506410423 12/17/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6457180

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KOOK-HYUN CHOI	12/30/2013
HYO-TAEK LIM	12/30/2013
DONG-HO SHIN	12/30/2013
YOUNG-JE CHO	12/30/2013
YONG-JO KIM	12/30/2013
SANG-YONG NO	12/30/2013
SUNG-HOON KIM	01/17/2014
HYO-SEOP KIM	12/30/2013

RECEIVING PARTY DATA

Name:	SAMSUNG DISPLAY CO., LTD.
Street Address:	1, SAMSUNG-RO, GIHEUNG-GU
City:	YONGIN-SI, GYEONGGI-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	17113

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17124575

CORRESPONDENCE DATA

Fax Number:

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:	04083311670
Email:	jkim@innovationcounsel.com
Correspondent Name:	KIEUN SUNG
Address Line 1:	2890 ZANKER ROAD
Address Line 2:	SUITE 200
Address Line 4:	SAN JOSE, CALIFORNIA 95134
ATTORNEY DOCKET NUMBER	R: 21ST03411-4C US
NAME OF SUBMITTER:	KYU WAN RYU
SIGNATURE:	/Kyu Wan Ryu/

DATE SIGNED:	12/17/2020			
	This document serves as an Oath/Declaration (37 CFR 1.63).			
Total Attachments: 10				
source=20201217_21ST03411-4CUS_[DecAssign_EF#page1.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page2.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page3.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page4.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page5.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page6.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page7.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page8.tif			
source=20201217_21ST03411-4CUS_[DecAssign_EF#page9.tif			
source=20201217_21ST03411-4CUS_DecAssign_EF#page10.tif				

DECLARATION FOR PATENT APPLICATION AND ASSIGNMENT

As a below-named inventor, we:

Kook-Hyun CHOI	of	101-505 Gyeongnam Apt., Siheung 4-dong,
Hyo-Taek LIM	of	Geumcheon-gu, Seoul, Korea, 103-1403 Dongil Hivill Apt., Yonggok- dong, Dongnam-gu, Cheonan-si, Chungcheongnam-do, Korea,
Dong-Ho SHIN	of	102-706 Parktown Daerim Apt., Sunae-dong,
		Bundang-gu, Seongnam-si, Gyeonggi-do,
		Korea,
Young-Je CHO	of	405-101 Dujeong 4 Cha Purgio Apt., #666,
		Dujeong-dong, Seobuk-gu, Cheonan-si,
		Chungcheongnam-do, Korea,
Yong-Jo KIM	of	202-906 Hyundai Apt., Hongeun 3-dong,
		Seodaemun-gu, Seoul, Korea
Sang-Yong NO	of	507-503 Byeoksan 5 Danji Apt., #266-3,
		Siheung 2-dong, Geumcheon-gu, Seoul,
		Korea,
Sung-Hoon KIM	of	102-1103 Gwanak Dreamtown Apt.,
		Seonghyeon-dong, Gwanak-gu, Seoul, Korea
		and
Hyo-Seop KIM	of	#389-28 Daga-dong, Dongnam-gu, Cheonan-
		si, Chungcheongnam-do, Korea

believe that we are the original inventors of the subject matter (process, machine, manufacture, composition of matter, or an improvement thereof) that is claimed and for which a patent is sought by way of the application entitled

DISPLAY SUBSTRATE, METHOD OF MANUFACTURING THE SAME AND DISPLAY DEVICE HAVING THE SAME

which

 $\underline{\mathbf{X}}$ is attached hereto.

-----*

____was filed on ______as Application Serial No.

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

-Page 1 of 5-

PATENT REEL: 054686 FRAME: 0539 We hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

We hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

	Prior Foreign Applica	ition(s)	Priority	Claimed
Number	Country	Day/Month/Year Filed	Yes	No
10-2009-0099436	Republic of Korea	19/10/2009		

We hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Provisional Application Number	Filing Date
and a second	

FURTHER, for good and valuable consideration, receipt of which is hereby acknowledged, we hereby sell, assign and transfer to Samsung Display Co., Ltd. a corporation, having a place of business at <u>95</u> Samsung 2 Ro, GiHeung-Gu, Yongin City, <u>Gyeonggi-Do, Republic of Korea</u>, its successors and assigns, the entire right, title and interest throughout the world in the invention for which a patent is sought by way of the aboveidentified application, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, its successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

-Page 2 of 5-

Executed this $\frac{30}{2}$ day of <u>December</u>	r, 2013.
$\Delta t_{\rm eff} = \frac{1}{2} \left[\frac{1}{2$	Young - Je CHD
WITNESSED:	Young-Je CHO
Signature	
Date	
Type or print name of witness	-
	÷
Executed this 30 day of 12	, 2013.
	Yong-Jo KIM
WITNESSED:	Yong-Jo KIM
Signature	-
Date	-
Type or print name of witness	
Executed this 30 day of December	, 2013.
	Sang-Yong No
WITNESSED:	Sang-Yong NO
Signature	
Date	
Type or print name of witness	

