PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4691727

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZIILABS INC., LTD.	08/09/2017

RECEIVING PARTY DATA

Name:	RPX CORPORATION	
Street Address:	ONE MARKET PLAZA	
Internal Address:	STEUART TOWER, SUITE 1100	
City:	SAN FRANCISCO	
State/Country:	CALIFORNIA	
Postal Code:	94105	

PROPERTY NUMBERS Total: 21

Property Type	Number
Patent Number:	6597157
Patent Number:	6597628
Patent Number:	6628288
Patent Number:	6667930
Patent Number:	6690369
Patent Number:	6674440
Patent Number:	6700576
Patent Number:	6700581
Patent Number:	6731288
Patent Number:	7616200
Patent Number:	6734860
Patent Number:	6816561
Patent Number:	6847370
Patent Number:	7227556
Patent Number:	6798421
Patent Number:	7466319
Patent Number:	6766410
Patent Number:	6765588
Patent Number:	6894700

PATENT REEL: 044476 FRAME: 0678

504645007

Property Type	Number
Patent Number:	7301540
Patent Number:	7368831

CORRESPONDENCE DATA

Fax Number: (858)430-2427

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: 858-724-2450

Email: scott@mdiplaw.net

Correspondent Name: MUSICK DAVISON LLP

Address Line 1: 12636 HIGH BLUFF DRIVE

Address Line 2: SUITE 400

Address Line 4: SAN DIEGO, CALIFORNIA 92130

ATTORNEY DOCKET NUMBER:	RPX.029			
NAME OF SUBMITTER:	SCOTT H. DAVISON			
SIGNATURE:	/Scott H Davison/			
DATE SIGNED:	11/16/2017			

Total Attachments: 60

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This PATENT ASSIGNMENT AGREEMENT ("Patent Assignment"), dated as of August 9, 2017 ("Effective Date"), is entered into by and between ZiiLabs Inc., Ltd., a Bermuda corporation with a registered office at Clarendon House, 2 Church Street, Hamilton, HM11 Bermuda ("Assignor"), and RPX Corporation, a Delaware corporation with a principal place of business at One Market Plaza, Steuart Tower, Suite 800, San Francisco, CA 94105 ("RPX").

For good and valuable consideration, the receipt of which is hereby acknowledged, Assignor hereby:

- (A) irrevocably assigns to RPX:
 - (1) the entire right, title, and interest, everywhere in the world, to
 - (a) the issued patents and/or patent applications set forth on Schedule 1 hereto.
 - (b) any patent applications and/or patents that may claim priority to the item in (a) (including but not limited to continuations, continuations-in-part, divisionals, renewals, extensions, and reexaminations or reissues of the patent in (a), including any foreign counterparts of such patent, together with all priority rights and counterpart applications under any existing or future international patent conventions, agreements, or treaties),
 - (c) any other rights in the inventions described in any of (a) or (b), including rights to future patent applications and all rights of cooperation assigned or granted by a third party;

(all of the foregoing in (1), collectively, the "Assigned Patents");

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 - (1) execute all truthful oaths, assignments, powers, and any other papers;
 - (2) testify in any proceeding; and
 - (3) otherwise take any action, and fully cooperate with RPX;

RPX agrees that this assignment is being made subject to those agreements entered into by Assignor and set forth on Exhibit F to that Patent License, License Option and Assignment Agreement entered into on July 7, 2017, as updated through the date of the assignment.

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Agreed to	Notary Seal:
ZiiLabs Inc., Ltd.	
Name: AG KEH Low	
Title: DIRECTOR	Fabruary 10, 2023
Date: August 9,	The Mark to State of the Mark to the Mark
RPX Corporation	Notary Seal:
**************************************	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: SENTEMBER	State of California) ss. County of San Francisco) On September 19, 2017 before me, Doris Young, Notary Publipersonally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity up behalf of which the person acted, executed the instrument.
Commissio NOTARY PU SAN FRAN	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. **SUIC-CALIFORNIA** **CECO COUNTY* ***OCTOBER 18, 2000

PATENTS

Patent No. Po	b. App.). No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6597157	US10/164172	US	Parallel phased switch control	Granted	6/5/2002		7/22/2003

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 - (a) the issued patents and/or patent applications set forth on Schedule 1 hereto,
 - (b) any patent applications and/or patents that may claim priority to the item in (a) (including but not limited to continuations, continuations-in-part, divisionals, renewals, extensions, and reexaminations or reissues of the patent in (a), including any foreign counterparts of such patent, together with all priority rights and counterpart applications under any existing or future international patent conventions, agreements, or treaties),
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(all of the foregoing in (1), collectively, the "Assigned Patents");

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RPX agrees that this assignment is being made subject to those agreements entered into by Assignor and set forth on Exhibit F to that Patent License, License Option and Assignment Agreement entered into on July 7, 2017, as updated through the date of the assignment.

