PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6063871

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the MISSPELLING OF INVENTOR NAME FROM "HUSHEN" TO "HUSEN" previously recorded on Reel 050223 Frame 0996. Assignor(s) hereby confirms the ASSIGNMENT.

CONVEYING PARTY DATA

Name	Execution Date
Xuming Lu	04/14/2020
Husen Wang	04/14/2020

RECEIVING PARTY DATA

Name:	ALIBABA GROUP HOLDING LIMITED
Street Address:	FOURTH FLOOR, ONE CAPITAL PLACE, P.O. BOX 847
City: GEORGE TOWN, GRAND CAYMAN	
State/Country:	CAYMAN ISLANDS
Postal Code:	KY1-1103

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16408103

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: +1 (212) 641-2232

Email: ANTFormalities@fr.com, APSI@fr.com

Correspondent Name: ALEXANDER BERG

Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER: 44892-0306001/A15618US	
NAME OF SUBMITTER:	SARAH NAGLE
SIGNATURE:	/Sarah Nagle/
DATE SIGNED:	04/16/2020

Total Attachments: 8

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PATENT REEL: 052412 FRAME: 0204

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PATENT REEL: 052412 FRAME: 0205 8/30/2019 Assignment

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Xuming Lu	08/20/2019
Hushen Wang	08/20/2019

RECEIVING PARTY DATA

Name:	ALIBABA GROUP HOLDING LIMITED
Street Address:	FOURTH FLOOR, ONE CAPITAL PLACE, P.O. BOX 847
City:	GEORGE TOWN, GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
Postal Code:	KY1-1103

PROPERTY NUMBERS Total: 1

Property Type	Number	-
Application Number:	16408103	

CORRESPONDENCE DATA

Fax Number: (877)769-7945 Phone: 612-335-5070

Email: ANTFormalities@fr.com, APSI@fr.com

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.

Correspondent Name: STEPHEN M. FUSSELMAN Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

	ATTORNEY DOCKET NUMBER:	44892-0306001/A15618US
	NAME OF SUBMITTER:	SARAH NAGLE
	Signature:	/Sarah Nagle/
· · · · · · · · · · · · · · · · · · ·	Date:	08/30/2019

Total Attachments: 3

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ASSIGNMENT and CONFIRMATION

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, XUMING LU, and HUSEN WANG, each individually assign to ALIBABA GROUP HOLDING LIMITED, a corporation formed under the laws of Cayman Islands and having a principal place of business at Fourth Floor, One Capital Place, P.O. Bux 847, George Town, Grand Cayman, Cayman Islands, KYI-1103, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the invention(s) (the "Subject Matter") of Chinese Patent Application, 201810443371.5, filed May 10, 2018 that names us as inventors (the "Chinese Patent Application") and of a patent application titled "BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, DEVICES, AND SYSTEMS," that claims priority to the Chinese Patent Application and was or will be filed in the United States Patent and Trademark Office on May 9, 2019, as application 16/408,103 (the "Application") which also names us as inventors.

The Subject Matter of the Application was developed as part of, and the forgoing assignment occurred by operation of, employment by each of us with Ant Small and Micro Financial Services Group Co., Ltd. directly or by a subsidiary of Ant Financial (collectively "Ant Financial"), a limited liability company organized under the Laws of the PRC and having a principal place of business at 26/F Tower One, Times Square, 1 Matheson Street, Causeway Bay, Hong Kong, and agreements with Assignee. Should any of us have any remaining interest, we hereby assign and transfer any right, title or interest we may have in said Subject Matter of the Application to Assignee.

This Assignment assigns, in addition to the Subject Matter of the Application, (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region and under every treaty or convention, (b) the right to claim priority based on and the benefit of the filling date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from

Assignment Page 1 of 3

PATENT REEL: 052412 FRAME: 0207

any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name,

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or, at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter; will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents; and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

Date: 04 / (4 / 2020)

Witnessed by:

Print Name:

Assignment Page 2 of 3

PATENT REEL: 052412 FRAME: 0208

Musen Wang

Date: 4/14/2022

Witnessed by:

Signature: Xiangirf 24ay

Print Name: 弘 小稿

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Date: 2020 . 4. 14

Assignment Page 3 of 3

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8/30/2019 Assignment

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RECEIPT INFORMATION

EPAS ID: PAT5696281 **Receipt Date:** 08/30/2019

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ASSIGNMENT and CONFIRMATION

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, XUMING LU, and HUSHEN WANG, each individually assign to ALIBABA GROUP HOLDING LIMITED, a corporation formed under the laws of Cayman Islands and having a principal place of business at Fourth Floor, One Capital Place, P.O. Box 847. George Town, Grand Cayman, Cayman Islands, KY1-1103, and its successors, transferees, and assignees (collectively the "Assignee"), all of our individual and joint right, title, and interest throughout the world in the invention(s) (the "Subject Matter") of Chinese Patent Application, 201810443371.5, filed May 10, 2018 that names us as inventors (the "Chinese Patent Application") and of a patent application titled "BLOCKCHAIN DATA PROCESSING METHODS, APPARATUSES, DEVICES, AND SYSTEMS," that claims priority to the Chinese Patent Application and was or will be filed in the United States Patent and Trademark Office on May 9, 2019, as application 16/408,103 (the "Application") which also names us as inventors.

The Subject Matter of the Application was developed as part of, and the forgoing assignment occurred by operation of, employment by each of us with Ant Small and Micro Financial Services Group Co., Ltd. directly or by a subsidiary of Ant Financial (collectively "Ant Financial"), a limited liability company organized under the Laws of the PRC and having a principal place of business at 26/F Tower One, Times Square, I Matheson Street, Causeway Bay, Hong Kong, and agreements with Assignee. Should any of us have any remaining interest, we hereby assign and transfer any right, title or interest we may have in said Subject Matter of the Application to Assignee.

This Assignment assigns, in addition to the Subject Matter of the Application, (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region and under every treaty or convention, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from

Assignment Page 1 of 3

any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

We authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in our names or in the Assignee's name.

We represent and warrant that we have the right and power to make this Assignment and that we have not made and will not make any other assignment that conflicts with this Assignment.

We will communicate to the Assignee (or, at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter; will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents; and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

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Date: 2019/08/20

Witnessed by:

Signature: Date: 20198.20

Print Name: AiPeng Tax

Assignment Page 2 of 3

Hushen Wang

Date: 3019.8.20.

Witnessed by:

Signature: 18 18 20

Print Name: Haifen Kuun

Date: >09. 8. 20

Assignment Page 3 of 3

PATENT REEL: 052412 FRAME: 0213

RECORDED: 04/16/2020