503611145 12/14/2015

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT3657776

CONVEYING PARTY DATA

Name	Execution Date
SEUNGHYUN HWANG	06/29/2015
VISHNU BALAN	06/29/2015
SUNIL RAO SUDHAKARAN	01/30/2015

RECEIVING PARTY DATA

Name:	NVIDIA CORPORATION
Street Address:	2701 SAN TOMAS EXPRESSWAY
City:	SANTA CLARA
State/Country:	CALIFORNIA
Postal Code:	95050

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14807823

CORRESPONDENCE DATA

Fax Number: (408)715-1201

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: 408-715-1211

Email: Kcruz@artegislaw.com, ALGdocketing@artegislaw.com

Correspondent Name: ARTEGIS LAW GROUP, LLP/NVIDIA

Address Line 1: 7710 CHERRY PARK DRIVE SUITE T #104

Address Line 4: HOUSTON, TEXAS 77095

ATTORNEY DOCKET NUMBER:	14SC0077US
NAME OF SUBMITTER:	JOHN C. CAREY
SIGNATURE:	/John C. Carey/
DATE SIGNED:	12/14/2015

Total Attachments: 6

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PATENT 503611145 REEL: 037288 FRAME: 0149

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ASSIGNMENT FOR APPLICATION FOR PATENT WITH DECLARATION STATEMENT

W	HF	RF	:AS

Names and Addresses of Inventors:

1)	Seunghyun HWANG San Jose, CA	2)	Vishnu BALAN 12171 Country Squire Court Saratoga, CA 95070
3)	Sunil Rao SUDHAKARAN		
	335 Berry St. #403		
	San Francisco, CA 94158		

(hereinafter referred to as Assignors), have invented a certain invention entitled:

enclosed herewith or for which application for Letters Patent in the United States was filed on

VIA PATTERN TO REDUCE CROSSTALK BETWEEN DIFFERENTIAL SIGNAL PAIRS

un	der Seriai No.	, and	
WHEREAS, NVIDIA COR business at 2701 San Tomas Ex desirous of acquiring the entire rig Application), and the invention dis embodiments of the Invention, here to any and all patents, inventor's	PORATION., a Corpor pressway, California ht, title and interest in sclosed therein (herein retofore conceived, management of the	ration of the State of Delawa 95050 (hereinafter referred and to said application (here nafter referred to as Inventio ade or discovered by said A r forms of protection (herei	to as Assignee), is sinafter referred to as on), and in and to all ssignors, and in and
Patents) thereon granted in any ar	nd all countries and gro	oups of countries.	

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

- 1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.
- 2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional,

divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

- The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
- Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- In the event that the filing date and/or Application No. of said Invention are not entered at the time Assignors execute this document, and if such information is deemed necessary, Assignors hereby authorize and request the attorney/agent(s) of Artegis Law Group, LLP, to insert the filing date and/or Application No. of said application where needed.

6.	This declaration is directed to the attached application, or (if following box is checked):			
	[]	United States application or PCT international application number filed on		
As a be	low n	amed inventor, i hereby declare that:		

The above-identified application was made or authorized to be made by me;

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application; and

I acknowledge that any willful false statement made in this declaration is punishable under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below. calend Monny

1)	June 29,2015 (DATE)	
• ,		Seunghyun HWANG
2)	(DATE)	Vishnu BALAN
3)	(DATE)	Sunil Rao SUDHAKARAN

ASSIGNMENT FOR APPLICATION FOR PATENT WITH DECLARATION STATEMENT

WHEREAS:

Names and Addresses of Inventors:

1)	Seunghyun HWANG	2)	Vishnu BALAN 12171 Country Squire Court
	San Jose, CA		Saratoga, CA 95070
3)	Sunil Rao SUDHAKARAN		
	335 Berry St. #403		
	San Francisco, CA 94158		

(hereinafter referred to as Assignors), have invented a certain invention entitled:

enclosed herewith or for which application for Letters Patent in the United States was filed on

