504533647 09/06/2017

PATENT ASSIGNMENT COVER SHEET

EPAS ID: PAT4580354

Electronic Version v1.1
Stylesheet Version v1.2

 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SHIREESH AGRAWAL	08/28/2017
MOISES MORGENSTERN GALI	09/05/2017
SUMEDHA SWAMY	08/28/2017
HONGJIE BAI	08/28/2017

RECEIVING PARTY DATA

Name:	GOOGLE INC.
Street Address:	1600 AMPHITHEATRE PARKWAY
City:	MOUNTAIN VIEW
State/Country:	CALIFORNIA
Postal Code:	94043

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15695584

CORRESPONDENCE DATA

Fax Number: (877)769-7945

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (617) 368-2135

Email: apsi@fr.com

Correspondent Name: STEVEN J. PETKOVSEK **Address Line 1:** FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER: 16113-8309001

NAME OF SUBMITTER: CHERYL A. FORREST

SIGNATURE: /Cheryl A. Forrest/

DATE SIGNED: 09/06/2017

Total Attachments: 3

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ASSIGNMENT and CONFIRMATION

We, <u>Shireesh Agrawal</u>, <u>Moises Morgenstern Gali</u>, <u>Sumedha Swamy</u> and <u>Hongjie Bai</u>, each hereby confirm the assignment and transfer to Google Inc., a Delaware corporation having a place of business at 1600 Amphitheatre Parkway, Mountain View, California 94043, and its successors and assigns (collectively, "ASSIGNEE") of all of our individual and joint right, title and interest throughout the world in and to any and all inventions and improvements that are the subject or subjects of a patent application entitled

Object identifier Index

that names us as inventors, and was filed in <u>United States</u> on <u>September 5, 2017</u>, as Application No. <u>15/695,584</u>. We authorize and request the attorneys filing the application to complete this assignment by inserting the filing date and serial number of the application when known. The foregoing assignment and transfer occurred by operation of one or more agreements relating to our employment by Google Inc. or an affiliate of Google Inc. Should any of us have any remaining interest, we each hereby assign and transfer any right, title or interest we may have in the above-mentioned inventions and improvements anywhere in the world to ASSIGNEE.

This assignment and confirmation includes the foregoing patent application or patent; all legal equivalents thereof in any country and all patents issuing therefrom; all patents, utility models, and design registrations granted for any of said inventions and improvements throughout the world; and the right to claim priority based on the filing date of the foregoing patent application or patent under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes. We authorize ASSIGNEE to apply in all countries in our names or in the name of ASSIGNEE for patents, utility models, and design registrations and like rights of exclusion and for inventors' certificates for the assigned inventions and improvements.

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The foregoing assignments have been made for good and valuable consideration, the receipt of which is hereby acknowledged, and in accordance with the employment-related agreements existing at the time the above-mentioned inventions and improvements were made.

We hereby represent and covenant that no assignment, agreement or encumbrance has been or will be made or entered into by us that would conflict with the abovementioned assignment of the inventions and improvements to ASSIGNEE.

We further covenant for ourselves and our respective heirs, legal representatives and assigns to provide to ASSIGNEE promptly upon the request of ASSIGNEE all pertinent facts and documents relating to any of the above-mentioned inventions and improvements, patent applications, patents and legal equivalents, as may be known and accessible to us; to testify as to the same in any interference, litigation, or proceeding relating thereto; and promptly to execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue or enforce any of the above-mentioned applications, inventions and improvements, patents and equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Dated: 8/28/2017	Shireesh	
	Shireesh Agrawal	
	DocuSigned by:	
Dated: 9/5/2017	28BE1CB644E44CD	
	Moises Morgenstern Gali	
	سسر DocuSigned by:	
Dated: 8/28/2017	Sumedlia Swamy	
	Sumedha Swamy	

--- DocuSigned by:

Attorney's Docket No.: 16113-8309001

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Dated: 8/28/2017

------DocuSigned by: HONGIE BUI

Hongjie Bai

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RECORDED: 09/06/2017

PATENT REEL: 043493 FRAME: 0169