700513634<sup>M</sup>

Form PTO-1595 (Rev. 03-11) OMB No. 0851-0027 (exp. 03/31/2015)	U.S. DEPARTMENT OF COMMERC United States Patent and Trademark Office
RECORDATION FOR	
PATENT:	S ONLY
To the Director of the U.S. Patent and Trademark Office: Please	record the attached documents or the new address(es) below.
1. Name of conveying party(les):	2. Name and address of receiving party(les)
Steven Maxwell Seitz (12/12/2013), Carlos	Name: Google Inc.
Hernandez Esteban (12/10/2013), and Supasorn Suwajanakorn (12/10/2013)	<u> </u>
Additional name(s) of conveying party(ies) stached?	Internal Address: Street Address:
3. Nature of conveyance/Execution Date(s):	Street Address.
Execution Date(s): in parentheses after inventor name	1600 Amphitheatre Parkway
x Assignment Merger Change of Name	,
Security Agreement Joint Research Agreement	City Barratain View
Government Interest Assignment	City: Mountain View
Variable   Variable	State: California
Executive Order 9424, Confirmatory License	Country: United States of America Zip: 94043
Other	Additional name(s) & address(es) Yes X No attached?
4. Application or patent number(s):	This document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
14/107,163	
Additional numbers attached	Yes X No
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: Noelle L. Cacciabeve	
LERNER, DAVID, LITTÉNBERG, KRUMHOLZ & MENTLIK, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address: Atty. Dkt.: Google 3.12F-1176	7. Total 100 (57 OF 1.21(11) & 5.41) \$
Street Address: 600 South Avenue West	Authorized to be observed to describ account
	X Authorized to be charged to deposit account
	Enclosed
	None required (government interest not affecting title)
City: Westfield	6. Payment Information
State: NJ Zip: 07090	
Phone Number: 908-654-5000	
Fax Number: 908-654-7866	Deposit Account Number 12-1095
Email Address: mcormier@ldlkm.com	Authorized User Name Noelle L. Cacclabeve
9. Signature:	
Marked Lancibular	December 17, 2013
Noelle L. Cacciabeve - 63,075	Date Total cumber of pages including anyer.
Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:

3399352

**PATENT REEL: 032081 FRAME: 0592** 

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Occument Integrity Verified

ASSIGNMENT OF PATENT APPLICATION	Docket Number (Optional)	
ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3,12F-1176	
WHEREAS, 1, <u>Steven Maxwell Seitz</u> of <u>Seattle, Washington 98</u> discoveries, the subject matter of which is described in the patent application"),	105, have invented or discovered inventions or tion entitled "Depth Map Generation Using Bokeh	
WHEREAS (if the left box is checked), the Patent Application was Trademark Office on, Application Number	ras filed with the U.S. Palent and	
WHEREAS (if the tell box is checked), the Petent Application in Steven Maxwell Seitz, Carlos Hemandez Esteber, and Supasom Suwajan David, Littenberg, Krumhotz & Mentilik, LLP, to insert in here in brackets (A 12/16/2013) the application number and fiting date of the application.	akom (and whereas I hereby authorize Lemer,	
WHEREAS, <u>Google Inc.</u> , incorporated or otherwise formed in <u>Q</u> <u>Amorhitheatre Parkway, Mountain View, Californie, 94043</u> (hereafter, the acquired and is desirous of memorializing its acquisition further berein, tr	"essignee") is desirous of acquiring, or has	
NOW, THEREFORE, for good and valuable consideration their as follows: I agree to assign, and hereby do assign, to the assignee my a Assigned Applications in the United States of America and all other countries and application, including any and all inventions, discoveries and other continuation, continuation—in-part, substitute, ressue, re-elemination or continuation, continuation—in-part, substitute, ressue, re-elemination or continuation, pursuant to any law or treaty, and any patent is using fide assign, to assignee the right to claim such priority or benefit. I have no obligation to convey, my rights in the Assigned Applications to a third part Trademark Office, and any other governmental agency in the world, to issue, as a supplications and to record assignee's ownership thereof. At astruther remuneration, to execute and deliver documents prepared at assigned has a sestimony, as may be reasonably required to evidence or protect Assignee may assign or transfer all or part of its rights set forth herein in affix its arguments to this document as well as any other indica of its acceptance in summifications thereof shall be deemed replaced, to the extent possible purpose of the offending provision.	entire right, title and interest in and to the tries, where "Assigned Applications" means the r subject marter described therein, any divisional, their application claiming priority or benefit to the rom the foregoing. I agree to assign, and hereby of previously conveyed, nor em I aware of an by I hereby authorize the U.S. Patent and sue to assignee all patents resulting from the signee's reasonable request I agree, without gnee's expense and to provide other cooperation, assignee's rights in the Assigned Applications to sole discretion. I agree that the assignmen may plance of the provisions hereof if any provision the full extent cermissible by law and the	
Dec 12, 2013 54. 5.	1	
(Date) Steven Mar	ell Seltz (Dec (Septiature)	

