

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5969138

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
WEN QINGSONG	12/23/2019
JINGKUN GAO	12/25/2019
XIAOMIN SONG	12/23/2019
LIANG SUN	12/23/2019
HUAN XU	12/30/2019
WOTAO YIN	12/31/2019
TAO YAO	12/31/2019
RECEIVING PARTY DATA	
Name:	ALIBABA GROUP HOLDING LIMITED
Street Address:	FOURTH FLOOR, ONE CAPITAL PLACE
Internal Address:	PO BOX 847
City:	GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16700931
CORRESPONDENCE DATA	
Fax Number:	(509)323-8979
<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>	
Phone:	5093249256
Email:	cherri@leehayes.com
Correspondent Name:	LEE & HAYES PC
Address Line 1:	601 WEST RIVERSIDE
Address Line 2:	SUITE 1400
Address Line 4:	SPOKANE, WASHINGTON 99201
ATTORNEY DOCKET NUMBER:	AB1-0846US
NAME OF SUBMITTER:	CHERRI A. SIMON
SIGNATURE:	/Cherri A. Simon/
DATE SIGNED:	02/18/2020

PATENT

Total Attachments: 30

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial Number 16/700,931
Filing Date December 2, 2019
Inventorship Qingsong et al.
Assignee Alibaba Group Holding Limited
Attorney's Docket No. AB1-0846US
Client Docket No. A24958US
Title: Time Series Decomposition

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):

Wen Qingsong
c/o Alibaba Group Legal Department
5/F, Building 3, No.969 West Wen Yi Road,
Yu Hang District, Hangzhou, China. 311121

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Tao Yao
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Yu Hang District, Hangzhou, China. 311121

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
"Time Series Decomposition" for which:

a provisional application for United States Letters Patent was filed on _____ and
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concurrently herewith. Assignors hereby authorize and request ASSIGNEE's legal
representatives, of Lee & Hayes, P.C., 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

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.

 _____ Wen Qingsong  _____ Date (mm/dd/yyyy)	 _____ Witness Signature  _____ Name (printed)  _____ Date (mm/dd/yyyy)
---	--

<p>_____ Jingkun Gao</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Xiaomin Song</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Liang Sun</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Huan Xu</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>

<p>_____ Wotao Yin</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
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<p><u>高靖昆</u> Jingkun Gao <u>12/25/2019</u> Date (mm/dd/yyyy)</p>	<p><u>孙梦雷</u> Witness Signature <u>Menglei Sun</u> Name (printed) <u>12/25/2019</u> Date (mm/dd/yyyy)</p>
<p>_____ Xiaomin Song _____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature _____ Name (printed) _____ Date (mm/dd/yyyy)</p>
<p>_____ Liang Sun _____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature _____ Name (printed) _____ Date (mm/dd/yyyy)</p>
<p>_____ Huan Xu _____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature _____ Name (printed) _____ Date (mm/dd/yyyy)</p>

<p>_____ Wotao Yin</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Tao Yao</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>

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Attorney's Docket No. AB1-0846US
Client Docket No. A24958US
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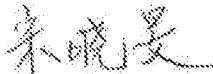

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<p>Jingkun Gao</p> <p>Date (mm/dd/yyyy)</p>	<p>Witness Signature</p> <p>Name (printed)</p> <p>Date (mm/dd/yyyy)</p>
<p></p> <p>Xiaomin Song</p> <p>12/23/2019</p> <p>Date (mm/dd/yyyy)</p> <p>12/23/2019</p>	<p></p> <p>Witness Signature</p> <p>Ming Lin</p> <p>Name (printed)</p> <p>12/23/2019</p> <p>Date (mm/dd/yyyy)</p>
<p>Liang Sun</p> <p>Date (mm/dd/yyyy)</p>	<p>Witness Signature</p> <p>Name (printed)</p> <p>Date (mm/dd/yyyy)</p>
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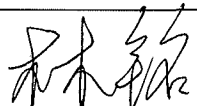
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interest in and to the invention and in and to any letters patent that may be granted therefore in the United States and in any and all foreign countries;

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.

