505707287 10/04/2019 PATENT ASSIGNMENT COVER SHEET

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| NATURE OF CONVEYANC CONVEYING PARTY DAT HUI ZHANG | | NEW ASSIGNMENT | |
|--|----------------------------------|--|----------------|
| | A | ASSIGNMENT | |
| HUI ZHANG | | | |
| HUI ZHANG | | Name | Execution Date |
| | | | 09/03/2019 |
| RECEIVING PARTY DAT | 4 | | |
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| Internal Address: | P.O. BOX 847, | | |
| City: | GEORGE TOWN, GRAND CAYMAN, | | |
| State/Country: | CAYMAN ISLANDS | | |
| Application Number: | 16 | 6592853 | |
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| Correspondent Name: Address Line 1: Address Line 4: ATTORNEY DOCKET NUM | FI 90 W/ | 1 NEW YORK AVENUE, NW ASHINGTON, D.C. 20001-4413 15009.0017-00000 | |

ASSIGNMENT

WHEREAS I/We are the below-named inventor(s) (hereinafter referred to as Assignor(s)) of an invention entitled:

METHOD AND APPARATUS FOR DETERMINING INDEX GRIDS OF GEO-FENCE

as disclosed and claimed in the applications identified below this paragraph:

| Application Number | Country of Filing | Filing Date |
|--------------------|-------------------|--------------|
| PCT/CN2018/089148 | PCT | May 31, 2018 |
| 201710407332.5 | CN | June 2, 2017 |
| | | |

WHEREAS, <u>Alibaba Group Holding Limited</u>, a corporation of <u>Cayman Islands</u>, whose post office address is <u>Fourth</u> <u>Floor, One Capital Place, P.O. Box 847, George Town, Grand Cayman, Cayman Islands</u> (hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to all applications for patents on this invention in all countries throughout the world, including any PCT International Application and all national stage applications based thereon that may be filed, and all patents issued upon such applications in all countries throughout the world;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/We, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention, the above-referenced applications that disclose and claim this invention, any PCT International Application and all national stage applications based thereon that may be filed, any other applications for patents filed anywhere in the world that claim this invention, and all divisions, and continuations of any such application, and all patents which may be granted thereon, and all reissues thereof, and all rights to claim priority in any country on the basis of any such applications, and all extensions, renewals, and reissues thereof; and I/We hereby authorize and request any official of any country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE covenant that I/We have the full right to convey the interest assigned by this Assignment, and I/We have not executed and will not execute any agreement in conflict with this Assignment;

AND, I/WE further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE authorize and request a patent practitioner of record in this application, to insert the filing date, country of filing, and application number of the above-referenced application(s) when known.

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PATENT REEL: 050623 FRAME: 0671

SOLE/JOINT INVENTION (Worldwide Rights) Attorney Docket No. 15009.0017-00000 Applicant Reference No. PCT11845US

IN TESTIMONY WHEREOF, I/We have hereunto set our hands.

ASSIGNOR (Inventor) 1 Signature Hui ZHANG Print Name 20/9, 09, 03 Execution Date

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RECORDED: 10/04/2019