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IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be executed as of the Effective Date. Each individual signing below represents and warrants that he or she has authority to sign for and enter into this Patent Assignment on behalf of his or her respective party.

	2.8.2
Agreed to∜	Notary Seal
ZiiLabs Inc., Ltd.	
Name: NG KEN LONG	PATRICIA C. TERRA Notary Public Communication of MASSACHABITES My Commission Expires
Title: PIRECTOR	February 10, 2023
Date: A 444427 9, 2017	
RPX Corporation	Notary Seal;
Name: Bully GAVIA Title: GENERAL CAUSEL	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: SEPTEMBER 19,2017	State of California) State of San Francisco)
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upobehalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
DORIS YOUNG Commission No. 2185145	WITNESS my hand and official seal.
COMMISSION NO. 2185145 NOTARY PUBLIC-CALIFORNIA SAM FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 2020	Signature

PATENTS

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6597628		ES10/114408	US	Auto- disable neceive control for ddr receive strobes	Granted	4/2/2082		7/22/2(8)3
	US20030128621	US10/114408	US	Auto- disable receive control for ddr receive strobes	Expired	4/2/2002	7/10/2003	

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Agreed to:	Notary Seal:
ZiiLabs Inc., Ltd. By: Name: AG KEH LONG Title: DIRECTOR Date: August 9 2017	The state of the s
RPX Corporation By: Name: An ILY GAVIA Title: GONDIAL GAUSEL Date: SEPTEMBER 19, 2017	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California) ss. County of San Francisco On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
DORIS YOUNG Commission No. 2165145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 3020	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

PATENTS

Patent No. Pub. No.	App. No.	Country	Title		File Date	Pub. Date	Issue Date
US6628288	US09/633092	US	Selectable back end unit	Gramed	8/4/2000		9/30/2003

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respective party.		,
Agreed to:		Notary Seals
ZiiLabs Inc., Lto	1. Tylochlosep	PATRICIA C. TERRA
Name:	HG KEH LONG	Notary Public Constonesum OF MASSACRUSTIS My Commission Expires
Title:	D1960702	\$2023 February 10, 2023
	Augus7 9, 2017	
RPX Corporation	n 	Notary Seal:
By: Name: Title: Date: 5	LLY GAVIA ENTEMBER 19,2019	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California) Ss. County of San Francisco On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upo behalf of which the person acted, executed the instrument.
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PATENTS

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6667930		US10/172461	us	System and method for optimizing performance in a four-bank sdram	Gramed	6/12/2002		12/23/2003

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	ho
Agreed to:	Notary Seal:
ZiiLabs Inc., Ltd.	
By:	PATRICIA C. TERRA
Name: MG KEH LONG	Notary Public COMMONWEALTH OF MASSACHUSETTS May Commission Expires
Title: \$1260702	February 10, 2023
Date: 4 44447 9, 2017	mile and the second
RPX Corporation	Notary Seal:
By:	A notary public or other officer completing this
Name: BULLY GAVIA	certificate verifies only the identity of the individual who signed the document to which this certificate is
Title: GENETAL COUNSEL	attached, and not the truthfulness, accuracy, or validity of that document.
Date: 58710WBB 19,2019	State of California)
	County of San Francisco)
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
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OORIS YOUNG Commission No. 2165145	WITNESS my hand and official seal.
COMMISSION NO. 2185145 NOTARY PUBLIC CALIFORNIA SAN FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 2020	Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6690369		US08/904715	US	Hardware- accelerated photoreal rendering	Granted	8/1/1997		2/10/2004
		US60/023513	US	HARDWARE- ACCELERATED PHOTOREAL RENDERING	Expired	8/7/1996		
		US60/023795	us	HARDWARE- ACCELERATED PHOTOREAL RENDERING	Expired	8/1/1996		

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- (B) agrees upon request of RPX (or its successors, assigns, or legal representatives) to, and if Assignor is unable or unwilling to do so authorizes RPX to act in Assignor's name to:
 - (1) execute all truthful oaths, assignments, powers, and any other papers;
 - (2) testify in any proceeding; and
 - (3) otherwise take any action, and fully cooperate with RPX;

RPX agrees that this assignment is being made subject to those agreements entered into by Assignor and set forth on Exhibit F to that Patent License, License Option and Assignment Agreement entered into on July 7, 2017, as updated through the date of the assignment.

