date herewith or, if not so exc	and/or for which application for Letters Palent of the United
(a) executed on ;	्र(Insert date of execution of application, if not concurrent).
(b) filed on November 26, 2013 Serial No. 14/090,270;	Any registered attorney of STAAS & HALSEY LLP, 1201 New York Avenue, N.W.; Suite 700 Washington, D.C. 20005 (202434-1500) Is hereby authorized to insert in (b) the specified data, when known.

and to said application and all Letters Patent(s) of the United States granted on said application and any continuation, division, renewal, substitute, relissue or reexamination application based thereon, for the full term of terms for which the said Letters Patent(s) may be granted and including any extensions thereof (collectively, hereinafter, "said application(s) and Letters Patent(s)").

The ASSIGNOR agree(s), when requested by said ASSIGNEE and without charge to but at the expense of said ASSIGNEE to do all acts which the ASSIGNEE may dearn necessary, desirable or expedient, for securing, maintaining and enforcing protection for said invention, including in the preparation and prosecution of said application(s) and the issuance of said Letters Patent(s) in any interference, reissue, reexamination, or public use proceeding, and in any illigation or other legal proceeding which may arise or be declared in relation to same, such acts to include but not be limited to executing all papers, including separate assignments and declarations, taking all rightful paths, providing aworn testimony; and obtaining and producing evidence.

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PATENT REEL: 036338 FRAME: 0972 Doc code: Oath

Document Description: Oath or declaration filed

PTO/AIA/02 (07-13) Approved for use through 01/31/2014. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	CLEANING ROBOT AND (CONTROL METHO	D THEREOF	
The atta OR United S LEGAL NA (E.g., Given Joo Sur Residence (e	ent is directed to: ached application, States application or PCT international ME of inventor to whom this survive and middle (if any)) and in a model of the properties of	pacitated inventor): State State inventor):	plies:	November 26, 2013
I believe the in the ap	above-named inventor or joint invenplication. dentified application was made or autonowledge that any willful false staten	State tor to be the original inventhorized to be made by meaning the made in this statement made in this statementh.	∋ .	
Relationshi	p to the inventor to whom this substited and the inventor to whom this substited and the inventor to whom this substited and the inventor is under a serson to whom the inventor is under a serson who otherwise shows a sufficient int Inventor.	ute statement applies: legally incapacitated inver		ler 37 CFR 1.46 is required), or

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandría, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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SUBSTITUTE STATEMENT Circumstances permitting execution of this substitute statement: Inventor is deceased, Inventor is under legal incapacity, Inventor cannot be found or reached after diligent effort, or Inventor has refused to execute the oath or declaration under 37 CFR 1.63. If there are joint inventors, please check the appropriate box below: An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted. OR An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b). **WARNING:** Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the JSPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. PERSON EXECUTING THIS SUBSTITUTE STATEMENT: YoungGui Park Date (Optional): 1 rolon Signature: APPLICANT NAME AND TITLE OF PERSON EXECUTING THIS SUBSTITUTE STATEMENT: If the applicant is a juristic entity, list the applicant pame and the title of the signer: Samsung Electronics Co., Ltd. Applicant Name: This Substitute Statement: Chief Engineer, IP Prosecution Group, DMC R&D Center Title of Person Executing The signer, whose title is supplied above, is authorized to act on behalf of the applicant. Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent): country Republic of Korea _{City} Suwon Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent) Samsung Electronics Co., Ltd., 129, Samsung-ro, Yeongtong-gu, _{city}Suwon-si 443-742

[Page 2 of 2]

after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.

Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached

U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter, "ASSIGNOR") by

SAMSUNG ELECTRONICS CO., LTD. 129. Samsung-ro, Yeongtong-gu.

Suwon-si, Gyeonggi-do 443-742 Republic of Korea	
(hereinafter, "ASSIGNEE"), the receipt of which is hereby a ransfers to ASSIGNEE the entire and exclusive right, title a (Title of Invention)	acknowledged, the undersigned ASSIGNOR hereby sells, assigns and and interest to the invention entitled
CLEANING ROBOT AND CONTROL MET	HOD THEREOF
relating to International Patent Application PCT/KR/_ States was executed on even date herewith or, if not so exc	and/or for which application for Letters Patent of the United ecuted, was:
(a) executed on ;	(Insert date of execution of application, if not concurrent)
(b) filed on , November 26, 2013 Serial No. 14/090,270;	Any registered attorney of STAAS & HALSEY LLP, 1201 New York Avenue, N.W., Suite 700 Washington, D.C. 20005 (202/434-1500) is hereby authorized to insert in (b) the specified data, when known.
substitute, reissue or reexamination application based there granted and including any extensions thereof (collectively, least the collectively, least and including any extensions thereof (collectively, least and collectively, least and collectively, least and collectively said invention, including in the preparation and prosecution terference, reissue, reexamination, or public use proceed	d ASSIGNEE and without charge to but at the expense of said ASSIGNE esirable or expedient, for securing, maintaining and enforcing protection of said application(s) and the issuance of said Letters Patent(s), in any ing, and in any litigation or other legal proceeding which may arise or be limited to executing all papers, including separate assignments and
IN WITNESS WHEREOF, the undersigned inventor(s) h (Typed Name & Signature of Inventor(s))	nas (have) affixed his/her/their signature(s). (Date) (Typed Name & Signature of Witness(es))
) Kyung Hwan YOO	
Joo Sung MOON	
Jeong Gm 89V4 A	1g. 13.2015
Seung II HAN AU Seung II HAN	9,13,2015

PATENT REEL: 036338 FRAME: 0975

RECORDED: 08/17/2015