PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3530885

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALWYN JOHN SEEDS	08/03/2015
ANDREW DAVID LEE	03/26/2015
HUIYUN LIU	05/25/2015

RECEIVING PARTY DATA

Name:	UCL BUSINESS PLC
Street Address:	97 TOTTENHAM COURT ROAD
Internal Address:	THE NETWORK BUILDING
City:	LONDON
State/Country:	UNITED KINGDOM
Postal Code:	W1T 4TP

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14418399

CORRESPONDENCE DATA

Fax Number: (202)672-5399

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: 608-258-4304

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

S. CHASE MEANS **Correspondent Name:**

Address Line 1: **FOLEY & LARDNER LLP**

Address Line 2: 3000 K STREET N.W., SUITE 600 Address Line 4: WASHINGTON, D.C. 20007-5109

ATTORNEY DOCKET NUMBER:	068320-0123
NAME OF SUBMITTER:	S. CHASE MEANS
SIGNATURE:	/S. Chase Means/
DATE SIGNED:	09/17/2015

Total Attachments: 9

source=068320-0123 Executed Assignment - Liu#page1.tif source=068320-0123 Executed Assignment - Liu#page2.tif

PATENT REEL: 036591 FRAME: 0930 503484260

source=068320-0123 Executed Assignment -	Liu#page3.tif
source=068320-0123 Executed Assignment -	Seeds#page1.tif
source=068320-0123 Executed Assignment -	Seeds#page2.tif
source=068320-0123 Executed Assignment -	Seeds#page3.tif
source=068320-0123 Executed Assignment -	Lee#page1.tif
source=068320-0123 Executed Assignment -	Lee#page2.tif
source=068320-0123 Executed Assignment -	Lee#page3.tif

PATENT REEL: 036591 FRAME: 0931

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UCL BUSINESS PLC
The Network Building
97 Tottenham Court Road
London W1T 4TP
United Kingdom

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions in and to this invention relating to

SEMICONDUCTOR DEVICE AND FABRICATION METHOD

as set forth in this United States Patent Application

Check	executed co	ncurrently herewith		
one	executed on			4 =
	X Serial No.	14/418,399	Filed January 29, 20	15
	and			

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns,

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver,

Page 1 of 3

4820-9216-8737.1

Atty. Dkt. No. 068320-0123

upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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 law firm of Foley & Lardner LLP 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.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE, since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

Atty. Dkt. No. 068320-0123

NAME AND SIGNATURE OF INVENT	COR 1)					
Name: Huiyun LIU	SIGNATURE	Date 25 May 21				
NAME AND SIGNATURE OF WITNES	SSES SIGNATURE YMICHM	sheet de la				
Name: Yuniyan Zhang	SIGNATURE JAN GONT	Date - 25 War 200				
Name: Anthra Provo	SIGNATURE 0	Date 25th Mach 2015				
		÷				
NAME AND SIGNATURE OF INVENT	TOR					
Name: Andrew David LEE	SIGNATURE	Date				
NAME AND SIGNATURE OF WITNES	SSES	er V				
Name:	SIGNATURE	Date				
Name:	SIGNATURE	Date				
		i.				
NAME AND SIGNATURE OF INVENT	TOR					
Name: Alwyn John SEEDS	SIGNATURE	Date				
NAME AND SIGNATURE OF WITNESSES						
Name:	SIGNATURE	Date				
Name;	SIGNATURE	Date				
		e e e e e e e e e e e e e e e e e e e				

Note: Prima facie evidence of execution may optionally be obtained by execution before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.

Page 3 of 3

4820-9216-8737,1

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UCL BUSINESS PLC The Network Building 97 Tottenham Court Road London W1T 4TP United Kingdom

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions in and to this invention relating to

SEMICONDUCTOR DEVICE AND FABRICATION METHOD

Check one	executed concurrently herewith executed on	walt 6	
	X Serial No. <u>14/418,399</u>	Filed	January 29, 2015
	and		

as set forth in this United States Patent Application

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver,

Page 1 of 3

4820-9216-8737.1

upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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 law firm of Foley & Lardner LLP 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.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

NAME.	AND SIGNATURE OF INVENTO	<u> 2R</u>			
Name:	Huiyun LIU	SIGNATURE	<u> </u>	Date	······································
NAME.	AND SIGNATURE OF WITNES	SES			
Name:		SIGNATURE		Date	
Name:		SIGNATURE		Date	·
767 A 76 A TOP	AND SIGNATURE OF INVENTO)B			
Name:	Andrew David LEE			Date	
Maine.	radiow David Line	Dreit vice or an	***************************************	22 640	
NAME	AND SIGNATURE OF WITNES:	SES			
Name:		SIGNATURE	` <u></u>	Date	
Name:		SIGNATURE		Date	
NAME	AND SIGNATURE OF INVENT	<u>or</u>	a same and		
Name:	Alwyn John SEEDS	SIGNATURE	47500	Date	3 August 2015
NAME	AND SIGNATURE OF WITNES	SES			
Name:	Hymen Shams Adim	SIGNATURE	Agent Hasis	Date	31A AM 2015
	MICHELE NATRELLA		Ayera Shanis 100 Kasi	Date	3 ²⁴ August 2015

Note: Prima facie evidence of execution may optionally be obtained by execution before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.

Page 3 of 3

ASSIGNMENT

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UCL BUSINESS PLC The Network Building 97 Tottenham Court Road London W1T 4TP United Kingdom

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions in and to this invention relating to

SEMICONDUCTOR DEVICE AND FABRICATION METHOD

	11	
Check	executed concurrently herewith	
one	☐ executed on☐ Serial No. <u>14/418,399</u>	- Filed January 29, 2015
	and	

as set forth in this United States Patent Application

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States; (c) to execute and deliver,

Page 1 of 3

4820-9216-8737.1

upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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 law firm of **Foley & Lardner LLP** 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.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **Foley & Lardner LLP** do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

<u>NAME</u>	AND SIGNATURE OF INVENT	<u>ror</u>			
Name:	Huiyun LIU	SIGNATURE		Date	
<u>NAME</u>	AND SIGNATURE OF WITNES	SSES			
Name:		SIGNATURE		Date	
Name:		SIGNATURE		Date	
<u>NAME</u>	AND SIGNATURE OF INVENT				
Name:	Andrew David LEE	SIGNATURE	Alle	Date	26/03/2015
<u>NAME</u>	AND SIGNATURE OF WITNES	<u>SSES</u>			
Name:	PAUL RENUCLE	SIGNATURE	Renewation	Date	26/03/2015
Name:	VINCENT JENNINGS	SIGNATURE	<u>()</u> .	Date	26/03/2015
<u>NAME</u>	AND SIGNATURE OF INVENT	COR			
Name:	Alwyn John SEEDS	SIGNATURE		Date	
NAME.	AND SIGNATURE OF WITNES	SSES	•		
Name:		SIGNATURE		Date	
Name:		SIGNATURE		Date	•

Note: *Prima facie* evidence of execution may optionally be obtained by execution before a U.S. Consul or before a local officer authorized to administer oaths whose authority is proved by a certificate from a U.S. Consul.

Page 3 of 3

4820-9216-8737.1

RECORDED: 09/17/2015

PATENT REEL: 036591 FRAME: 0940