505793968 11/26/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5840797

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
RAJBALLAV DASH	11/11/2019	
JACK H. CHOQUETTE	11/08/2019	
MING LIANG MILTON LEI	11/13/2019	
STEPHEN JONES	11/13/2019	
CHRISTOPHER FREDERICK LAMB	11/07/2019	

RECEIVING PARTY DATA

Name:	NVIDIA CORPORATION	
Street Address:	2788 SAN TOMAS EXPRESSWAY	
City:	SANTA CLARA	
State/Country:	CALIFORNIA	
Postal Code:	95051	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16677503

CORRESPONDENCE DATA

Fax Number: (312)616-5700

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: 312-616-5600

Email: assignments@leydig.com

LEYDIG, VOIT & MAYER (WALNUT CREEK) **Correspondent Name:**

Address Line 1: 180 N. STETSON

Address Line 2: TWO PRUDENTIAL PLAZA, SUITE 4900

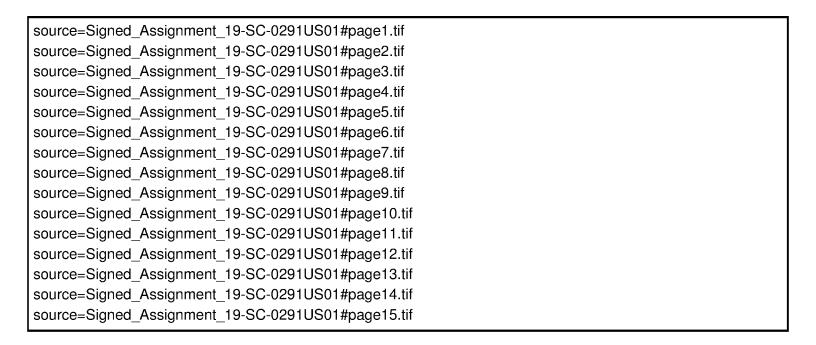
Address Line 4: CHICAGO, ILLINOIS 60601

ATTORNEY DOCKET NUMBER:	512944/19-SC-0291-US01
NAME OF SUBMITTER:	STEPHANIE L. WINNER
SIGNATURE:	/Stephanie L. Winner/
DATE SIGNED:	11/26/2019
	-

Total Attachments: 15

PATENT REEL: 051123 FRAME: 0218

505793968



PATENT REEL: 051123 FRAME: 0219

NVIDIA CORPORATION ASSIGNMENT AGREEMENT – WORLDWIDE

WHEREAS, I, an undersigned individual, have invented certain invention(s) described in an application for Letters Patent (the "Application") in:
Ξ the United States □ another jurisdiction;
\square enclosed herewith or Ξ previously filed on date $11/7/2019$ under Serial No. $16/677,503$;
with docket number and title: 512944/19-SC-0291-US01; PERSISTENT SCRATCHPAD MEMORY FOR DATA EXCHANGE BETWEEN PROGRAMS.
WHEREAS, NVIDIA Corporation, a corporation of the State of Delaware, having a place of business at 2788 San Tomas Expressway, Santa Clara, CA 95051; U.S.A. ("NVIDIA"), desires to acquire the entire right, title, and interest in and to the invention(s) disclosed in the Application and all embodiments of such invention(s) previously conceived, made, or discovered by me during my employment with or within the scope of my work in any capacity for NVIDIA (collectively, the "Inventions"), and in and to the Application and any and all other applications for utility patents, utility models, inventor's certificates, and other forms of invention protection or rights for the Inventions in any and all countries and groups of countries (collectively, the "Applications"), and in and to any and all patents, inventors certificates, and other forms of invention protection or rights arising therefrom (the "Patents").
NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by me to have been received in full from NVIDIA:
1. I hereby sell, assign, transfer and convey to NVIDIA the entire right, title and interest (a) in and to the Inventions and the Application; (b) in and to all rights to apply for patents and all other forms of invention protection or rights on the Inventions in any and all countries pursuant to the Paris Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on the Inventions 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, continuation, or continuation-in-part of any of the Applications; and (d) in and to each and every reissue or extension of any of the Patents.
2. I hereby covenant and agree to cooperate with NVIDIA to enable NVIDIA to enjoy to the fullest extent the right, title and interest to the Inventions herein conveyed in any and all countries and groups of countries. My cooperation shall include prompt production of pertinent facts and documents, giving testimony, executing petitions, oaths, specifications, declarations or other papers, and providing other assistance to the extent deemed necessary or desirable by NVIDIA (a) for perfecting in NVIDIA the right, title and interest herein conveyed; (b) for prosecuting the Applications; (c) for filing and prosecuting substitute, conventional, divisional, continuation, continuation-in-part, or additional applications covering the Inventions; (d) for filing and prosecuting applications for reexamination or reissuance of any of the Patents; (e) in assisting NVIDIA in any pre-grant or post-grant proceeding involving any of the Inventions, Applications, or Patents; and (f) in assisting NVIDIA in any court or administrative proceedings involving any of the Inventions, Applications, or Patents, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, and infringement actions; provided, however, that reasonable expenses incurred by me in providing such cooperation shall be paid for by NVIDIA.
3. I hereby agree that the terms and covenants of this Assignment Agreement (the "Agreement") shall inure to the benefit of NVIDIA, its successors, assigns and other legal representatives, and shall be binding upon me, my heirs, my legal representatives, and my assigns.

