mm PTO-1595 (Rev. 03-11) MB No. 0651-0027 (exp. 03/31/2015)	U.S. DEPARTMENT OF COMMERCE United States Patent and Tredemark Office			
RECORDATION FORM COVER SHEET				
PATENTS ONLY				
To the Director of the U.S. Patent and Trademark Office: Please	record the attached documents or the new address(es) below.			
Name of conveying party(les):	2. Name and address of receiving party(les)			
Jiangbo Li (06/26/2012), Junian Zhou	Name: Google Inc.			
(06/26/2012), and Joon Ong (06/25/2012)	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 Amphitheatre Parkway			
X Assignment Merger Change of Name				
Security Agreement Joint Research Agreement	City: Mountain View			
Government Interest Assignment	State: California			
	Country: United States of America Zip: 94043			
Executive Order 9424, Confirmatory License	Additional name(s) & address(es) Yes x No			
Other	attached?			
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: Niraj A. Desai LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK, LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00			
Internal Address: Atty. Dkl.: GOOGLE 3.0-500				
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			
City:				
Phone Number: 908-654-5000	_			
Fax Number: 908-654-7866	Deposit Account Number 12-1095			
Email Address: ataylor@ldlkm.com	Authorized User Name Niraj A. Desai			
9. Signature:				
AD	July 5, 2012			
Signature	Dete			
Niraj A. Desai - 64,934	Total number of pages including cover sheet, attachments, and documents:			
Name of Person Signing	And the state of t			

PATENT REEL: 028553 FRAME: 0727

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- 1	11	ł	N. I

Docket Number (Optional)

ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.0-500			
WHEREAS, I, <u>Jianobo Li</u> of <u>373 River Oaks Cir. #1205: San Jose, Calliornia 95134</u> , have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "INBAND MANAGEMENT IN A MULTI-STAGE CLOS NETWORK" (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				
\times WHEREAS (if the left box is checked), the Patent Application names the following inventors: <u>Jiangbo Li, Junian Zhou, and Joon Orio</u> (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentlik, LLP, to insert in here in brackets [Application No. $13/535$, 557 , filed on $6-28-12$] the application number and filling 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 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-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 at assignee's reasonable request I agree, without further remuneration, to execute and deliver documents prepared at assignee's rights in the Assigned Applications, assignee may assign or transfer all or part of its rights set torth 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.				
06/26/2012	(Signature)			
(Odio)	(ognatus)			
The				
Signature of Wilness PETRI GYNTHER				
Printed Name of Witness				
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	Docket Number (Optional)			
ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.0-800			
WHEREAS, I, Juniar Zhou of 1660 Kamsack Drive: Sunnyvate, California, 94968, have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "INBAND MANAGEMENT IN A MULTI-STAGE CLOS NETWORK" (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 chacked), the Patent Application names the following inventors: Jianobo Li, Junian Zhou, and Joon Ong (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentilk, LLP, to Insert in here in brackete [Application No. 13/535,557], filed on 6-28-12] the application number and filing date of the application when known), and				
WHEREAS, <u>Google inc.</u> incorporated or otherwise formed in <u>Delayare</u> and having a place of business at <u>1600</u> <u>Amohitheatre 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 ras follows. I agree to assign, and hereby do assign, to the assignee my Assigned Applications in the United States of America and all other coun Patent Application, including any and all inventions, discoveries and office continuation, continuation-in-part, substitute, reissue, re-examination or continuation, continuation-in-part, substitute, reissue, re-examination or continuation, continuation-in-part, substitute, reissue, re-examination or continuation, continuation part law law or treaty, and any patent issuing the dosesign, to assignee the right to claim such priority or benefit. I have not obligation to convey, my rights in the Assigned Applications to a third particular to convey, my rights in the Assignee's ownership thereof. At an Assigned Applications and to record assignee's ownership thereof. At an intrinser remuneration, to execute and deliver documents prepared at assignee may assign or transfer all or part of its rights set forth herein in affix its algusture to this document as well as any other indicts of its accomplished in the sum of the provision shall remain to offending portions thereof shall be deemed replaced, to the extent possign purpose of the offending provision.	tries, where "Assigned Applications" means the or subject matter described therein, any divisional, other application claiming priority or benefit to the from the foregoing. I agree to assign, and hereby ot previously conveyed, nor am I aware of an ty. I hereby authorize the U.S. Patent and sue to assignee all patents resulting from the assignee's reasonable request I agree, without gnee's expense and to provide other cooperation, t assignee's rights in the Assigned Applications. Its sole discretion. I agree that the assignee may aptance of the provisions hereof. If any provision othe full extent permissible by law and the			
06/26/12	700/18			
(Date)	(Signature)			
JING XIAN LU Printed Name of Wilness				
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PATENT REEL: 028553 FRAME: 0729

RECORDED: 07/05/2012

	Docket Number (Optional)			
ASSIGNMENT OF PATENT APPLICATION	GOOGLE 3.0-500			
WHEREAS, I, <u>Joon Ong</u> of <u>7412 Stanford Place</u> : <u>Cupertino</u> , <u>California 95014</u> , have invented or discovered inventions or discoveries, the subject matter of which is described in the patent application entitled "INBAND MANAGEMENT IN A MULTI-STAGE CLOS NETWORK" (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: <u>Jiangbo LI, Junian Zhou, and Joon Ong.</u> (and whereas I hereby authorize Lerner, David, Littenberg, Krumholz & Mentlik, LLP, to Insert in here in brackets [Application No. $\frac{13/535,557}{13/535,557}$, tited on $\frac{6-28-12}{13/535,557}$] 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> Amphitheatre Parkway: <u>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, (the 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 all inventions, discoveries and other subject matter described therein, any divisional, continuation, continuation-in-part, substitute, reissue, re-examination or other application persuant 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 expense and to provide other cooperations. 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.				
6/25/12	- Jacky			
	(Signature)			
Signature of Witness				
Printed Name of Witness				

PATENT REEL: 028553 FRAME: 0730