

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT2653809

SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>ZIYAD S. HAKURA</td> <td>10/02/2013</td> </tr> <tr> <td>WALTER R. STEINER</td> <td>11/22/2013</td> </tr> <tr> <td>CYNTHIA ANN EDGEWORTH ALLISON</td> <td>11/12/2013</td> </tr> <tr> <td>ROUSLAN DIMITROV</td> <td>10/02/2013</td> </tr> <tr> <td>KARIM M. ABDALLA</td> <td>10/03/2013</td> </tr> <tr> <td>DALE L. KIRKLAND</td> <td>10/02/2013</td> </tr> <tr> <td>EMMETT M. KILGARIFF</td> <td>10/07/2013</td> </tr> </tbody> </table>		Name	Execution Date	ZIYAD S. HAKURA	10/02/2013	WALTER R. STEINER	11/22/2013	CYNTHIA ANN EDGEWORTH ALLISON	11/12/2013	ROUSLAN DIMITROV	10/02/2013	KARIM M. ABDALLA	10/03/2013	DALE L. KIRKLAND	10/02/2013	EMMETT M. KILGARIFF	10/07/2013
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<table border="1"> <tr> <td>Name:</td> <td>NVIDIA CORPORATION</td> </tr> <tr> <td>Street Address:</td> <td>2701 SAN TOMAS EXPRESSWAY</td> </tr> <tr> <td>City:</td> <td>SANTA CLARA</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>95050</td> </tr> </table>		Name:	NVIDIA CORPORATION	Street Address:	2701 SAN TOMAS EXPRESSWAY	City:	SANTA CLARA	State/Country:	CALIFORNIA	Postal Code:	95050						
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PROPERTY NUMBERS Total: 1																	
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CORRESPONDENCE DATA																	
Fax Number:	(713)623-4846																
Phone:	7136234844																
Email:	DWEDDERBURN@PATTERSONSHERIDAN.COM, PSDOCKETING@PATTERSONSHERIDAN.COM																
<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>																	
Correspondent Name:	PATTERSON & SHERIDAN, LLP																
Address Line 1:	3040 POST OAK BLVD																
Address Line 2:	SUITE 1500																
Address Line 4:	HOUSTON, TEXAS 77056																

OP \$40.00 14046856

ATTORNEY DOCKET NUMBER:	NVDA/SC-13-0115-US1
NAME OF SUBMITTER:	JOHN C. CAREY
Signature:	/John C. Carey/
Date:	12/18/2013
<p>Total Attachments: 12</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page1.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page2.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page3.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page4.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page5.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page6.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page7.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page8.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page9.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page10.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page11.tif</p> <p>source=NVDA_SC130115_Executed Assignment_EF#page12.tif</p>	

## ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

**Ziyad S. HAKURA**, residing at  
704 Tennyson Drive  
Gilroy, California 95020

**Walter R. STEINER**, residing at  
5905 Luke Lane  
Flagler Beach, FL 32136

**Cynthia Ann Edgeworth ALLISON**, residing at  
154 Kensington Drive  
Madison, Alabama 35758

**Rouslan DIMITROV**, residing at  
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**Karim M. ABDALLA**, residing at  
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Menlo Park, California 94025

**Dale L. KIRKLAND**, residing at  
106 Spring Water Drive  
Madison, Alabama 35758

**Emmett M. KILGARIFF**, residing at  
1146 Meredith Avenue  
San Jose, CA 95125

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

### HEURISTICS FOR IMPROVING PERFORMANCE IN A TILE-BASED ARCHITECTURE

for which application for Letters Patent in the United States was filed on October 4, 2013, under Serial No. 14/046,856, executed on even date herewith; and

WHEREAS, NVIDIA CORPORATION, a corporation of the State of Delaware, having a place of business at 2701 San Tomas Expressway, Santa Clara, California 95050 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups 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

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.

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2)	_____ (DATE)	_____
		Walter R. STEINER
3)	_____ (DATE)	_____
		Cynthia Ann Edgeworth ALLISON
4)	_____ (DATE)	_____
		Rouslan DIMITROV
5)	<u>10/3/2013</u> (DATE)	<u>K. Abdalla</u>
		Karim M. ABDALLA
6)	_____ (DATE)	_____
		Dale L. KIRKLAND
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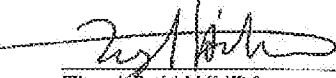
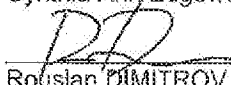
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2)	_____ (DATE)	Walter R. STEINER
3)	_____ (DATE)	Cynthia Ann Edgeworth ALLISON
4)	<u>10/2/2012</u> (DATE)	 Rotislav DIMITROV
5)	_____ (DATE)	Karim M. ABDALLA
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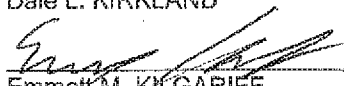
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7)	<u>Oct 7, 2013</u> (DATE)	
		Emmett M. KILGARIFF

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		Dale L. KIRKLAND
7)	_____ (DATE)	_____
		Emmett M. KILGARIFF

## ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

**Ziyad S. HAKURA**, residing at  
704 Tennyson Drive  
Gilroy, California 95020

**Walter R. STEINER**, residing at  
5905 Luke Lane  
Flagler Beach, FL 32136

**Cynthia Ann Edgeworth ALLISON**, residing at  
154 Kensington Drive  
Madison, Alabama 35758

**Rouslan DIMITROV**, residing at  
130 Leslie Drive  
San Carlos, CA 94070

**Karim M. ABDALLA**, residing at  
4 Zachary Court  
Menlo Park, California 94025

**Dale L. KIRKLAND**, residing at  
106 Spring Water Drive  
Madison, Alabama 35758

**Emmett M. KILGARIFF**, residing at  
1146 Meredith Avenue  
San Jose, CA 95125

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

### HEURISTICS FOR IMPROVING PERFORMANCE IN A TILE-BASED ARCHITECTURE

for which application for Letters Patent in the United States was filed on October 4, 2013, under Serial No. 14/046,856, executed on even date herewith; and

WHEREAS, NVIDIA CORPORATION, a corporation of the State of Delaware, having a place of business at 2701 San Tomas Expressway, Santa Clara, California 95050 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups 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

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.

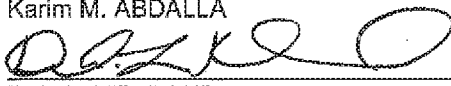
2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt 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. I hereby authorize and request my attorneys, Patterson & Sheridan LLP, of 3040 Post Oak Blvd, Suite 1500, Houston Texas 77056, to insert above in parentheses (Application No. and Filing Date) the filing date and application number of said application when known.

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

1)	_____ (DATE)	_____
		Ziyad S. HAKURA
2)	_____ (DATE)	_____
		Walter R. STEINER
3)	_____ (DATE)	_____
		Cynthia Ann Edgeworth ALLISON
4)	_____ (DATE)	_____
		Rouslan DIMITROV
5)	_____ (DATE)	_____
		Karim M. ABDALLA
6)	<u>10/2/2013</u> (DATE)	
		Dale L. KIRKLAND
7)	_____ (DATE)	_____
		Emmett M. KILGARIFF