NVIDIA Incorporated Assignment Agreement

PATENT REEL: 051123 FRAME: 0220

- 4. I hereby warrant and represent that I have not entered into and will not enter into any assignment. license, contract, or understanding in conflict herewith.
- 5. I hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement shall remain valid, enforceable, and binding, and the invalid or otherwise unenforceable provision shall be deemed to be replaced by a provision that is valid and enforceable and that comes closest to expressing the intent expressed by the invalid or unenforceable provision.
- 6. I hereby agree that this Agreement contains the entire understanding between NVIDIA and me relating to the subject matter contained herein, and supersedes all prior and collateral communications and understandings between NVIDIA and me.
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IN WITNESS WHEREOF, I have executed and delivered this instrument to NVIDIA on the date indicated below.

(Printed legal name of inventor) Rajballav	Dash
(Inventor's signature) Rajballan	Sash (Date) 11/11/2019
(Inventor's mailing address) 2788 San Ton	nas Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Jack H. C	hoquette
	(Date)
(Inventor's mailing address) 2788 San Ton	nas Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Ming Lian	1g Milton
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Ton	nas Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Stephen Jo	ones
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Ton	nas Expressway, Santa Clara, CA 95051
NVIDIA Incorporated Assignment Agreeme	ent Page 2 of 3

PATENT REEL: 051123 FRAME: 0221

Page 2 of 3

ventor's mailing address) 2788 San Tomas Expressway, Santa Clara, CA 95051	nventor's signature)	(Date)	
	nventor's mailing address) <u>2788 San Toma</u>	s Expressway, Santa Clara, CA 95051	
	•		

NVIDIA CORPORATION ASSIGNMENT AGREEMENT – WORLDWIDE

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with docket number and title: 512944/19-SC-0291-US01; PERSISTENT SCRATCHPAD MEMORY FOR DATA EXCHANGE BETWEEN PROGRAMS.
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1. I hereby sell, assign, transfer and convey to NVIDIA the entire right, title and interest (a) in and to the Inventions and the Application; (b) in and to all rights to apply for patents and all other forms of invention protection or rights on the Inventions in any and all countries pursuant to the Paris Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on the Inventions 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, continuation, or continuation-in-part of any of the Applications; and (d) in and to each and every reissue or extension of any of the Patents.
2. I hereby covenant and agree to cooperate with NVIDIA to enable NVIDIA to enjoy to the fullest extent the right, title and interest to the Inventions herein conveyed in any and all countries and groups of countries. My cooperation shall include prompt production of pertinent facts and documents, giving testimony, executing petitions, oaths, specifications, declarations or other papers, and providing other assistance to the extent deemed necessary or desirable by NVIDIA (a) for perfecting in NVIDIA the right, title and interest herein conveyed; (b) for prosecuting the Applications; (c) for filing and prosecuting substitute, conventional, divisional, continuation, continuation-in-part, or additional applications covering the Inventions; (d) for filing and prosecuting applications for reexamination or reissuance of any of the Patents; (e) in assisting NVIDIA in any pre-grant or post-grant proceeding involving any of the Inventions, Applications, or Patents; and (f) in assisting NVIDIA in any court or administrative proceeding involving any of the Inventions, Applications, or Patents, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, and infringement actions; provided, however, that reasonable expenses incurred by me in providing such cooperation shall be paid for by NVIDIA.
3. I hereby agree that the terms and covenants of this Assignment Agreement (the "Agreement") shall inure to the benefit of NVIDIA, its successors, assigns and other legal representatives, and shall be binding upon me, my heirs, my legal representatives, and my assigns.

