# 503622101 12/21/2015

# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
YONGJIE ZHANG	12/04/2015
HUI ZHANG	12/10/2015
FEI DUAN	12/11/2015
HAOXING WANG	12/10/2015
JAE-JOON HAN	12/15/2015
JUNG-BAE KIM	12/10/2015
SEONMIN RHEE	12/10/2015
GENGYU MA	12/10/2015

#### **RECEIVING PARTY DATA**

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

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	14977282

## **CORRESPONDENCE DATA**

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NAME OF SUBMITTER:	S. LAURA CHUNG
SIGNATURE:	/S. Laura Chung/
DATE SIGNED:	12/21/2015

PATENT 503622101 REEL: 037345 FRAME: 0144

# **Total Attachments: 15** source=NewApp 0120521314 ExecutedCDA EPAS#page1.tif source=NewApp 0120521314 ExecutedCDA EPAS#page2.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page3.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page4.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page5.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page6.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page7.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page8.tif source=NewApp 0120521314 ExecutedCDA EPAS#page9.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page10.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page11.tif source=NewApp 0120521314 ExecutedCDA EPAS#page12.tif source=NewApp 0120521314 ExecutedCDA EPAS#page13.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page14.tif source=NewApp\_0120521314\_ExecutedCDA\_EPAS#page15.tif

PATENT REEL: 037345 FRAME: 0145

#### **DECLARATION**

As a below-named inventor, I hereby declare that this declaration is directed to the application attached hereto, or
to United States Application Number or PCT International Application Number
filed on (if applicable), entitled:
THREE-DIMENSIONAL IMAGE GENERATION METHOD AND APPARATUS
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 14/977,282 filed on December 21, 2015
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 3

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	Yongjie ZHANG		
Inventor's Signature	Yong jie Zhang	Date	2015-12-04
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technolog Gyeonggi-do 16678, Republic of Korea	gy, 130 Samsı	ung-ro, Youngtong-gu Suwon-si,
Inventor's Legal Name	Hui ZHANG	innanananananananananananananananan	
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China	J.	3
Mailing Address	Samsung Advanced Institute of Technolog Gyeonggi-do 16678, Republic of Korea	gy, 130 Samsi	ung-ro, Youngtong-gu Suwon-si,
	1		
Inventor's Legal Name	Fei DUAN	·····	[
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		······································
Mailing Address	Samsung Advanced Institute of Technolog Gyeonggi-do 16678, Republic of Korea	gy, 130 Sams	ung-ro, Youngtong-gu Suwon-si,
inventor's Legal Name	Haoxing WANG	<u>-</u>	T
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China	•	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		

Inventor's Legal Name	Jae-Joon HAN	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
	1	
Inventor's Legal Name	Jung-Bae KIM	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
Inventor's Legal Name	Seonmin RHEE	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
Inventor's Legal Name	Gengyu MA	
Inventor's Signature		Date
Residence (City, Country)	Beijing, China	<u> </u>
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	0 Samsung-ro, Youngtong-gu Suwon-si,

#### DECLARATION

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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 14/977,282 filed on December 21, 2015
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Page 1 of 3

exclusion, and inventors' certificates for any of the inventions and improvements that are the subject of the above-

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	Yongjie ZHANG		
inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Te Gyeonggi-do 16678, Republic of K	ohnology, 130 Samsu oras	ng-ra, Yaungtong-ga Suwan-si.
Inventor's Legal Name	Hui ZHANG		
Inventor's Signature	Zhang Hrii	Date	2015-12-10
Residence (City, Country)	Seijing, China		
Mailing Address	Samsung Advanced Institute of Tec Gyeonggi-do 16678, Republic of Ki	chnology, 130 Samsu orea	ng-ro, Youngtong-gu Suwon-si,
	<u></u>		
Inventor's Legal Name	Fei DUAN		
Inventor's Signature		Daie	
Residence (City, Country)	Beijing, China		
Mailing Address	Sameung Advanced Institute of Ter Gyeonggi-do 16678, Republic of Ke	hnology, 130 Samsui xea	ng-ra, Youngtong-gu Suwon-ei,
inventor's Legal Name	Haoxing WANG		
Inventor's Signature	主義の多	Date	2015-12-10
Residence (City, Country)	Beijing, China	<u></u>	W.
Mailing Address	Samsung Advanced institute of Tec Gyeonggi-do 16678, Republic of Ko	hnology, 130 Samsur rea	ng-re, Youngiong-gu Suwon-si,

Page 2 of 3

Inventor's Legal Name	Jae-Joon HAN	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
	1	
Inventor's Legal Name	Jung-Bae KIM	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
Inventor's Legal Name	Seonmin RHEE	
Inventor's Signature		Date
Residence (City, Country)	Seoul, Republic of Korea	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea	
Inventor's Legal Name	Gengyu MA	
Inventor's Signature		Date
Residence (City, Country)	Beijing, China	<u> </u>
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	0 Samsung-ro, Youngtong-gu Suwon-si,

#### **DECLARATION**

As a below-named inventor, I hereby declare that this declaration is directed to the application attached hereto, or
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The above-identified application was made or authorized to be made by me.
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ASSIGNMENT
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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
14/977,282 filed on December 21, 2015
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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.