VIA PATTERN TO REDUCE CROSSTALK BETWEEN DIFFERENTIAL SIGNAL PAIRS

	under Serial No.	and	
WHEREAS, NVIDIA CO	RPORATION., a Corp	oration of the State of I	Delaware, having a place of
business at 2701 San Tomas	Expressway, California	ı 95050 (hereinafter r	eferred to as Assignee), is
desirous of acquiring the entire	right, title and interest i	n and to said applicatio	n (hereinafter referred to as
Application), and the invention	disclosed therein (here	einafter referred to as I	nvention), and in and to all
embodiments of the Invention, I	heretofore conceived, r	made or discovered by	said Assignors, and in and
to any and all patents, invento	r's certificates and oth	er forms of protection	(hereinafter referred to as
Patents) thereon granted in any	and all countries and g	roups of countries.	

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

- 1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.
- 2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional,

divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

- 3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
- 4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. In the event that the filing date and/or Application No. of said invention are not entered at the time Assignors execute this document, and if such information is deemed necessary, Assignors hereby authorize and request the attorney/agent(s) of **Artegis Law Group, LLP**, to insert the filing date and/or Application No. of said application where needed.

	6.	6. This declaration is directed to the attached application, or (if following box is checked):			
		[]	United States application	n or PCT International application number filed on	
	As a be	elow n	amed inventor, I hereby de	eclare that:	
		The	above-identified applicatio	n was made or authorized to be made by me;	
	in the a		eve that I am the original ation; and	inventor or an original joint inventor of a claimed invention	
	I acknowledge that any willful false statement made in this declaration is punishal under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.				
said As	IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.				
	1)	<u></u>	(DATE)	Seunghyun HWANG	
	2) 2	<u> </u>	Suce 15 (DATE)	Viskou Balon Vishnu BALAN	

Sunii Rao SUDHAKARAN

(DATE)

3)

ASSIGNMENT FOR APPLICATION FOR PATENT WITH DECLARATION STATEMENT

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Names and Addresses of Inventors:

1)	Seunghyun HWANG	2)	Vishnu BALAN 12171 Country Squire Court
	San Jose, CA		Saratoga, CA 95070
3)	Sunil Rao SUDHAKARAN 335 Berry St. #403		
	San Francisco, CA 94158		

(hereinafter referred to as Assignors), have invented a certain invention entitled:

enclosed herewith or for which application for Letters Patent in the United States was filed on

VIA PATTERN TO REDUCE CROSSTALK BETWEEN DIFFERENTIAL SIGNAL PAIRS

July 23, 2015	under Serial No.	14/807,823	_; and
WHEREAS, NVIDIA C	ORPORATION., a C	orporation of the	State of Delaware, having a place of
			einafter referred to as Assignee), is
			application (hereinafter referred to as
			ed to as Invention), and in and to all
			overed by said Assignors, and in and
			protection (hereinafter referred to as
Patents) thereon granted in an			

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

- 1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a conventional, division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.
- 2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, conventional,

divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefore and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

- 3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.
- 4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. In the event that the filing date and/or Application No. of said Invention are not entered at the time Assignors execute this document, and if such information is deemed necessary, Assignors hereby authorize and request the attorney/agent(s) of **Artegis Law Group, LLP**, to insert the filing date and/or Application No. of said application where needed.
 - This declaration is directed to the attached application, or (if following box is checked):
 United States application or PCT international application number
 14/807,823 filed on July 23, 2015

As a below named inventor, I hereby declare that:

The above-identified application was made or authorized to be made by me;

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application; and

I acknowledge that any willful false statement made in this declaration is punishable under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) (DATE) Seunghyun HWANG

2) (DATE) Vishnu BALAN

3) (DATE) Sunil Rao SUDHAKARAN

PATENT REEL: 037288 FRAME: 0156

RECORDED: 12/14/2015