505701372 10/01/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5748182

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the ADDRESS OF THE ASSIGNEE TO CHANGE "DEMOCRACTIC PEOPLE'S REPUBLIC OF" TOREPUBLIC OF previously recorded on Reel 040586 Frame 0045. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
JINMYOUNG KIM	11/14/2016
JAEHYUK CHOI	11/29/2016
JUNGWOO KIM	11/29/2016

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15371326

CORRESPONDENCE DATA

Fax Number: (202)293-7860

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2022937060

Email: MWHITE@SUGHRUE.COM, SUGHRUE@SUGHRUE.COM

Correspondent Name: SUGHRUE MION, PLLC

2000 PENNSYLVANIA AVENUE, N.W. Address Line 1:

Address Line 2: SUITE 900

Address Line 4: WASHINGTON, D.C. 20006

ATTORNEY DOCKET NUMBER:	Q229772
NAME OF SUBMITTER:	MICHELLE L WHITE FOR LOREN H TUNG
SIGNATURE:	/Michelle L White/
DATE SIGNED:	10/01/2019

Total Attachments: 8

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504126722 12/07/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4173393

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JINMYOUNG KIM	11/14/2016
JAEHYUK CHOI	11/29/2016
JUNGWOO KIM	11/29/2016

RECEIVING PARTY DATA

State/Country: Postal Code:	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF 16677
Clais/Caustine	MODEA DEMOCRATIC DEODLEIC DEDLIDUO OF
City:	SUWON-SI
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO
Name:	SAMSUNG ELECTRONICS CO., LTD.

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15371326

CORRESPONDENCE DATA

Fax Number: (202)293-7860

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

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	Q229772
NAME OF SUBMITTER:	THOMAS HUNDLEY
SIGNATURE:	/Thomas Hundley/
DATE SIGNED:	12/07/2016
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

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Docket No.: Q229772

Samsung Ref.: RS2015070111US0

Only After Sept 16, 2012

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ASSIGNMENT WITH DECLARATION FOR PATENT APPLICATION (37 CFR 1.63)

특허 출원 관련 양도 및 선언 (연방규칙집 제 37 조 1.63 항)

Korean Language Assignment with Declaration

이하 양도인으로 지칭되는 하기 서명 발명자인 본인(돌)은 아래에 명시된출원에서서술한특정개선을발명하였으므로그리고	Whereas, I/We, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; and
에 소재한 (양수인)는(은) 출원 및 발명의 그리고 이에 따라 획득될 일체의 미국 특허에 대한 모든 권리, 소유권 및 이권을 획득하기를 원하므로,	Whereas, <u>SAMSUNG ELECTRONICS CO.</u> , <u>LTD.</u> of 129. <u>Samsung-ro.</u> Yeongtong-gu, <u>Suwon-si.</u> Gyeonggi-do, 16677. <u>Republic of Korea</u> , (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;
이제 대가를 위한 그 수령을 인정합니다.	Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,
상기 양도인인 본인(들)은 싱기 명칭의 양수인, 그 승계자 및 그양수인에게모든분할과그연속을 포함하여 미국용으로 공개된출원과발명 그리고 그에 대해 숭인될수 있는 미국의모든 특허증서와 미합중국코드 제 35 장 제§119 항에 의거한 우선권 청구권과 과거의 손해에 대한소송권을 포함한 모든 그 재발행에 대한 전체 권리, 소유권 및 이권을판매, 양도 및 이전하며 그리고 본인(들)은 출원서에 제시된 발명에 대해숭인된 일체의 특허증서를 양수인, 그 승계자 또는 그 양수인에게발급하도록 미국 특허청장에게 요청하는 바이며 또한 본인(들)은양수인의 요청할 경우 미국 출원과 관련하여 양수인이 필요하다고생각하는모든서류를 더이상의보수없이서명날인할것입니다.	I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, including the right to claim priority under 35 USC 119 and the right to sue for past damages, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee.
(공인은 기록을 위해 요구되지는 않지만 미합중국 코드 제 35 장 제\$261 항에 의거서명날인에 대한일웅의 증거입니다)	(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)
본인은 아래성명의 발명자로서 다음과 같이 선언합니다.	As the below named inventor, I hereby declare that:
본 양도 및 선언서는 다음 사항을 위한 것입니다.	This assignment with declaration is directed to:
★ 첨부출원또는	∑ The attached application, or
□ 미합중국출원또는PCT 국제출원번호: 출원일:	United States Application or PCT International Application Number filed on
본출원의 제목은 다음과 같습니다:	The application is entitled:
	BEAM STEERING APPARATUS, METHOD OF DRIVING THE BEAM STEERING APPARATUS, AND SPATIAL INFORMATION ACQUISITION APPARATUS USING THE BEAM STEERING APPARATUS

[Page 1]

Korean Language Assignment with Declaration

위에 표시된 출원은 본인이 신청하였거나 또는 신청하도록 허가를 받았습니다.

본인은, 본인이 본 출원에서 청구된 발명의 원 발명자 또는 원 공동 발명자라고 믿습니다.

본인은 본 양도 및 선언서 제출과 관련된 출원의 내용을 검토하였으며 아울러 이해합니다.

본인은 연방 규정 코드 제 37장 제 156항에 규정된 바에 따라, 특허성의 판단에 중요한본인이 아는 모든 정보를 특허청에 공개할 의무가 있음을 알고 있습니다.

본 양도 및 선언서 내에 의도적 허위 진술이 있을 경우 미합중국 코드 제 18장의 1001 항에 의거 벌금이나 5년 이하의 징역 또는 두 가지 처벌을 모두받을 수 있음을 인정합니다. The above identified application was made or was authorized to be made by me.

I believe that I am the original inventor or an original join inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):

The assignment with declaration is an accurate translation of the corresponding English language assignment with declaration.

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Signature

[Page 2]

Date March 17, 2014

PATENT

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Mailing Address:	a Samsung Advanced Inst		logy, 130, S	densenng-ra,	Young		Samone	i, Gyec	megi-do	, 16678,
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