

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Michael Burrows	08/05/2005
Fay Wen Chang	08/05/2005
Jeffrey A. Dean	08/05/2005
Andrew B. Fikes	11/01/2005
Sanjay Ghemawat	08/05/2005
Wilson C. Hsieh	09/01/2005
Deborah Anne Wallach	08/05/2005

RECEIVING PARTY DATA

Name:	Google Inc.
Street Address:	1600 Amphitheatre Parkway
Internal Address:	Building 41
City:	Mountain View
State/Country:	CALIFORNIA
Postal Code:	94043

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11197924

CORRESPONDENCE DATA

Fax Number: (650)843-4001

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 650-843-4000

Email: bgemello@morganlewis.com

Correspondent Name: Gary S. Williams

Address Line 1: 3000 El Camino Real, Suite 700

Address Line 2: 2 Palo Alto Square

Address Line 4: Palo Alto, CALIFORNIA 94306

CH \$40.00 11197924

PATENT

500058201

REEL: 016716 FRAME: 0086

ATTORNEY DOCKET NUMBER:	60963-5148-US
NAME OF SUBMITTER:	Gary S. Williams
Total Attachments: 4 source=60963-5148 assign#page1.tif source=60963-5148 assign#page2.tif source=60963-5148 assign#page3.tif source=60963-5148 assign#page4.tif	

JOINT

ASSIGNMENT

WHEREAS, WE, **Michael Burrows**, citizen of the United Kingdom, residing in Palo Alto, California; **Fay Wen Chang**, citizen of the United States, residing in Greenwich, Connecticut; **Jeffrey A. Dean**, citizen of the United States, residing in Palo Alto, California; **Andrew B. Fikes**, citizen of the United States, residing in Los Altos, California; **Sanjay Ghemawat**, citizen of the United States, residing in Mountain View, California; **Wilson C. Hsieh**, citizen of the United States, residing in New York, New York; and **Deborah Anne Wallach**, citizen of the United States, residing in Mountain View, California, ASSIGNORS, are the inventors of the invention in **STORING A SPARSE TABLE USING LOCALITY GROUPS**, for which we have executed an application for a Patent of the United States

- ☒ which is executed on ☒ even date herewith or
☒ which is identified by Morgan, Lewis & Bockius LLP docket no. 60963-5148-US
☐ which was filed on _____, Application No. _____
☒ We hereby authorize and request our attorney, Gary S. Williams, of Morgan, Lewis & Bockius, LLP, to insert here in parentheses (Application number, 11/197,924 filed 8/5/2005) the filing date and application number of said application when known.

and WHEREAS, **Google Inc.**, ASSIGNEE, having a place of business at 1600 Amphitheatre Pkwy., Building 41, Mountain View, CA 94043-1351, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date <u>August 5</u> , 2005	<u>M. Burrows</u> L.S. Michael Burrows
Date <u>August 5</u> , 2005	<u>Fay W. Chang</u> L.S. Fay Wen Chang
Date <u>August 5</u> , 2005	<u>Jeffrey A. Dean</u> L.S. Jeffrey A. Dean
Date _____, 2005	_____ Andrew B. Fikes

JOINT

ASSIGNMENT

WHEREAS, WE, Michael Burrows, citizen of the United Kingdom, residing in Palo Alto, California; Fay Wen Chang, citizen of the United States, residing in Greenwich, Connecticut; Jeffrey A. Dean, citizen of the United States, residing in Palo Alto, California; Andrew B. Fikes, citizen of the United States, residing in Los Altos, California; Sanjay Ghemawat, citizen of the United States, residing in Mountain View, California; Wilson C. Hsieh, citizen of the United States, residing in New York, New York; and Deborah Anne Wallach, citizen of the United States, residing in Mountain View, California, ASSIGNORS, are the inventors of the invention in **STORING A SPARSE TABLE USING LOCALITY GROUPS**, for which we have executed an application for a Patent of the United States

- ☐ which is executed on ☐ even date herewith or
☒ which is identified by Morgan, Lewis & Bockius LLP docket no. 60963-5148-US
☒ which was filed on August 5, 2005, Application No. 11/197,924
☒ We hereby authorize and request our attorney, Gary S. Williams, of Morgan, Lewis & Bockius, LLP, to insert here in parentheses (Application number, 11/197,924 filed 8/5/2005) the filing date and application number of said application when known.

and WHEREAS, Google Inc., ASSIGNEE, having a place of business at 1600 Amphitheatre Pkwy., Building 41, Mountain View, CA 94043-1351, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, the said ASSIGNORS, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, our entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

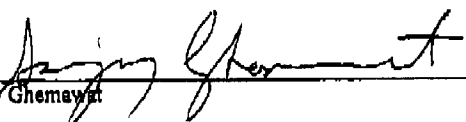
AND WE HEREBY covenant and agree that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

IN TESTIMONY WHEREOF, We hereunto set our hands and seals the day and year set opposite our respective signatures.

Date _____, 2005	_____ Michael Burrows L.S.
Date _____, 2005	_____ Fay Wen Chang L.S.
Date _____, 2005	_____ Jeffrey A. Dean L.S.
Date <u>11/01/05</u> , 2005	_____ Andrew B. Fikes L.S.

Date August 5, 2005

 L.S.
Sanjay Ghemawat

Date _____, 2005

Wilson C. Hsieh L.S.

Date August 5, 2005

 L.S.
Deborah Anne Wallach

Date _____, 2005

Sanjay Ghemawat L.S.

Date Sept. 1, 2005

Wilson C. Hsieh L.S.

Date _____, 2005

Deborah Anne Wallach L.S.