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ASSIGNMENT OF PATENT APPLICATION  WHEREAS, I. Catos Hemandez Esteban of Kirkland. Washington 98033 have invented or discovered inventions or discoverees, the subject inatter of which is described in the patent application entitled 'Doph Map Generation Using Bokeh Detection' (hereefter "Petent Application").  WHEREAS (if the left box is checked), the Patent Application was filled with the U.S. Patent and Trademark Office on Application Number and White Patent Application number and White Patent Application numbers the following inventors:  Sleven Maxwell Seigt, Cartos Hemandez Esteban, and Successon Swerigination, (and whereas) hereby authorize Lerner, David, Litenberg, Krumholz & Merifik, LiP., to insert in here in brackets Application No. 14/2.07, 163 — field on 12/16/2.013 — the application number and thing date of the application when known), and  WHEREAS, Google Inc., incorporated or otherwise formed in Detegrating and hering a place of business at 1600 Amphiliheatra Parkwalz Maxwelland View. California, 9403 (hereafter, the "essignee") is desirous of acquiring, or has acquiring and share desirous of memorializing its acquisition further herein. the errors only this and interest in series.  NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows: agree to assign, and hereby do assign, to the assignee my antition right, title and interest in and to the Assigned Applications in the United States of America and in lither countries, where "Assigned Applications in memoria to be assigned as a committed on a part of the Assigned Application in committed to describe and protection protects as greater and to the Assigned Applications in an exist to describe the series of the part of the Assigned Application in an exist per transfer and in the Assigned Applications are to record assigned to assign a desire of the assignment on the registeral resource of the resident and interest in an existing the series of the other provision and in the provision in the As		
WHEREAS, I. Carlos Hemandez Esteban of Kirkland Washnoton 98033. Nove invented or discovered inventions or discoverees, the subject matter of which is described in the patent application entitled "Depth Map Generation Using Bokeh Detection" (hereefter "Patent Application").  WHEREAS (if the left box is checked), the Patent Application was filled with the U.S. Patent and Trademark Office on		Docket Number (Optional)
or discovenes, the subject matter of which is described in the patent application entitled "Depth Map Generation Using Bokeh Detection" (hereafter "Patent Application").  WHEREAS (if the left box is checked), the Patent Application was filled with the U.S. Patent and Trademark Office on	ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.12F-1176
X   WHEREAS (if the left box is checked), the Patent Application names the following inventors:   Steven Maxwell Setz, Carlos Hernandez Estaben, and Supescon Suwajanakom (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentilk, LLP, to insert in here in brackets (Application No. 14/107, 163   filed on 12/16/2013   the application number and thing date of the application when known), and	or discovenes, the subject matter of which is described in the patent appli	on 98033, have invented or discovered inventions cation entitled "Depth Map Generation Using
Steven Maxwell Setz, Carlos Hernandez Esteben, and Supescan Suverjanakom. (and whereas I hereby authorize Lemer, David, Littenberg, Krumholz & Mentilik, LLP, to insert in here in brackets (Application No. 14/107, 163 filed on 12/16/2013.) The application number and filing date of the application when known), and  WHEREAS, Coxole Inc., incorporated or otherwise formed in Delaware and having a place of business at 1600 Amphitheatre Parkway. Mayuntain View. Californig 94043 (hereafter, the "essignee") is desirous of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;  NOW, THEREFORE, for good and valueble consideration the receipt of which is hereby acknowledged, I agree as follows. I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation, continuation, on-part, substitute, reissue, re-examination or other application between priority or benefit to the Patent Application pursuent to any lew or treatly, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to corrivey, my rights in the Assigned Applications and to record assignee's ownership thereof. At assignee's alphants resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's agence and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's appears and to provide other cooperation, as testimony, as may be reasonably required to evidence or protect assignee's appears and to provide other cooperations thereof shall be	WHEREAS (if the left box is checked), the Patent Application will Trademark Office on	as filed with the U.S. Patent and , and
Amphitheatre Parkway: Mountain View. California 94043 (hereafter, the "assignee") is desirous of acquiring, or has acquired and is desirous of memorializing its acquisition further herein, the entire right, title and interest in same;  NOW, THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, I agree as follows: I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any and att inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation, nontinuation, no part, substitute, reissue, re-examination or other application claiming priority or benefit to the Patent Application pursuant to any law or treaty, and any patent issuing from the foregoing. I agree to assign, and hereby do assign, to assignee the right to claim such priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request I agree, without further remuneration, to execute and deliver documents prepared at assignee's expense and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's rights in the Assigned Applications. Assignee may be reasonably required to evidence or protect assignee's rights in the Assigned Applications. Assignee may be reasonably required to evidence or protect assignee's rights in the Assigned Applications of the segment to this document as well as any other indica of its acceptance of the provisions hereof shall be deemed replaced, to the extent possi	Steven Maxwell Seltz, Carlos Hernandez Esteben, and Supersom Suwajana David, Littenberg, Krumholz & Mentilik, LLP, to insert in here in brackets [A	kom (and whereas I hereby authorize Lerner, phication No. 14/107, 163 filed on