NVIDIA Incorporated Assignment Agreement

PATENT REEL: 051123 FRAME: 0223

- 4. I hereby warrant and represent that I have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. I hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement shall remain valid, enforceable, and binding, and the invalid or otherwise unenforceable provision shall be deemed to be replaced by a provision that is valid and enforceable and that comes closest to expressing the intent expressed by the invalid or unenforceable provision.
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IN WITNESS WHEREOF, I have executed and delivered this instrument to NVIDIA on the date indicated below.

(Printed legal name of inventor) Rajballav Da	ash
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Tomas	s Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Jack H. Cho	quette
(Inventor's signature)	(Date) Nov 8, 2019
	s Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Ming Liang	Militon
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Toma	s Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Stephen Jon	es
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Toma	s Expressway, Santa Clara, CA 95051
NVIDIA Incorporated Assignment Agreement	t Page 2 of 3

(Printed legal name of inventor) Christopher F	rederick Lamb	
(Inventor's signature)	(Date)	
(Inventor's mailing address) 2788 San Tomas	Expressway, Santa Clara, CA 95051	

Page 3 of 3

NVIDIA CORPORATION ASSIGNMENT AGREEMENT - WORLDWIDE

MANDER COME COMMENCE AND SECTION OF SECTION ASSESSMENT AND SECTION OF THE SECTION ASSESSMENT OF
WHEREAS, I, an undersigned individual, have invented certain invention(s) described in an application for Letters Patent (the "Application") in:
Ξ the United States □ another jurisdiction;
□ enclosed herewith or ≡ previously filed on date 11/7/2019 under Serial No. 16/677,503;
with docket number and title: 512944/19-SC-0291-US01; PERSISTENT SCRATCHPAD MEMORY FOR DATA EXCHANGE BETWEEN PROGRAMS.
WHEREAS, NVIDIA Corporation, a corporation of the State of Delaware, having a place of business at 2788 San Tomas Expressway, Santa Clara, CA 95051; U.S.A. ("NVIDIA"), desires to acquire the entire right, title, and interest in and to the invention(s) disclosed in the Application and all embodiments of such invention(s) previously conceived, made, or discovered by me during my employment with or within the scope of my work in any capacity for NVIDIA (collectively, the "Inventions"), and in and to the Application and any and all other applications for utility patents, utility models, inventor's certificates, and other forms of invention protection or rights for the Inventions in any and all countries and groups of countries (collectively, the "Applications"), and in and to any and all patents, inventors certificates, and other forms of invention protection or rights arising therefrom (the "Patents").
NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by me to have been received in full from NVIDIA:
1. I hereby sell, assign, transfer and convey to NVIDIA the entire right, title and interest (a) in and to the Inventions and the Application; (b) in and to all rights to apply for patents and all other forms of invention protection or rights on the Inventions in any and all countries pursuant to the Paris Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on the Inventions 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, continuation, or continuation-in-part of any of the Applications; and (d) in and to each and every
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NVIDIA Incorporated Assignment Agreement

PATENT REEL: 051123 FRAME: 0226

- 4. I hereby warrant and represent that I have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. I hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement shall remain valid, enforceable, and binding, and the invalid or otherwise unenforceable provision shall be deemed to be replaced by a provision that is valid and enforceable and that comes closest to expressing the intent expressed by the invalid or unenforceable provision.
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IN WITNESS WHEREOF, I have executed and delivered this instrument to NVIDIA on the date indicated below.

