

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5540704

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
GUILU XIE	05/14/2019
<b>RECEIVING PARTY DATA</b>	
<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
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16464172
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	50GL-293151
<b>NAME OF SUBMITTER:</b>	WEIGUO CHEN
<b>SIGNATURE:</b>	/Weiguo Chen/
<b>DATE SIGNED:</b>	05/24/2019
<b>Total Attachments: 2</b>	
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ASSIGNMENT

For valuable consideration, the receipt of which I acknowledge, and intending to be bound legally, I, Guifu XIE, 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 my right, title, and interest throughout the world in the invention(s) (the "Subject Matter") of PCT Application No. PCT/CN2018/125782, filed December 29, 2018 that names me as inventor (the "PCT Application") and of a patent application titled "SYSTEM AND METHOD FOR DETECTING REPLAY ATTACK," that claims priority to the Chinese Patent Application and was or will be filed in the United States Patent and Trademark Office on May 24, 2019, as application number 16/474,172 (the "Application") which also names me as inventor. I authorize the insertion of the filing date and application number above.

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 Paris 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.

I 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 my name or in the Assignee's name.

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

I 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.

谢桂鲁  
Guihu XIE

Date: 2019.5.14

Witnessed by:

Signature: 周知远

Date: 2019.5.14

Print Name: ZHIYUAN ZHOU