orm PTO-1595 (Rev. 03-11) MB No. 0651-0027 (exp. 03/31/2 <u>0</u> 15)	U.S. DEPARTMENT OF COMMER: United States Petent and Trademark Of	
RECORDATION FOR	RM COVER SHEET	
PATENT		
To the Director of the U.S. Petent and Trademark Office: Please		
1. Name of conveying party(les):	2. Name and address of receiving party(les)	
Yushi Jing (05/25/2012), Michele Covell (05/24/2012), and Stephen Conor Holiday	Name: Google Inc.	
(05/24/2012)	Internal Address:	
Additional name(s) of conveying party(les) attached? Yes X No	Street Address:	
3. Nature of conveyance/Execution Date(s):		
Execution Date(s): in parentheses after inventor name	1600 Amphithéatre Parkway	
X Assignment Merger Change of Name		
Security Agreement Joint Research Agreement	City: Mountain View	
Government Interest Assignment	State: California	
Executive Order 9424, Confirmatory License	Country: United States of America Zip: 94043	
Other	Additional name(s) & address(es) Yes X No attached?	
Additional numbers attached		
. 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, LITTENBERG, KRUMHOLZ & MENTLIK, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00	
Internal Address: Atty. Dkt.: GOOGLE 3.0-723	<u> </u>	
Street Address: 600 South Avenue West	X Authorized to be charged to deposit account	
	Enclosed	
	None required (government interest not affecting ti	
City: Westfield	8. Payment Information	
State: NJ Zip: 07090		
Phone Number: 908-654-5000	_	
Fax Number: 908-654-7866	Deposit Account Number 12-1095	
Email Address: ataylor@ldlkm.com	Authorized User Name Noelle L. Cacciabeve	
Signature Lacial Signature	June 4, 2012 Date	
Noelle L. Cacciabeve - 63,075	Total number of pages including cover 4	
Name of Person Signing	sheet, attachments, and documents:	

PATENT REEL: 028345 FRAME: 0150

## ASSIGNMENT OF PATENT APPLICATION

Docket Number (Optional)

	GOOGILE 3.0-723			
WHEREAS, I. Yushi Jing of 501 Delancey Street; Apartment 508; San Francisco. California 94017, have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "CLUSTERING QUERIES FOR IMAGE SEARCH" (hereafter "Patent Application"),  WHEREAS (If the left box is checked), the Patent Application was filed with the U.S. Patent and				
Trademark Office on, Application Number	, and			
WHEREAS (if the left box is checked), the Patent Application names the following inventors:  Yushi Jing, Michele Coveti, and Stephen Conor Holiday (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentlik, LLP, to insert in here in brackets (Application No. 13/482,343 , filed on 5-29-12 ) the application number and filing date of the application when known), and				
WHEREAS, <u>Google Inc.</u> , incorporated or otherwise formed in <u>Delaware</u> and having a place of business at <u>1600</u> <u>Amphitheatre Parkway: Mountain View. California 94043</u> (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 end 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 nighter described therein, any divisional, continuation, continuation-in-part, substitute, release, 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. Petent 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 expanse 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 eat forth herein in its sole discretion. I agree that the assignee may affix its eignature to this document as well as any other indicia 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.				
I further agree to assign, and hereby do assign, to assignee my Application No. 61/645,776, filed May 11, 2012, such provisional applicational purposes herein.	entire right, title and interest in and to Provisional on being donaldered an Assigned Application for			
	March 1			
05/25/20/2 (Date)	(Signature)			
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Weo C				
Signature of Witness  Printed Name of Witness	•			
Timod Natio of Wildes				
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	Docket Number (Optional)			
ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.0-723			
	GOUGLE 3.0-123			
WHEREAS, I, Michele Covell of 2150 Dartmouth Street: Palo Alto, California 94306, have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "CLUSTERING QUERIES FOR IMAGE SEARCH" (hereafter "Patent Application"),				
WHEREAS (If the left box is checked), the Patent Application was filed with the U.S. Patent and Trademark Office on, Application Number, and				
WHEREAS (if the left box is checked), the Patent Application names the following Inventors:  Yushi Jing, Michele Covell, and Stephen Conor Holiday (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentlik, LLP, to insert in here in brackets [Application No. 13/482,343 , fled on 5-29-12 ] the application number and filing date of the application when known), and				
WHEREAS, <u>Google Inc.</u> , incorporated or otherwise formed in <u>De Amphitheatre Parkway: Mountain View. California 94043 (hereafter, the "acquired and is desirous of memorializing its acquisition further herein, the</u>	assigned") is desirous of acquiring, or has			
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 all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-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 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 signature to this document as well as any other indicia 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.				
I further agree to assign, and hereby do assign, to assignee my Application No. 61/645,776, filed May 11, 2012, such provisional applicational application all purposes herein.	on being considered an Assigned Application for			
5/24/2012 -7/11	(Signature)			
5 24 2012 (Date)	(Signature)			
(Daily)	(4.8).4.4)			
Signature of Witness	· '			
JOSH SALITS				
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PATENT REEL: 028345 FRAME: 0152 LDLKM

ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.0-723	is (educarist)		
WHEREAS, I, Simplest County Houseast of Education. Strangum Orasso LSX, 318 GANASIa. have invented or speciment invertional or descending, the subject matter of which is described in the param application embed of CLUSTERING GUERRES FOR IMAGE SEARCHT (Interesting "Palent Application").				
WHEREAS if the left box is checked! The Plaget Application in the control of the		<b>-</b> no		
A WHEREAS III the limit service checked), the Poissa Ascrication names the following inventor the State of th				
Well-REAS, <u>Georgia to c</u> incorporated or otherwise formed in <u>Q</u> <u>Amphilipsation Parkmay, Maratian vices, Caldonnia (PCQ4)</u> (hospition that depunded and is libitarous of memoratisting its accuration further handle, or	manigroo") is desirous of a	gueing, or has		
NOW, THEREFORE, for good and valuable comadoration than it as noticed. It has been always as depend, and neroby do easign, no the reasognee my a Assigned Angelections in the United States of American and all other countries. Person Application in the United States of American, discovering from other programs confirmation, research addition of a Person Application portrained to any and all inventions, discoverings from other programs, confirmation, research addition of a Person Application pursuable to any learn's treating particle, and dily patient issuing in the application to account the Applications of their participation is provided any animal participation application and to record assigned personal to the restation and deliver decrements between Assignment any assign or to execute and deliver decrements proposed all peer such as instruments, as many the restationable propriet of the application to execute and deliver decrements propried all peer such as instruments in the restation of the personal continuous and applications and the execution and the application to be applied to the propried and the personal to design and the personal to the application of the decrements of the propried and the propried and the application to the decrements. If the personal personal is decrement to the others are a confidenting personal and the personal applications and the others are the application and the personal personal applications and personal	nitria rigial, tata and intornata filina, valviera "Assuphed Appatira, valviera Passuphed Appatira, rushpect invasion classification of the internation of their application relationing bill contained and properties of the properties of the type of the properties of the properties of suppression apparent and to province of suppression apparent and to province assuppression apparent and to province assuppression apparent and to province assuppression apparent and to province of the province to province of the province the province of the province of the province of the province of the province of the province of the province of the province of the province of the province the province of the provi	in and to the canonic house in a canonic house in processing any component on the canonic house of the canonic hou		
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Signature of Voluments    FIREL   Mayar'  Contact Name of Wirecon				
Signature of Wilsons  FIREL NAVAK  Provided Hamel of Wilsons				

**PATENT** 

REEL: 028345 FRAME: 0153