

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6056996

|   |                                   |
|---|-----------------------------------|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                    |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                        |
| <b>CONVEYING PARTY DATA</b>   |                                   |
| <b>Name</b>   | <b>Execution Date</b>             |
| Michael Busch   | 03/09/2015                        |
| Samuel Luckenbill   | 02/13/2015                        |
| Brian Larson  | 02/12/2015                        |
| Patrick J. Lok  | 02/15/2015                        |
| Krishna Gade  | 02/17/2015                        |
| Francesco G. Callari  | 02/12/2015                        |
| Ugo Di Girolamo   | 02/17/2015                        |
| <b>RECEIVING PARTY DATA</b>   |                                   |
| <b>Name:</b>  | TWITTER, INC.                     |
| <b>Street Address:</b>  | 1355 MARKET STREET                |
| <b>Internal Address:</b>  | SUITE 900                         |
| <b>City:</b>  | SAN FRANCISCO                     |
| <b>State/Country:</b>   | CALIFORNIA                        |
| <b>Postal Code:</b>   | 94103                             |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                   |
| <b>Property Type</b>  | <b>Number</b>                     |
| Application Number:   | 14422150                          |
| <b>CORRESPONDENCE DATA</b>  |                                   |
| <b>Fax Number:</b>  | (877)769-7945                     |
| <i>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.</i> |                                   |
| <b>Phone:</b>   | (650) 839-5124                    |
| <b>Email:</b>   | nienaber@fr.com, apsi@fr.com      |
| <b>Correspondent Name:</b>  | ALEXANDER D. GANESCU              |
| <b>Address Line 1:</b>  | FISH & RICHARDSON P.C.            |
| <b>Address Line 2:</b>  | P.O.BOX 1022                      |
| <b>Address Line 4:</b>  | MINNEAPOLIS, MINNESOTA 55440-1022 |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 42005-0031US1                     |
| <b>NAME OF SUBMITTER:</b>   | SUSAN M. NIENABER                 |
| <b>SIGNATURE:</b>   | /Susan M. Nienaber/               |

PATENT

|   |            |
|---|------------|
| <b>DATE SIGNED:</b>   | 04/10/2020 |
| <b>Total Attachments: 14</b><br>source=Executed Assignment#page1.tif<br>source=Executed Assignment#page2.tif<br>source=Executed Assignment#page3.tif<br>source=Executed Assignment#page4.tif<br>source=Executed Assignment#page5.tif<br>source=Executed Assignment#page6.tif<br>source=Executed Assignment#page7.tif<br>source=Executed Assignment#page8.tif<br>source=Executed Assignment#page9.tif<br>source=Executed Assignment#page10.tif<br>source=Executed Assignment#page11.tif<br>source=Executed Assignment#page12.tif<br>source=Executed Assignment#page13.tif<br>source=Executed Assignment#page14.tif |            |

## INNOVATOR's PATENT AGREEMENT (IPA), Version 1.0

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| Title                                    | Application No.   | Filed on        |
|--|-------------------|-----------------|
| Search Infrastructure                    | PCT/US2013/055409 | August 16, 2013 |
| Search Infrastructure with Facets        | 61/801,097        | March 15, 2013  |
| Search Infrastructure with a Query Cache | 61/800,335        | March 15, 2013  |

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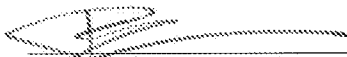
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AGREED TO AND ACCEPTED:

Brian Larson Inventor  
Brian A. Larson

Date: Feb 12, 2015

 Twitter, Inc.  
Benjamin S. Lee, Legal Director

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| Search Infrastructure                         | PCT/US2013/055409 | August 16, 2013 |
| Variable Length Document Postings List Format | 61/801,687        | March 15, 2013  |

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AGREED TO AND ACCEPTED:

  
\_\_\_\_\_  
Francesco G. Callari      Inventor

Date: Feb 12, 2015

  
\_\_\_\_\_  
Benjamin S. Lee, Legal Director      Twitter, Inc.

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| Search in a Real-time Messaging Platform      | 61/684,668        | August 17, 2012 |
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AGREED TO AND ACCEPTED:

  
\_\_\_\_\_  
Michael Busch

Date: Mar 9, 2015

  
\_\_\_\_\_  
Benjamin S. Lee, Legal Director

\_\_\_\_\_  
Twitter, Inc.



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Samuel Luckenbill Inventor  
Samuel Luckenbill

Date: Feb 13, 2015

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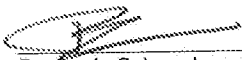
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Patrick J. Lok

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Benjamin S. Lee, Legal Director

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This INNOVATOR's PATENT AGREEMENT ("Agreement") is made between the person(s) named below (collectively referred to as "Inventors") and Twitter, Inc., a Delaware corporation, having a place of business at 1355 Market Street, Suite 900, San Francisco, CA 94103 ("Company").

