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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
WEIMING LI	10/28/2019
HYONG EUK LEE	10/29/2019
HAO WANG	10/28/2019
SEUNGIN PARK	10/29/2019
QIANG WANG	10/28/2019
YANG LIU	10/28/2019
YUEYING KAO	10/28/2019

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16674139

CORRESPONDENCE DATA

Fax Number: (202)315-3758

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: 202-429-0020

Email: pto@nsiplaw.com

Correspondent Name: NSIP LAW

Address Line 1: P.O. BOX 65745

Address Line 4: WASHINGTON, D.C. 20035

ATTORNEY DOCKET NUMBER: 012052.1763

NAME OF SUBMITTER: S. MAHMOOD AHMAD

SIGNATURE: /S. Mahmood Ahmad/

DATE SIGNED: 11/05/2019

PATENT REEL: 050927 FRAME: 0616

Total Attachments: 5 source=NewApp_0120521763_ExecutedCDAEPAS#page1.tif source=NewApp_0120521763_ExecutedCDAEPAS#page2.tif source=NewApp_0120521763_ExecutedCDAEPAS#page3.tif

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PATENT REEL: 050927 FRAME: 0617

DECLARATION

As a below-named inventor, I hereby dec	lare that this declaration is directed t	o the application attached hereto, or
to United States Application Number or F	PCT International Application Number	
filed on(if applicable), entitled:	

METHOD AND APPARATUS FOR ALIGNING 3D MODEL

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the above-identified application.

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

I have reviewed and understand the contents of the above-identified application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

ASSIGNMENT

For valuable consideration, I, as a below-named assignor, hereby assign to:

Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do 16677 Republic of Korea

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the subject of the application identified in the above declaration, which is United States Application Number or PCT International Application Number 16/674,139

filed on November 5, 2019

I authorize and request the attorneys appointed in the above-identified application to hereafter complete this Assignment by inserting above the application number and the filing date of the above-identified application when known, and to correct any typographical errors that may be discovered in this Assignment.

This Assignment includes the above-identified application, any and all United States and foreign patents, utility models, and design registrations granted for any of the inventions and improvements that are the subject of the above-identified application, and the right to claim priority based on the filing date of the above-identified 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 I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations, like rights of exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-

Page 1 of 2

identified application; and I agree for myself and my 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 witness whereof, I, as a below-named inventor and assignor, intending to be legally bound, have hereunto affixed my signature on the date indicated below next to my signature.

Inventor's Legal Name	Weiming LI		
Inventor's Signature	Weiming Li	Date	DH.28,2019
Residence (City, Country)	Beijing, People's Republic of China		
Mailing Address	18/F Sun Palace Building, No 12A, TaiYangGong, Middle Rd, Chaoyang District Beijing 100028, P.R.China		

Inventor's Legal Name	Hyong Euk LEE		
Inventor's Signature		Date	
Residence (City, Country)	Suwon-si, Republic of Korea	3	···········
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

Inventor's Legal Name	Hao WANG
Inventor's Signature	Han Wang Date Oct. 28, 2019
Residence (City, Country)	Boijing, People's Republic of China
Mailing Address	18/F Sun Palace Building, No.12A, TaiYangGong, Middle Rd, Chaoyang District Beijing 100028, P.R.China

inventor's Legal Name	Seungin PARK		
Inventor's Signature		Date	
Residence (City, Country)	Yongin-si, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Yeongtong-gu, Suwon-si, Gynonggi-do, 16678, Republic of Korea		

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Inventor's Legal Name	Qiang WANG	
Inventor's Signature	Qiang Won) Dove Oct. 28, 2019	
Residence (City, Country)	Beijing, People's Republic of China	
Mailing Address	18/F Sun Palace Building, No.12A, TarYangGong, Middle Rd, Chaoyang District Beijing 100028, P.R.China	

inventor's Legal Name	Yang Liti		
Inventor's Signature	Ymy liv	Date	Oct. 28, 2019
Residence (City, Country)	Beijing, People's Republic of China	******************	
Mailing Address	18/F Sun Palace Building, No.12A, TaiYangGong, Middle Rd, Chaoyang District Beijing 190928, P.R.China		

Inventor's Legal Name	Yueying KAO	
Inventor's Signature	Yveyty kou	Date 011.28, 2019
Residence (City, Country)	Beijing, People's Republic of China	
Mailing Address	18/F Sun Palace Building, No.12A, TaiYangGong, Middle Rd, Chacyang District Beijing 100028, P.R.China	

DECLARATION

As a below-named inventor, I hereby de	eclare that this declaration is directed to the application attached hereto, o
to United States Application Number or	PCT International Application Number
filed on	(if applicable), entitled:

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The above-identified application was made or authorized to be made by me.

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I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

ASSIGNMENT

For valuable consideration, I, as a below-named assignor, hereby assign to:

Samsung Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu Suwon-si, Gyeonggi-do 16677 Republic of Korea

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title, and interest throughout the world in the inventions and improvements that are the subject of the application identified in the above declaration, which is United States Application Number or PCT International Application Number 16/674,139 filed on November 5, 2019

I authorize and request the attorneys appointed in the above-identified application to hereafter complete this Assignment by inserting above the application number and the filing date of the above-identified application when known, and to correct any typographical errors that may be discovered in this Assignment.

This Assignment includes the above-identified application, any and all United States and foreign patents, utility models, and design registrations granted for any of the inventions and improvements that are the subject of the above-identified application, and the right to claim priority based on the filing date of the above-identified 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 I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations, like rights of exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-

Page 1 of 2

identified application; and I agree for myself and my 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 witness whereof, I, as a below-named inventor and assignor, intending to be legally bound, have hereunto affixed my signature on the date indicated below next to my signature.

Inventor's Legal Name	Weiming LI		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, People's Republic of China		
Mailing Address	18/F Sun Palace Building, No.12A, TaiYangGong, Middle Rd, Chaoyang District Beijing 100028, P.R.China		
Inventor's Legal Name	Hyong Euk LEE		
inventor's Signature	A/2	Date 19. 70. 29	
Residence (City, Country)	Suwon-si, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		
Inventor's Legal Name	Hao WANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, People's Republic of China		
Mailing Address	18/F Sun Palace Building, No.12A, TaiYangGong, Middle Rd, Chaoyang District Beijing 100028, P.R.China		
Inventor's Legal Name	Seungin PARK		
Inventor's Signature	Quin,	Date /9, /0, 29	
Residence (City, Country)	Yongin-si, Republic of Korea		
Commence to the Commence of th	Samsung Advanced Institute of Technology, 130 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16678, Republic of Korea		

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