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Inventor's Legal Name	Yongjie ZHANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	0 Samsı	ing-ro, Youngtong-gu Suwon-si,
Inventor's Legal Name	Hui ZHANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
Inventor's Legal Name	Fei DUAN		
Inventor's Signature	Fei Duan	Date	Dee. 11, 2015
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
			***************************************
Inventor's Legal Name	Haoxing WANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
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Inventor's Legal Name	Jae-Joon HAN		
Inventor's Signature		Date	
Residence (City, Country)	Seoul, Republic of Korea		
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Inventor's Legal Name	Jung-Bae KIM		
Inventor's Signature		Date	
Residence (City, Country)	Seoul, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
Inventor's Legal Name	Seonmin RHEE		
Inventor's Signature		Date	
Residence (City, Country)	Seoul, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
Inventor's Legal Name	Gengyu MA		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		

Of

# COMBINED DECLARATION AND ASSIGNMENT UNDER 37 CFR 1.63(e)

#### DECLARATION

As a below-named inventor, I hereby declare that this declaration is directed to the application attached hereto, of
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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
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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-identified application; and I agree for myself and my heirs, legal representatives, and assigns without further

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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	Yongjie ZHANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China	······································	
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	30 Samsung-ro, Youngtong-gu Suwon-si,	
Inventor's Legal Name	Hui ZHANG		
Inventor's Signature		Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	0 Samsung-ro, Youngtong-gu Suwon-si,	
Inventor's Legal Name	Fei DUAN		
Inventor's Signature	DBCBESS.	Date	
Residence (City, Country)	Beijing, China		
Mailing Address	Sameung Advanced institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 18678, Republic of Korea		
Inventor's Legal Name	Haoxing WANG		
Inventor's Signature		Date	
Residence (City, Country)	Beiling, China		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		

***************************************	***************************************		
Inventor's Legal Name	Jae-Joon HAN		
inventor's Signature	AFT	Date	December 15, 2015
Residence (City, Country)	Secul, Republic of Korea	<u>-</u>	
Malling Address	Samsung Advanced Institute of Technology, Gyeonggi-do 16678, Republic of Korea	130 Samsur	ng-ro, Youngtong-gu Suwon-si,

Inventor's Legal Name	Jung-Bae KIM	***************************************	***************************************	
Inventor's Signature	4 रे ४ ९	Date	Decamber	10,2016
Residence (City, Country)	Secul, Republic of Korea			
Mailing Address	Samsung Advanced Institute of Technologyeonggi-do 16678, Republic of Korea	gy, 130 Samsui	ng-ro, Younglang-gu	Suwon-si,

Inventor's Legal Name	Seonmin RHEE
Inventor's Signature	314/Cel Dec. 10, 2015
Residence (City, Country)	Secul, Republic of Korea
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea

Inventor's Legal Name	Gengyu MA
Inventor's Signature	Date
Residence (City, Country)	Beijing, China
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Inventor's Signature		Date	
Residence (City, Country)	Beijing, China	<u> </u>	
Mailing Address	Samsung Advanced Institute of Technology, 13 Gyeonggi-do 16678, Republic of Korea	0 Samsung-ro, Youngtong-gu Suwon-si,	
yaanaanaanaanaanaanaanaanaanaanaanaanaan			
Inventor's Legal Name	Hui ZHANG		
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parances and the second and the seco			
Inventor's Legal Name	Haoxing WANG		
Inventor's Signature		Date	
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Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		

Page 2 of 3

Inventor's Legal Name	Jae-Joon HAN		
Inventor's Signature		Dat	е
Residence (City, Country)	Seoul, Republic of Korea	L	
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
Inventor's Legal Name	Jung-Bae KIM		
Inventor's Signature		Dat	е
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	<b>-</b>		
Inventor's Legal Name	Seonmin RHEE		
Inventor's Signature		Dat	е
Residence (City, Country)	Seoul, Republic of Korea		
Mailing Address	Samsung Advanced Institute of Technology, 130 Samsung-ro, Youngtong-gu Suwon-si, Gyeonggi-do 16678, Republic of Korea		
***************************************	1		
Inventor's Legal Name	Gengyu MA		
Inventor's Signature	Gengyu Ma	Dat	e December 10, 2015
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