WHEREAS the Inventors have invented certain patentable subject matter which they desire to assign to the Company;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1. Subject to the terms and conditions herein, Inventors do hereby sell, assign, and transfer and have sold, assigned, and transferred to the Company, for itself and its successors, transferees, and assignees, the entire worldwide right, title, and interest in and to the following patent application(s):

| Title   | Application No.   | Filed on        |
|---|-------------------|-----------------|
| Search Infrastructure                         | PCT/US2013/055409 | August 16, 2013 |
| Variable Length Document Postings List Format | 61/801,687        | March 15, 2013  |

including (a) any and all inventions and improvements ("Subject Matter") disclosed therein; (b) all right of priority in the above application(s) and in any underlying provisional or foreign application; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; and (d) all patents ("Patents"), including reissues and reexaminations, which may be granted on any of the above applications, together with all rights to recover damages for infringement, including infringement of provisional rights.

2. The Company, on behalf of itself and its successors, transferees, and assignees (collectively the "Assignee"), agrees not to assert any claims of any Patents which may be granted on any of the above applications unless asserted for a Defensive Purpose. An assertion of claims of the Patents shall be considered for a "Defensive Purpose" if the claims are asserted:

(a) against an Entity that has filed, maintained, threatened, or voluntarily participated in a patent infringement lawsuit against Assignee or any of Assignee's users, affiliates, customers, suppliers, or distributors;

(b) against an Entity that has filed, maintained, or voluntarily participated in a patent infringement lawsuit against another in the past ten years, so long as the Entity has not instituted the patent infringement lawsuit defensively in response to a patent litigation threat against the Entity; or

(c) otherwise to deter a patent litigation threat against Assignee or Assignee's users, affiliates, customers, suppliers, or distributors.

If Assignee needs to assert any of the Patent claims against any Entity for other than a Defensive Purpose, Assignees must obtain prior written permission from all of the Inventors without additional consideration or threat.

"Entity" means an individual, partnership, corporation, limited liability company, association, joint venture, trust, unincorporated organization or other entity. "Affiliate" means with respect to any Entity, any other Entity, whether or not existing on the date hereof, controlling controlled by or under common control with such first Entity. The term "control" (including with correlative meaning the terms "controlled by" and "under common control with"), as used with respect to any Entity, means the possession, directly or indirectly, of the power to direct or cause the direction or


management and policies of such Entity, whether through the ownership of voting securities, by contract or otherwise.

Assignee acknowledges and agrees that the above promises are intended to run with the Patents and are binding on any future owner, assignee or exclusive licensee who has been given the right to enforce any claims of the Patents against third parties. Assignee covenants with Inventors that any assignment or transfer of its right, title, or interest herein will be conveyed with the promises herein as an encumbrance.

3. Inventors agree that Assignee may apply for and receive patents for Subject Matter in Assignee's own name. Inventors agree, when requested, and without further consideration, to execute all papers necessary to fully secure to Assignee the rights, titles and interests herein conveyed. Inventors represent that Inventors have the rights, titles, and interests to convey as set forth herein; and Inventors covenant with Assignee that Inventors have not made and will not make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed, except as explicitly set forth herein.
4. The Assignee hereby grants to the Inventors a perpetual, worldwide, non-exclusive, royalty-free, no-charge irrevocable license under the Patents, the license explicitly limited to those rights necessary to enforce the promises made by Assignee in section 2. Accordingly, if Assignee asserts any of the Patent claims against any entity in a manner that breaks the promises of section 2, the Inventors, individually or jointly, may grant written nonexclusive sublicenses, without the right to further sublicense, the scope of the sublicense being limited to those rights necessary to enforce the promises made by Assignee in section 2.


Any sublicense granted by the Inventors under this section must be without threat or additional consideration; otherwise, the sublicense will be considered void ab initio. This license to the Inventors is not assignable, although the license shall pass to the heirs of an inventor in the case that the inventor is deceased, and the inventors, individually or jointly, may appoint a representative who may act on their behalf in granting sublicenses under this section. Assignee acknowledges and agrees that the promises in section 2 and 4 are intended to benefit third parties, except in the case of an assertion of claims of the Patents authorized under section 2.

AGREED TO AND ACCEPTED:

  
\_\_\_\_\_  
Ugo di Girolamo

Inventor

Date: Feb 17, 2015

  
\_\_\_\_\_  
Benjamin S. Lee, Legal Director

Twitter, Inc.

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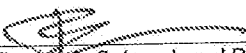
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AGREED TO AND ACCEPTED:

Krishna Gade Inventor  
Krishna Gade

Date: Feb 17, 2015

 Twitter, Inc.  
Benjamin S. Lee, Legal Director