The terms and conditions of this Patent Assignment will inure to the benefit of RPX, its successors, assigns, and other legal representatives, and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be executed as of the Effective Date. Each individual signing below represents and warrants that he or she has authority to sign for and enter into this Patent Assignment on behalf of his or her respective party.

Agreed to:	Notary Seal:
Ziil.abs Inc., Ltd.	
Name: No KEH LONG	PATRICIA C. TERRA Notary Public COMMUNICATIVO MASSACIAMETTS My Commission Expires
Title: DIRECTOR	February 10, 2023
Date; August 9, 2017	
RPX Corporation Bv:	Notary Seal:
Name: ANILY GAVIA	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Title: GENETIAL UNISEL Date: SEPTEMBER 19, 2017	State of California)) ss. County of San Francisco)
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
DORIS YOUNG Commission No. 2165145 & NOTARY PUBLIC CALIFORNIA	WITNESS my hand and official seal.
SAN FRANCISCO COUNTY My Comm. Expires OCTOSER 18, 2020	Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6674440		US09/533158	US	Graphics processor for stereoscopically displaying a graphical image	Granted	3/23/2000		1/6/2004

This PATENT ASSIGNMENT AGREEMENT ("Patent Assignment"), dated as of August 9, 2017 ("Effective Date"), is entered into by and between ZiiLabs Inc., Ltd., a Bermuda corporation with a registered office at Clarendon House, 2 Church Street, Hamilton, HM11 Bermuda ("Assignor"), and RPX Corporation, a Delaware corporation with a principal place of business at One Market Plaza, Steuart Tower, Suite 800, San Francisco, CA 94105 ("RPX").

For good and valuable consideration, the receipt of which is hereby acknowledged, Assignor hereby:

- (A) irrevocably assigns to RPX:
 - (1) the entire right, title, and interest, everywhere in the world, to
 - (a) the issued patents and/or patent applications set forth on Schedule 1 hereto,
 - (b) any patent applications and/or patents that may claim priority to the item in (a) (including but not limited to continuations, continuations-in-part, divisionals, renewals, extensions, and reexaminations or reissues of the patent in (a), including any foreign counterparts of such patent, together with all priority rights and counterpart applications under any existing or future international patent conventions, agreements, or treaties),

(c) any other rights in the inventions described in any of (a) or (b), including rights to future patent applications and all rights of cooperation assigned or granted by a third party;

(all of the foregoing in (1), collectively, the "Assigned Patents");

- (2) the right to sue third parties for infringement (including but not limited to past, present, and future infringement, damages, and injunctive relief) of the Assigned Patents accruing based on activities occurring prior to the Effective Date hereof or hereafter; and
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ZiiLabs Inc., Ltd. By:	PATRICIA C. TERRA
Name: AG KEH LONG	(Ci Motory Public
Title: DIRECTOR	8 55000
Date: A wave 7 9,	2017
RPX Corporation	Notary Seals
Name: An LLY GAVIN	certificate verifies only the identity of the individual who signed the document to which this certificate is
Title: GENETIAL CA	tidy and the same
Date: SEPTEMBER	State of California) 35. County of San Francisco) On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upor behalf of which the person acted, executed the instrument.
Commission NOTARY PUBLI SAN FRANCI	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal.

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6700576		US09/535358	US	Variable stride circle rendering apparatus and method	Granted	3/24/2000		3/2/20(4
		US60/126034	US	VARIABLE STRIDE CIRCLE RENDERING APPRATUS AND METHOD	Expired	3/25/1999		

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• • • •	ý.
Agreed to:	Notary Seal:
ZiiLabs Inc., Ltd. By:	
Name: NG KEH LONG	PATRICIA C. TERRA Notary Public Communication of Massaconsetts My Commission Expires
Title: PIRETOR	Formary 10, 2023
Date: A WAUST 9, 2017	
RPX Corporation	Notary Seal:
Name: ANIV GAVIN	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: SEPTEMBER 19, 2019	
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
COMIS YOUNG Commission No. 2185145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Cottim. Expires OCTOSER 18, 8020	WITNESS my hand and official seal. Signature
And the second control of the second control	

