

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
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EPAS ID: PAT5469993

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the THE FORMAT OF THE ADDRESS OF THE ASSIGNEE, AND TO INCLUDE THE ZIPCODE previously recorded on Reel 048673 Frame 0329. Assignor(s) hereby confirms the CORRECT ADDRESS IS AS LISTED HEREIN.

**CONVEYING PARTY DATA**

Name	Execution Date
Yanghui Liu	12/18/2018
Lei WANG	12/18/2018
Ge Chen	12/18/2018
Lingnan Shen	12/18/2018

**RECEIVING PARTY DATA**

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

**PROPERTY NUMBERS Total: 1**

Property Type	Number
<b>Application Number:</b>	16193201

**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:** (214) 760-6148  
**Email:** cottle@fr.com, apsi@fr.com  
**Correspondent Name:** JONATHAN A. SOLOMON  
**Address Line 1:** FISH & RICHARDSON P.C.  
**Address Line 2:** P.O.BOX 1022  
**Address Line 4:** MINNEAPOLIS, MINNESOTA 55440-1022

<b>ATTORNEY DOCKET NUMBER:</b>	44892-0218001 / PCT8839US
<b>NAME OF SUBMITTER:</b>	YANLING L. COTTLE
<b>SIGNATURE:</b>	/yanling cottle/
<b>DATE SIGNED:</b>	04/11/2019

PATENT

**Total Attachments: 8**

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## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT5435523

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Yanghui Liu	12/18/2018
Lei WANG	12/18/2018
Ge Chen	12/18/2018
Lingnan Shen	12/18/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Alibaba Group Holding Limited
<b>Street Address:</b>	Fourth Floor, One Capital Place, P.O. Box 847 George Town, Grand Cayman,
<b>Internal Address:</b>	.
<b>City:</b>	Cayman Island
<b>State/Country:</b>	KY1-1103
<b>Postal Code:</b>	.
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16193201
<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>	(214) 760-6148
<b>Email:</b>	cottle@fr.com, APSI@fr.com
<b>Correspondent Name:</b>	JONATHAN A. SOLOMON
<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>	44892-0218001
<b>NAME OF SUBMITTER:</b>	YANLING L. COTTLE
<b>SIGNATURE:</b>	/yanling cottle/
<b>DATE SIGNED:</b>	03/22/2019
<b>Total Attachments: 5</b>	

ASSIGNMENT

For valuable consideration, the receipt of which we acknowledge, and intending to be bound legally, we, YANGHUI LIU, LEI WANG, GE CHEN, and LINGNAN SHEN, 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, Serial No. 201610398687.8, filed June 7, 2016 that names us as inventors (the "Chinese Patent Application") and of a patent application titled "DATA TRANSMISSION METHOD, DATA TRANSMITTER, DATA RECEIVER, AND SYSTEM," that claims priority to the Chinese Patent Application and was or will be filed in the United States Patent and Trademark Office on November 16, 2018, as application 16/193,201 (the "Application") which also names us as inventors.

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 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.

Yanghui Liu  
Yanghui Liu

Date: Dec. 18, 2018

Witnessed by:

Signature: 袁海芬

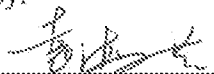
Date: 2018, 12, 18

Print Name: Haifen Yuan

Lei WANG  
Lei WANG

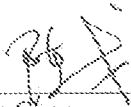
Date: Dec. 18, 2018

Witnessed by:

Signature: 

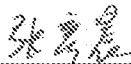
Date: 2018.12.18

Print Name: Haifen Yuan

  
\_\_\_\_\_  
Ge Chen

Date: 12.18.2018

Witnessed by:

Signature:  \_\_\_\_\_

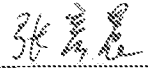
Date: 12.18.2018

Print Name: Yan Chen ZHANG

  
Lingnan Shen

Date: 12.18.2018

Witnessed by:

Signature: 

Date: 12.18.2018

Print Name: Yanchen ZHANG





**UNITED STATES PATENT AND TRADEMARK OFFICE**

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 25, 2019

PTAS

JONATHAN A. SOLOMON  
FISH & RICHARDSON P.C.  
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**505388730**

UNITED STATES PATENT AND TRADEMARK OFFICE  
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BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 44892-0218001

ASSIGNOR:

LIU, YANGHUI

DOC DATE: 12/18/2018

ASSIGNOR:

WANG, LEI

DOC DATE: 12/18/2018

ASSIGNOR:

CHEN, GE

DOC DATE: 12/18/2018

ASSIGNOR:

SHEN, LINGNAN

DOC DATE: 12/18/2018

ASSIGNEE:

ALIBABA GROUP HOLDING LIMITED  
FOURTH FLOOR, ONE CAPITAL PLACE,  
P.O. BOX 847 GEORGE TOWN, GRAND  
CAYMAN,

CAYMAN ISLAND, CAYMAN ISLANDS

APPLICATION NUMBER: 16193201

FILING DATE: 11/16/2018

PATENT NUMBER:

ISSUE DATE:

TITLE: DATA TRANSMISSION METHOD, DATA TRANSMITTER, DATA RECEIVER, AND  
SYSTEM

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION