02/21/2020 505929695

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5976413

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XU LU	02/10/2020
HENGZHEN LIANG	02/10/2020
XIAOLONG ZHU	02/10/2020
LIANBIN LIU	02/10/2020
FAN LI	02/10/2020
SHIHAO WANG	02/10/2020
HUAN MENG	02/10/2020
WEN XU	02/10/2020

RECEIVING PARTY DATA

Name:	CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD.
Street Address:	NO.1188 HEZUO RD., (WEST ZONE)
Internal Address:	HI-TECH DEVELOPMENT ZONE
City:	CHENGDU, SICHUAN
State/Country:	CHINA
Postal Code:	611731
Name:	BOE TECHNOLOGY GROUP CO., LTD.
Name: Street Address:	BOE TECHNOLOGY GROUP CO., LTD. NO.10 JIUXIANQIAO RD.
	·
Street Address:	NO.10 JIUXIANQIAO RD.
Street Address: Internal Address:	NO.10 JIUXIANQIAO RD. CHAOYANG DISTRICT

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16641082

CORRESPONDENCE DATA

(617)342-4001 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: 6173424000

> **PATENT** REEL: 051891 FRAME: 0786

Email: kquebec@foley.com, ipdocketing@foley.com

Correspondent Name: MENG H. PUA

Address Line 1: FOLEY & LARDNER LLP

Address Line 2: 111 HUNTINGTON AVENUE, SUITE 2500 Address Line 4: BOSTON, MASSACHUSETTS 02199

ATTORNEY DOCKET NUMBER:	038873-1373(IEE190004PUS)
NAME OF SUBMITTER:	KAYLA M. QUEBEC
SIGNATURE:	/Kayla M. Quebec/
DATE SIGNED:	02/21/2020

Total Attachments: 16

source=2020-02-21 IEE190004PUS Assignment#page1.tif source=2020-02-21 IEE190004PUS Assignment#page2.tif source=2020-02-21 IEE190004PUS Assignment#page3.tif source=2020-02-21 IEE190004PUS Assignment#page4.tif source=2020-02-21 IEE190004PUS Assignment#page5.tif source=2020-02-21 IEE190004PUS Assignment#page6.tif source=2020-02-21 IEE190004PUS Assignment#page7.tif source=2020-02-21 IEE190004PUS Assignment#page8.tif source=2020-02-21_IEE190004PUS_Assignment#page9.tif source=2020-02-21 IEE190004PUS Assignment#page10.tif source=2020-02-21 IEE190004PUS Assignment#page11.tif source=2020-02-21_IEE190004PUS_Assignment#page12.tif source=2020-02-21_IEE190004PUS_Assignment#page13.tif source=2020-02-21_IEE190004PUS_Assignment#page14.tif source=2020-02-21 IEE190004PUS Assignment#page15.tif source=2020-02-21_IEE190004PUS_Assignment#page16.tif

> PATENT REEL: 051891 FRAME: 0787

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
	named inventor, I hereby declare that:
This decla	to: The attached application, or
The above-	United States application or PCT international application numberfiled on identified application was made or authorized to be made by me.
I believe the in the applic	at I am the original inventor or an original joint inventor of a claimed invention cation.
I hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Chengdu BOE Optoelectronics Technology Co., Ltd. ,having a place of business at No.1188 Hezuo Rd., (West Zone), Hi-tech Development Zone, Chengdu, Sichuan, 611731, P.R.China, and TECHNOLOGY GROUP CO., LTD. , having a place of business at Jiuxianqiao Rd., Chaoyang District, Beijing ,100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the aboveidentified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to PCT/CN2019/078594 filed on Mar.19,2019; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

**4. † ₁₁ .

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

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STATEMENTS

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LEGAL NAME OF INVENTOR				
Inventor: Xu LU	Date:_	Feb. 10.	WW	
Signature: Xu LI)		•	- ""	

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	named inventor, I hereby declare that:
This decla	
is directed	to: The attached application, or
The above-	United States application or PCT international application numberfiled on identified application was made or authorized to be made by me.
	at I am the original inventor or an original joint inventor of a claimed invention
l hereby acl punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

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LEGAL NAME OF INVENTOR	
Inventor: Hengzhen LIANG	Date: 10 . 10 . 20 20
Signature: Hengsheh LIANG.	

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LEGAL NAME OF INVENTOR	
Inventor: Xiaolong ZHU	Date: Feb. 10. 2020
Signature: X200 long ZHV	•

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	named inventor, I hereby declare that:
This decla	ration
is directed	to: 🗹 The attached application, or
į	United States application or PCT international application numberfiled on
The above-i	dentified application was made or authorized to be made by me.
I believe tha in the applic	at I am the original inventor or an original joint inventor of a claimed invention eation.
	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) th.

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LEGAL NAME OF INVENTOR	
Inventor: <u>Lianbin LIU</u>	Date: <u>Feb. 10, 2020</u>
Signature: Lianhin Liu	,

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	named inventor, I hereby declare that:
This decla	ition .
is directed	o: ☑ The attached application, or
	United States application or PCT international application number
The above-	entified application was made or authorized to be made by me.
I believe tha in the applic	I am the original inventor or an original joint inventor of a claimed invention tion.
l hereby acl punishable years, or bo	nowledge that any willful false statement made in this declaration is nder 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) n.
This decla is directed The above- I believe tha in the applic I hereby acl punishable	The attached application, or United States application or PCT international application number filed on Tentified application was made or authorized to be made by me. I am the original inventor or an original joint inventor of a claimed invention. I an owledge that any willful false statement made in this declaration is nowledge that any willful false or imprisonment of not more than five (5)

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LEGAL NAME OF INVENTOR	
Inventor: Fan LI	
Signature: Fan Ll	·

	6
Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	v named inventor, I hereby declare that:
This decla is directed The above-	The attached application, or The attached application or The attached applica
I believe the	at I am the original inventor or an original joint inventor of a claimed invention cation.
I hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U:S.C. 1001 by fine or imprisonment of not more than five (5) oth.
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LEGAL NAME OF INVENTOR	
Inventor: Shihao WANG	Date: Feb. 10.2020
Signature: Shihao WANG.	

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	named inventor, I hereby declare that:
This decla	
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Walania .

1

PATENT REEL: 051891 FRAME: 0800

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LEGAL NAME OF INVENTOR	
Inventor: Huan MENG	Date: Teh. 10, 2020
Signature: Huan MENG	

Title of Invention	DISPLAY SUBSTRATE, DISPLAY DEVICE, CONTROL METHOD AND CONTROL CIRCUIT
As a below	named inventor, I hereby declare that:
This decla is directed The above-	☑ The attached application, or
I believe thain the applic	at I am the original inventor or an original joint inventor of a claimed invention cation.
l hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to _Chengdu BOE Optoelectronics Technology Co., Ltd. ,having a place of business at No.1188 Hezuo Rd., (West Zone), Hi-tech Development Zone, Chengdu, Sichuan, 611731, P.R.China, and TECHNOLOGY GROUP CO., LTD. , having a place of business at____ Jiuxianqiao Rd., Chaoyang District, Beijing ,100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the aboveidentified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to PCT/CN2019/078594 filed on Mar.19,2019; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of <u>FOLEY & LARDNER LLP</u> the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

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

LEGAL NAME OF INVENTOR	
Inventor: Wen XU	Date: Jeb. 10.2020
Signature: Wen XU	

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PATENT REEL: 051891 FRAME: 0803