

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
XIAOBEI WANG	11/28/2018
TAO FANG	11/28/2018
RUHUA HUANG	11/28/2018
<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>	PO BOX 847
<b>City:</b>	GRAND CAYMAN
<b>State/Country:</b>	CAYMAN ISLANDS
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16206819
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<b>Fax Number:</b>	
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<b>SIGNATURE:</b>	/Jessica West/
<b>DATE SIGNED:</b>	10/29/2019
<b>Total Attachments: 3</b>	
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial Number .....  
Filing Date .....  
Inventorship ..... Wang et al.  
Assignee ..... Alibaba Group Holding Limited  
Attorney's Docket No. .... AB1-0702US  
Client Docket No. .... PCT8467US  
Title: ..... METHOD, APPARATUS AND SYSTEM FOR GENERATING COLLOCATION  
RENDERINGS

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):

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Assignee:

Alibaba Group Holding Limited  
Fourth Floor, One Capital Place  
P.O. Box 847  
Grand Cayman  
Cayman Islands

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled  
" METHOD, APPARATUS AND SYSTEM FOR GENERATING COLLOCATION  
RENDERINGS" for which:

a provisional application for United States Letters Patent was filed on ..... and  
was given U.S. Serial No. .... and/or

a foreign priority Chinese patent application was filed on 02 June 2016 and was given CN Patent Application Serial No. 201610387618.7and/or

a PCT international application for was filed on 22 May 2017 and was given PCT Serial No. PCT/CN2017/085282and/or

a non-provisional application for United States Letters Patent was:

filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_/ or filed concurrently herewith. Assignors hereby authorize and request ASSIGNEE's legal representatives, of Lee & Hayes, PC, 601 W Riverside Ave, Suite 1400, Spokane, Washington 99201, who are associated with customer number 29150, to insert in the caption above the serial number and filing date of the patent application when known.

WHEREAS, Alibaba Group Holding Limited (hereinafter referred to as ASSIGNEE), a corporation of Cayman Islands having a place of business at Fourth Floor, One Capital Place, P.O. Box 847, Grand Cayman, Cayman Islands, is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefore in the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE, the entire right, title and interest in and to said invention, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR(S)

had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefore.

<p><u>王潇北</u> Xiaobei Wang <u>11/28/2018</u> Date (mm/dd/yyyy)</p>	<p><u>段惠文</u> Witness Signature <u>Duan Huiwen</u> Name (printed) <u>11/28/2018</u> Date (mm/dd/yyyy)</p>
<p><u>方涛</u> Tao Fang <u>11/28/2018</u> Date (mm/dd/yyyy)</p>	<p><u>段惠文</u> Witness Signature <u>Duan Huiwen</u> Name (printed) <u>11/28/2018</u> Date (mm/dd/yyyy)</p>
<p><u>黄如华</u> Ruhua Huang <u>11/28/2018</u> Date (mm/dd/yyyy)</p>	<p><u>段惠文</u> Witness Signature <u>Duan Huiwen</u> Name (printed) <u>11/28/2018</u> Date (mm/dd/yyyy)</p>