PATENTS

Pstent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6700581		US10/087654	US	In-circuit test using scan chains	Granted	3/1/2002		3/2/2004
	US20030164825	US10/087654	US	In-circuit test using scan chains	Expired	3/1/2002	9/4/2003	

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Agreed to:	Notary Seals
ZiiLabs Inc., Ltd. By: Name: MG KEH LONG Title: DIRECTOR Date: A waw 7 9 2017	PATRICIA C. TERRA Notary Public Commonwealth of MASSACHEETTS My Commission Expires Fabruary 10, 2023
RPX Corporation By: Name: Aulty Anin Title: General Courset Date: 55775MBBP 19, 2017	Notary Seal: A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document. State of California State of California Ss. County of San Francisco On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
OORIS YOUNG Commission No. 2165145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Comm. Express OCTOSER 18, 2020	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6731288		US10/086981	US	Graphics engine with isochronous context switching	Granted	3/1/2002		5/4/2004
	US20030164824	US10/086981	US	Graphics engine with isochronous context switching	Expired	3/1/2002	9/4/2003	

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 - (1) the entire right, title, and interest, everywhere in the world, to
 - (a) the issued patents and/or patent applications set forth on Schedule I hereto,
 - (b) any patent applications and/or patents that may claim priority to the item in (a) (including but not limited to continuations, continuations-in-part, divisionals, renewals, extensions, and reexaminations or reissues of the patent in (a), including any foreign counterparts of such patent, together with all priority rights and counterpart applications under any existing or future international patent conventions, agreements, or treaties),
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Agreed to?	Notary Seal:
ZiiLabs Inc., Ltd.	
By:	PATRICIA C. TERRA
Name: NG KEH LONG	COMMUNICATION MASSACHUMETTS My Commission Expires
Title: D124070R	8 1/2/2/ Cabinani 10 2028 8
Date: 4 444 7 9, 2017	······································
RPX Corporation	Notary Seal:
By:	A notary public or other officer completing this
Name: BULLY GAVIA	certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or
Title: GENERAL COLUSEL	validity of that document
Date: 500 TOMBER 19,2017	
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
DORIS YOUNG Commission No. 2165145	WITNESS my hand and official seal.
NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 2020	Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
		US60/089030	us	SYSTEM FOR REDUCING ALIASING ON A DISPLAY DEVICE	Expired	6/12/1998		
US7616200		US09/329557	US	System for reducing aliasing on a display device	Granted	6/10/1999		11/10/2009

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ZiiLabs Inc., Ltd.	
By:	PATRICIA C. TERRA
Name: AG KEH LONG	Notary Public CONSCINEATH OF MASSACHABITES My Commission Expires
Title: DIRECTOR	February 10, 2023
Date: 4 MAURY 9, 2017	
RPX Corporation	Notary Seal:
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PATENTS

Patent No.	Pub. No.	App. No.	Constry	Title	Status	File Date	Pub. Date	Issue Date
U S6 734860		US09/632447	US	Apparates for providing videodriving capability from various types of dacs	Granted	8/4/2000		5/11/2004

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Agreed to	Notary Seal;
ZiiLabs Inc., Ltd. By:	
Name: RG KEM LONG	PATRICIA C. TENRA Notary Public COMMONICATION OF MARKONIZETTS My Commission Expires
Title: Director	February 10, 2023
Date: 4 usus 7 9, 2017 RPX Corporation	 Notary Seal;
Name: BULLY GAVIN Title: GENERAL CLUBEL	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: 52717/1688-19,2017	State of California) ss. County of San Francisco) On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
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PATENTS

Patent No.	Pub.	App.	Country	Title	Status	PERSON AND AND AND AND AND AND AND AND AND AN	Pub. Date	
US6816561		US09/633091	t:s	Phase correction for multiple processors	Gramed	8/4/2000	*	11/9/2004

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- (B) agrees upon request of RPX (or its successors, assigns, or legal representatives) to, and if Assignor is unable or unwilling to do so authorizes RPX to act in Assignor's name to:
 - (1) execute all truthful oaths, assignments, powers, and any other papers;
 - (2) testify in any proceeding; and
 - (3) otherwise take any action, and fully cooperate with RPX;

RPX agrees that this assignment is being made subject to those agreements entered into by Assignor and set forth on Exhibit F to that Patent License, License Option and Assignment Agreement entered into on July 7, 2017, as updated through the date of the assignment.

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IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be executed as of the Effective Date. Each individual signing below represents and warrants that he or she has authority to sign for and enter into this Patent Assignment on behalf of his or her respective party.

Agreed to:	Notary Seal
ZiiLabs Inc., Ltd.	
By:	PATRICIA C. TERRA
Name; MG KEH LONG	Notary Public COMMUNICATION OF MASSACHAMETTS NAY Commission Expires
Title: DIRECTOR	February 10, 2023
Date: A wars 7 9, 2017	- latricia C-Tena
RPX Corporation	Notary Seal:
By:	A notary public or other officer completing this
Name: BULLY GAVIA	
Title: GENETIAL CLUISEL	validity of that document.
Date: 52770MB02 19,2017	State of California) County of San Francisco)
	On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upor behalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
DONIS YOUNG	WITNESS my hand and official seal.
Commission No. 2165145 NOTARY PUBLIC-CALIFORNIA SAM FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 2020	Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
	US20020126124	US10/080284	US	Planar byte memory organization with linear access	Expired	2/20/2002	9/12/2002	
		US60/269802	us	Planar byte memory organisation with linear access	Expired	2/20/2001		
US6847370		US10/080284	US	Planar byte memory organization with linear access	Granted	2/20/2002		1/25/2005

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ZiiLabs Inc., Ltd. By: Name: NG KEH LONG Title: DIRECTOR Date: A wars 7 9, 2017	PATRICIA C. TERRA Notery Public SCOMMONWEALTH OF ANSACCAME My Commission Express Fabruary 10, 2023
RPX Corporation By: Name: Bully GAVIN Title: GENERAL CAUSEL Date: SETTEMBER 19 2019	validity of that document.
DORIS YOUNG Commission No. 2165145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Comm Express OCTOBER 18, 2020	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US7227556		US10/086986	US	High quality antialiased lines with dual sampling pattern	Grunted	3/1/2002		6/5/2007
	US20030164840	US10/086986	US	High quality antisliased lines with dual sampling pattern	Expired	3/1/2002	9/4/2003	

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Agreed to:	Notary Seal;
ZiiLabs Inc., Ltd. By:	
Name: NG KEH LONG	PATRICIA C. TERRA Notary Public COMMONMENTH OF MASSACHEMETTS My Commission Expires
Title: 01852708 Date: 4 44427 9, 2017	February 10, 2023
RPX Corporation	 Notary Scal:
By: Name: By LY GAVIN Title: GENERAL CAUSEL	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: 55015W/W 19,2019	State of California) ss. County of San Francisco) On September 19, 2017 before me, Doris Young, Notary Public personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.
DORIS YOUNG Commission No. 2165145 NOTARY PUBLIC-CALIFORNIA BAN FRANCISCO COUNTY My Comm Expires OCTOBER 18, 2020	l certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
		US60/272125	US	Same tile method	Expired	2/28/2001		
US6798421		US10/087233	US	Same tile method	Granted	2/28/2002		9/28/2004
	US20020118202	US10/087233	US	Same tile method	Expired	2/28/2002	8/29/2002	

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Agreed to:	Notary Seal:
Ziil.abs Inc., Ltd.	
Name: MG KEM LONG	PATRICIA C. TERRA Notary Public COMMONWEALTH OF MASSACHASETTS My Commission Expires
Title: DIRECTOR	February 10, 2023
Date: A waws 7 9, 2017 RPX Corporation	Notary Seal:
Name: By LY GAVIA Title: GENERAL CAUSEL	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
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DORIS YOUNG Commission No. 2185145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Comm. Expires OCTOBER 18, 2020	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

PATENTS

Patent No.	Pub. No.	1,4414	Country	Title	Status	File Date	Pub. Date	Issue Date
US7466319		US10/163793	US	System and method for fast gradient pixel clears in graphics rendering	Granted	6/6/2002		12/16/2008

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respective party.	w:
Agreed to:	Notary Seal
ZiiLabs Inc., Ltd. By:	
Name: NG KEH LONG	PATRICIA C. TERRA
Title: PIRECTOR	
Date: 4 44447 9, 2017	Manager and the Artifact
RPX Corporation	Notary Seal;
Name: BULLY GAVIN Title: GENERAL COUNSEL	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
Date: 52710MBB 19,201	State of California)) ss. County of San Francisco)
	On September 19, 2017 before me, Doris Young, Notary Publi personally appeared Emily Gavin, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upo behalf of which the person acted, executed the instrument.
	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Commission No. 2165145 Commission No. 2165145 MOTARY PUBLIC-CALIFORNIA	WITNESS my hand and official seal.