<hr/> Wen Qingsong <hr/> Date (mm/dd/yyyy)	<hr/> Witness Signature <hr/> Name (printed) <hr/> Date (mm/dd/yyyy)
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<p>Jingkun Gao</p> <p>Date (mm/dd/yyyy)</p>	<p>Witness Signature</p> <p>Name (printed)</p> <p>Date (mm/dd/yyyy)</p>
<p>Xiaomin Song</p> <p>Date (mm/dd/yyyy)</p>	<p>Witness Signature</p> <p>Name (printed)</p> <p>Date (mm/dd/yyyy)</p>
<p>Liang Sun</p> <p>Date (mm/dd/yyyy)</p>	<p>Witness Signature</p> <p>Name (printed)</p> <p>Date (mm/dd/yyyy)</p>
<p></p> <p>Huang Xu</p> <p>12/30/2019</p> <p>Date (mm/dd/yyyy)</p>	<p></p> <p>Witness Signature</p> <p>Yan Li</p> <p>Name (printed)</p> <p>12/30/2019</p> <p>Date (mm/dd/yyyy)</p>

<hr/> <p>Wotao Yin</p> <hr/> <p>Date (mm/dd/yyyy)</p>	<hr/> <p>Witness Signature</p> <hr/> <p>Name (printed)</p> <hr/> <p>Date (mm/dd/yyyy)</p>
<hr/> <p>Tao Yao</p> <hr/> <p>Date (mm/dd/yyyy)</p>	<hr/> <p>Witness Signature</p> <hr/> <p>Name (printed)</p> <hr/> <p>Date (mm/dd/yyyy)</p>

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial Number 16/700,931
Filing Date December 2, 2019
Inventorship Qingsong et al.
Assignee Alibaba Group Holding Limited
Attorney's Docket No. AB1-0846US
Client Docket No. A24958US
Title: Time Series Decomposition

PATENT ASSIGNMENT

PARTIES TO THE ASSIGNMENT

Assignor(s):

Wen Qingsong
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Liang Sun
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Tao Yao
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5/F, Building 3, No.969 West Wen Yi Road,
Yu Hang District, Hangzhou, China. 311121

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
“Time Series Decomposition” 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 _____ and was given
CN Patent Application Serial No. _____ and/or

a PCT international application for was filed on _____ and was given PCT
Serial No. _____ and/or

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

filed on December 2, 2019 and was given U.S. Serial No. 16/700,931; or filed
concurrently herewith. Assignors hereby authorize and request ASSIGNEE’s legal
representatives, of Lee & Hayes, P.C., 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.


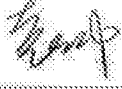
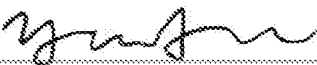

WHEREAS, Alibaba Group Holding Limited (hereinafter referred to as ASSIGNEE), a
corporation of Cayman Islands having a place of business at Fourth Floor, One Capital Place,
P.O. Box 847, Grand Cayman, Cayman Islands, is desirous of acquiring the entire right, title and

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.

<hr/> <p>Wen Qingsong</p> <hr/> <p>Date (mm/dd/yyyy)</p>	<hr/> <p>Witness Signature</p> <hr/> <p>Name (printed)</p> <hr/> <p>Date (mm/dd/yyyy)</p>
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<p>_____ Jingkun Gao</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Xiaomin Song</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Liang Sun</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>
<p>_____ Huan Xu</p> <p>_____ Date (mm/dd/yyyy)</p>	<p>_____ Witness Signature</p> <p>_____ Name (printed)</p> <p>_____ Date (mm/dd/yyyy)</p>

 Wotao Yin <u>12/31/2019</u> Date (mm/dd/yyyy)	 Witness Signature: <u>KUN YANG</u> Name (printed): <u>12/31/2019</u> Date (mm/dd/yyyy)
 Tao Yao <u>12/31/2019</u> Date (mm/dd/yyyy)	 Witness Signature: <u>KUN YANG</u> Name (printed): <u>12/31/2019</u> Date (mm/dd/yyyy)