(Printed legal name of inventor) Rajballav Dash	a
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Tomas E	Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Jack H. Choqu	ette
	(Date)
	Expressway, Santa Clara, CA 95051
(Inventor's signature)	Iilton Lei (Date) Abv / 3 , 2019 Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Stephen Jones	
(Inventor*s signature)	(Date)
(Inventor's mailing address) 2788 San Tomas E	Expressway, Santa Clara, CA 95051
NVIDIA Incorporated Assignment Agreement	Page 2 of 3

PATENT REEL: 051123 FRAME: 0227

(Printed legal name of inventor) Christopher Fro	ederick Lamb	······································
(Inventor's signature)	(Date)	·
(Inventor's mailing address) 2788 San Tomas E	xpressway, Santa Clara, CA 95051	

PATENT REEL: 051123 FRAME: 0228

Page 3 of 3

NVIDIA CORPORATION ASSIGNMENT AGREEMENT - WORLDWIDE

WHEREAS, I, an undersigned individual, have invented certain invention(s) described in an application for Letters Patent (the "Application") in:
Ξ the United States □ another jurisdiction;
\Box enclosed herewith or Ξ previously filed on date <u>11/7/2019</u> under Serial No. <u>16/677,503</u> ;
with docket number and title: 512944/19-SC-0291-US01; PERSISTENT SCRATCHPAD MEMORY FOR DATA EXCHANGE BETWEEN PROGRAMS.
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NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by me to have been received in full from NVIDIA:
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3. I hereby agree that the terms and covenants of this Assignment Agreement (the "Agreement") shall inure to the benefit of NVIDIA, its successors, assigns and other legal representatives, and shall be binding upon me, my heirs, my legal representatives, and my assigns.

NVIDIA Incorporated Assignment Agreement

PATENT REEL: 051123 FRAME: 0229

- 4. I hereby warrant and represent that I have not entered into and will not enter into any assignment, license, contract, or understanding in conflict herewith.
- 5. I hereby agree that if any provision of this Agreement is deemed invalid or otherwise unenforceable, the remaining provisions of this Agreement shall remain valid, enforceable, and binding, and the invalid or otherwise unenforceable provision shall be deemed to be replaced by a provision that is valid and enforceable and that comes closest to expressing the intent expressed by the invalid or unenforceable provision.
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(Inventor's mailing address) 2788 San Toma	s Expressway, Santa Clara, CA 95051
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(Inventor's signature)	(Date)
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(Printed legal name of inventor) Ming Liang	Milton
(Inventor's signature)	(Date)
(Inventor's mailing address) 2788 San Toma	s Expressway, Santa Clara, CA 95051
(Printed legal name of inventor) Stephen Jon	
(Inventor's signature)	MUJ (Date) 18th November 2019
(Inventor's mailing address) 2788 San Toma	s Expressway, Santa Clara, CA 95051
NVIDIA Incorporated Assignment Agreement	t Page 2 of 3

PATENT REEL: 051123 FRAME: 0230

ntor's signature) (Date) ntor's mailing address) 2788 San Tomas Expressway, Santa Clara, CA 9	

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NVIDIA Incorporated Assignment Agreement

PATENT REEL: 051123 FRAME: 0232

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(Printed legal name of inventor) Stephen J	ones
(Inventor's signature)	(Date)
(Inventor's mailing address) <u>2788 San Ton</u>	nas Expressway, Santa Clara, CA 95051

NVIDIA Incorporated Assignment Agreement

Page 2 of 3

(Printed legal name of inventor) Christopher Frederick Lamb
(Inventor's signature) Chate) (Date) (Date) (17/2019)
(Inventor's mailing address) 2788 San Tomas Expressway, Santa Clara, CA 95051

NVIDIA Incorporated Assignment Agreement

Page 3 of 3