-Page 4 of 5-

(

Executed this <u>30</u> day of	December	, 2013.
	Kook-	- Hyum CHOI
WITNESSED:		Kook-Hyun CHOI
Signature		
Date		
Type or print name of witness		
Executed this <u>\mathcal{W}</u> day of	12	, 2013.
		Hyo-Taek Lim
WITNESSED:		Hyo-Taek LIM
Signature		
Date		
Type or print name of witness		4:
Executed this <u>30</u> day of	12	, 2013.
	Don-	-Ho SHIN
WITNESSED:	0	Dong-Ho SHIN
Signature		
Date		
Type or print name of witness		

-Page 3 of 5-

Executed this	day of		, 2013.
WITNESSED:			Sung-Hoon KIM
Signature	······································	4 4 - 1 .	
Date			
Type or print name of wit	ness		
			. :
Executed this 30	day of	12	, 2013.
			Hyo-Seop KIM Hyo-Seop KIM
WITNESSED:			Hyo-Seop KIM
Signature			

DECLARATION FOR PATENT APPLICATION AND ASSIGNMENT

As a below-named inventor, we:

Kook-Hyun CHOI	of	101-505 Gyeongnam Apt., Siheung 4-dong, Geumcheon-gu, Seoul, Korea,
Hyo-Taek LIM	of	103-1403 Dongil Hivill Apt., Yonggok- dong, Dongnam-gu, Cheonan-si, Chungcheongnam-do, Korea,
Dong-Ho SHIN	of	102-706 Parktown Daerim Apt., Sunae-dong, Bundang gu Seongnam si Gueonggi da
		Bundang-gu, Seongnam-si, Gyeonggi-do, Korea,
Young-Je CHO	of	405-101 Dujeong 4 Cha Purgio Apt., #666,
		Dujeong-dong, Seobuk-gu, Cheonan-si,
		Chungcheongnam-do, Korea,
Yong-Jo KIM	of	202-906 Hyundai Apt., Hongeun 3-dong,
		Seodaemun-gu, Seoul, Korea
Sang-Yong NO	of	507-503 Byeoksan 5 Danji Apt., #266-3,
		Siheung 2-dong, Geumcheon-gu, Seoul,
		Korea,
Sung-Hoon KIM	of	102-1103 Gwanak Dreamtown Apt.,
		Seonghyeon-dong, Gwanak-gu, Seoul, Korea
Hyo-Seop KIM	of	#389-28 Daga-dong, Dongnam-gu, Cheonan-
		si, Chungcheongnam-do, Korea

believe that we are the original inventors of the subject matter (process, machine, manufacture, composition of matter, or an improvement thereof) that is claimed and for which a patent is sought by way of the application entitled

DISPLAY SUBSTRATE, METHOD OF MANUFACTURING THE SAME AND DISPLAY DEVICE HAVING THE SAME

which

 $\underline{\mathbf{X}}$ is attached hereto.

____was filed on ______as Application Serial No.

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

-Page 1 of 5-

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

We hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

	Prior Foreign Applicat	ion(s)	Priority	Claimed
Number	Country	Day/Month/Year Filed	Yes	No
10-2009-0099436	Republic of Korea	19/10/2009		

We hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Provisional Application Number	Filing Date

FURTHER, for good and valuable consideration, receipt of which is hereby acknowledged, we hereby sell, assign and transfer to Samsung Display Co., Ltd. a corporation, having a place of business at <u>95 Samsung 2 Ro, GiHeung-Gu, Yongin City,</u> <u>Gyeonggi-Do, Republic of Korea</u>, its successors and assigns, the entire right, title and interest throughout the world in the invention for which a patent is sought by way of the aboveidentified application, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, its successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

ITNESSED:	Kook-Hyun CHOI
gnature	
ate	
pe or print name of witness	
Executed this day of	, 2014.
	Hyo-Taek LIM
TNESSED:	
nature	
te	
pe or print name of witness	
Executed this day of	, 2014.
ITNESSED:	Dong-Ho SHIN
nature	
te	

-Page 3 of 5-

Executed this day of	, 2014.
WITNESSED:	Young-Je CHO
Signature	
Date	
Type or print name of witness	
Executed this day of	, 2014.
an a	Yong-Jo KIM
VITNESSED:	Tong-Jo Kim
ignature	
Date	
Type or print name of witness	
Executed this day of	, 2014.
	Sang-Yong NO
WITNESSED:	
VITNESSED:	

Hyo-Seop KIM

Executed this 17th day of January 2014. Fung Hown Kim-Sung-Hoon KIM

WITNESSED:

Signature

Date

Type or print name of witness

Executed this _____ day of _____, 2014.

WITNESSED:

Signature

Date

.

Type or print name of witness

-Page 5 of 5-

PATENT REEL: 054686 FRAME: 0548

RECORDED: 12/17/2020