505686244 09/23/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5733054

SUBMISSION TYPE:		NEW AS	SSIGNMENT				
ATURE OF CONVEYANCE:		ASSIGN	ASSIGNMENT				
CONVEYING PARTY D	ΑΤΑ						
		Name				Executio	on Date
LIN MA						08/14/201	9
WENHAO JIANG						08/14/201	9
WEI LIU					08/14/201	9	
RECEIVING PARTY DA	TA						
Name:	TENCE	TENCENT TECHNOLOGY (SHENZHEN) CO				IMITED	
Street Address:	35/F,TENCENT BUILDING, KEJIZHONGYI ROAD, MIDWEST DISTRICT OF HI-TECH PARK, NANSHAN DISTRICT						RICT OF
City:	SHENZHEN						
State/Country:	CHINA						
Postal Code:	518057						
PROPERTY NUMBERS Property Type			Number				
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COMBINED ASSIGNMENT & DECLARATION

ASSIGNMENT

WHEREAS, I hereinafter called the "Assignor", have made the invention described in the United States patent application entitled <u>TRAINING METHOD OF IMAGE-TEXT MATCHING MODEL</u>, <u>BI-DIRECTIONAL SEARCH METHOD</u>, AND RELEVANT APPARATUS, executed by Assignor on the same date as, or on a date prior to, this Assignment;

WHEREAS, <u>Tencent Technology (Shenzhen) Company Limited</u>, a corporation organized and existing under the laws of P. R. China, having a place of business at <u>35/F Tencent Building</u>, <u>Keijzhongyi Road</u>, <u>Midwest District of Hi-tech Park</u>, <u>Nanshan District Shenzhen.518057,P.R.China</u>, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, be it known that, for good and valuable consideration the receipt of which by the Assignor from Assignee is hereby acknowledged, the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents issuing therefrom in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignor hereby covenants and agrees, for both the Assignor and the Assignor's legal representatives, that the Assignor will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and that the Assigner will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignor has executed this agreement.

DECLARATION

As the below-named inventor, I hereby declare that:

This Declaration is directed to the attached application. I have reviewed and understand the contents of the above-identified patent application including the claims, and I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified patent application. The above-identified patent application was made or authorized to be made by me.

I acknowledge my duty to disclose to the United States Patent and Trademark Office all information that I know to be material to the patentability of this application as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Further, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application and any patent issued thereon.

DATE: 2019 8.14 SIGNATURE: 1. MA

PATENT REEL: 050464 FRAME: 0834

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NOW, THEREFORE, be it known that, for good and valuable consideration the receipt of which by the Assignor from Assignee is hereby acknowledged, the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents issuing therefrom in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignor hereby covenants and agrees, for both the Assignor and the Assignor's legal representatives, that the Assignor will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and that the Assigner will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

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DATE: 2014 . 8.14 SIGNATURE: Wenhao Jang Wenhao Jiang

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DATE: 8/19/2019 SIGNATURE: Wei LIU

- 4 -