as follows: I agree to assign, and hereby do assign, to the assignee my entire right, title and interest in and to the Assigned Applications in the United States of America and all other countries, where "Assigned Applications" means the Patent Application, including any end all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation, including any end all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation in part, substitute, reissue, re-exemination or other application claiming priority or benefit. I have not previously conveyed, nor am I aware of an obligation to convey, my rights in the Assigned Applications to a third party. I hereby authorize the U.S. Patent and Trademark Office, and any other governmental agency in the world, to issue to assignee all patents resulting from the Assigned Applications and to record assignee's ownership thereof. At assignee's reasonable request Lagree, without further remuneration, to execute and deliver documents prepared at assignee's expense and to provide other cooperation, such as testimony, as may be reasonably required to evidence or protect assignee's rights in the Assigned Applications. Assignee may assign or transfer all or part of its rights set forth herein in its sole discretion. I agree that the assignee may affix its agreement to this document as well as any other indica of its acceptance of the provisions hereof. If any provision herein is unenforceable, the requirements of the provision shall remain to the full extent permissible by law and the offending portions thereof shall be deemed replaced, to the extent possible, with a provision most closely reflecting the purpose of the offending provision.	Amphitheatre Parkway: Mountain View, California, 94043 (hereafter, the "	assignee") is desirous of acquiring, or has
(Date) Cares Feature 学研究。 (Segriature)	as follows: I agree to assign, and hereby do assign, to the assignee my a Assigned Applications in the United States of Arrence and all other count Patent Application, including any and all inventors, discoveries and other continuation, continuation in part, substitute, reissue, re-examination or of Patent Application pursuant to any law or treaty, and any patent issuing in do assign, to assignee the right to claim such priority or benefit. I have no obligation to convey, my rights in the Assigned Applications to a third part Trademark Office, and any other governmental agency in the world, to iss Assigned Applications and to record assignee's ownership thereof. At assigned Applications are to record assignee's ownership thereof. At assigned as lestimony, as may be reasonably required to evidence or protect Assignee may assign or transfer all or part of its rights set forth herein in it affix its signature to this document as well as any other indicts of the according to herein is unenforceable, the requirements of the provision shall remain to offending portions thereof shall be deemed replaced, to the extent possible purpose of the offending provision.	ntire right, title and interest in and to the ries, where "Assigned Applications" means the subject matter described therein, any divisional, her application claiming priority or benefit to the orm the foregoing. I agree to assign, and hereby a previously conveyed, nor am I aware of an III. I hereby authorize the U.S. Paterit and use to assignee all patents resulting from the highest reasonable request I agree, without nee's expense and to provide other cooperation, assignee's rights in the Assigned Applications. I sold discretion I agree that the assignee may take of the provisions hereof If any provision the full extent permissible by law and the
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(Date)	
Dec 10, 2013	(Signature)
WHEREAS, <u>Google Inc.</u> , incorporated or <u>Amothitheatre Parkway. Misuntain View. California</u> acquired and is desirous of memonalizing its acquired and is desirous of memonalizing its acquired and is desirous of memonalizing its acquired and is desirous of memonalizing to acquired and is desirous of memonalizing and all inventions as follows: I agree to assign, and hereby do assign Assigned Applications, including any and all inventions continuation, continuation-in-part, substrute, reissubstant Application pursuant to any law or treaty, and assign, to assignee the right to claim such produced assigned Applications and to record assigned Applications and to record assigned's ow unther remuneration, to execute and deliver documents desired applications, as may be reasonably required assignee may assign or transfer all or part of its not the stagnature to this document as well as any other is unenforceable, the requirements of the politerating portions thereof shall be deemed replace surpose of the offending provision.	It in here in brackets (Application No. 14/107, 163
Trademark Onice on, Application  X WHEREAS (if the left box is checked), the Steven Maxwell Setz, Carlos Hernandez Esteban, the setzen Maxwell Maxwel	e Patent Application names the following inventors.  and Supersom Suwaianakom (and whereas) hereby subbyize Lemer
WHEREAS, I. <u>Supasom Suwalanekom</u> of discoveries, the subject matter of which is describe Detection* (hereafter *Patient Application*),	of <u>Seattle. Washington 98105</u> , have invented or discovered invention ad in the petent application entitled "Depth Map Generation Using Bo
	PLICATION GOOGLE 3.12F-1176
ASSIGNMENT OF PATENT AP	Docket Number (Optional)

RECORDED: 12/17/2013 REEL: 032081 FRAME: 0595

Echasian Transaction Number X3G046X342 ISSXH