My Comm. Expires OCTOSER 18, 2020

<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6766410		US10/166155	US	System and method for reordering fragment data based upon rasterization direction	Granted	6/10/2002		7/20/2004

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ZiiLabs Inc., Ltd.	
By:	PATRICIA C. TERRA
Name: NG KEH LONG	Notary Public COMMUNICATIN OF MASSACHABETTS My Commission Expires
Title: DIRECTOR	February 10, 2023
Date:A usus 7 9, 2017	i brocketing a second
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<u>PATENTS</u>

Patent No.	Pub. No.	App. No.	Country	Title	Status	File Date	Pub. Date	Issue Date
US6765588		US10/230500	US	Multisample dithering with shuffle tables	Granted	8/29/2002		7/20/2004
	US20030128222	US10/230500	US	Multisample dithering with shuffle tables	Expired	8/29/2002	7/10/2003	
		US60/346550	US	Multisampling dithering with shuffle tables	Expired	1/8/2002		
US6894700		US10/786430	US	Multisampling dithering with shuffle tables	Granted	2/25/2004		5/17/2005
	US20040164993	US10/786430	US	Multisample dithering with shuffle tables	Expired	2/25/2004	8/26/2004	

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Name: NG KEH LONG	PATRICIA C. TERRA Notary Public COMMUNICATION DE MASSACIONETTS My Commission Expires
Title: DIRECTOR	February 10, 2028
Date: A waws 7 9, 2017	
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Name: Bully GAVIA	A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.
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Date: 52717 19 2017	County of San Francisco)
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COMMISSION NO. 2189145 NOTARY PUBLIC-CALIFORNIA SAN FRANCISCO COUNTY My Contin. Expires OCTOBER 18, 2020	Signature

PATENTS

Patent N	Pub. No.		Country	Title	Status	File Date	Pub. Date	Issue Date
U\$73015	0	US10/634379	¥3S	System and method for rasterization through approximation	Granted	8/5/2003		11/27/2007

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(all of the foregoing in (1), collectively, the "Assigned Patents");

- (2) the right to sue third parties for infringement (including but not limited to past, present, and future infringement, damages, and injunctive relief) of the Assigned Patents accruing based on activities occurring prior to the Effective Date hereof or hereafter; and
- (3) any current or future right to receive royalties based on any of the foregoing in (1) or (2);

(all of the foregoing in (A), collectively, the "Assigned Rights"); and

- (B) agrees upon request of RPX (or its successors, assigns, or legal representatives) to, and if Assignor is unable or unwilling to do so authorizes RPX to act in Assignor's name to:
 - (1) execute all truthful oaths, assignments, powers, and any other papers;
 - (2) testify in any proceeding; and
 - (3) otherwise take any action, and fully cooperate with RPX;

RPX agrees that this assignment is being made subject to those agreements entered into by Assignor and set forth on Exhibit F to that Patent License, License Option and Assignment Agreement entered into on July 7, 2017, as updated through the date of the assignment.

The terms and conditions of this Patent Assignment will inure to the benefit of RPX, its successors, assigns, and other legal representatives, and will be binding upon Assignor, its successors, assigns, and other legal representatives.

IN WITNESS WHEREOF, the parties hereto have caused this Patent Assignment to be executed as of the Effective Date. Each individual signing below represents and warrants that he or she has authority to sign for and enter into this Patent Assignment on behalf of his or her respective party.

Agreed to:	Notary Seal:
ZiiLahs Inc., Ltd. By: Name: AG KEH LONG Title: DIRECTOR Date: A ware 7 9, 2017	PATRICIA C. TERRA Notary Public Commission Expres February 19, 2028
RPX Corporation By: Name: An ILY GAVIN Title: GENERAL CLUSEL Date: SEPTEMBER 19, 2017	validity of that document.
DORIS YOUNG Commission No. 2165145 NOTARY PUBLIC-CALIFORMA BAN FRANCISCO COUNTY Ny Comm. Expires GCTOBER 18, 2020	I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official seal. Signature

PATENTS

Patent No.	Pub. No.	App. No.					Pub. Issue Date Date
US7368831		US10/657053	US	Power converter feedback circuit	Gramed	9/5/2003	5/6/2008

PATENT REEL: 044476 FRAME: 0740

RECORDED: 11/16/2017