

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6398105

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ALIBABA GROUP HOLDING LIMITED	08/26/2020
RECEIVING PARTY DATA	
Name:	ADVANTAGEOUS NEW TECHNOLOGIES CO., LTD.
Street Address:	CAYMAN CORPORATE CENTRE
Internal Address:	27 HOSPITAL ROAD
City:	GEORGE TOWN, GRAND CAYMAN KY1-9008
State/Country:	CAYMAN ISLANDS
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17095478
CORRESPONDENCE DATA	
Fax Number:	(202)408-4400
<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:	2024084000
Email:	regional-desk@finnegan.com
Correspondent Name:	FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER
Address Line 1:	901 NEW YORK AVENUE, NW
Address Line 4:	WASHINGTON, D.C. 20001-4413
ATTORNEY DOCKET NUMBER:	15009.0007-01000
NAME OF SUBMITTER:	DEBORAH A. EDDINS
SIGNATURE:	/Deborah A. Eddins/
DATE SIGNED:	11/12/2020
Total Attachments: 7	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page1.tif	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page2.tif	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page3.tif	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page4.tif	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page5.tif	
source=15009_0007_01000_AssignmentfromAlibabatoAdvantageous#page6.tif	

Patent Assignment

This Patent Assignment (this "Assignment") with an effective date of August 24, 2020 (the "Effective Date") by Alibaba Group Holding Limited, a company duly authorized under the laws of Cayman Islands and having an address at Fourth Floor, One Capital Place, P.O. Box 847, George Town, Grand Cayman, Cayman Islands (hereinafter the "Assignor") witnesseth:

WHEREAS, Assignor is the owner of certain rights, title and interest in and to the patents and patent applications set forth on Schedule A hereto (hereinafter the "Patents and Applications");

WHEREAS, Advantageous New Technologies Co., Ltd., a company duly organized under and pursuant to the laws of Cayman Islands and having an address at Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands (hereinafter the "Assignee"), is desirous of acquiring Assignor's entire right, title and interest in and to said Patents and Applications, and in and to any Letters Patent or Patents to be obtained therefor and thereon;

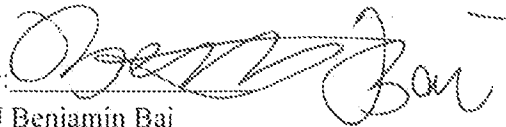
NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Assignor has as of the Effective Date sold, assigned, transferred and conveyed, and does hereby sell, assign, transfer and convey, unto Assignee, all of Assignor's rights, titles and interests in and to the Patents and Applications, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefor and thereon, for its own use and behalf and the use and behalf of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had this sale and assignment not been made. Assignor does hereby sell, assign, transfer, and convey to Assignee, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to Assignee, or may accrue hereafter including, but not limited to, the right to sue for, collect, and retain damages for past, present and future infringement of the said Patents and Applications before or after issuance.

IN TESTIMONY WHEREOF, this Assignment is signed by the following duly authorized signatories of the Assignor and Assignee respectively, on this 26th day of August, 2020.

Assignor
Alibaba Group Holding Limited

Assignee
Advantageous New Technologies Co., Ltd.

Signature: 
Name: Min Schumann Xu
Title: Chief Patent & Technology Counsel

Signature: 
Name: J Benjamin Bai
Title: Director

Schedule A to Patent Assignment

Internal Docket	Country / Region	App. No.	App'n Date	Patent Title
A2437USCI	US	15870738	2018/1/12	VERIFICATION METHOD AND DEVICE USING A MAGNETOMETER
A2437US	US	14677720	2015/4/2	VERIFICATION METHOD AND DEVICE USING A MAGNETOMETER
PCT2559US	US	15328857	2017/1/24	METHODS AND APPARATUSES FOR USING EXHAUSTIBLE NETWORK RESOURCES
PCT2572US	US	15324661	2015/6/17	DATA STORAGE METHODS, QUERY METHODS, AND APPARATUSES THEREOF
A2591DUS	US	29510898	2014/12/4	Fingerprint Scanner
A2660US	US	14746548	2015/6/22	APPARATUS AND METHOD FOR CONTROLLING WIRELESS NETWORK ACCESS AND WIRELESS DATA TRAFFIC
A2661USCI	US	15701230	2017/9/11	SYSTEM AND METHOD FOR DETECTING AND ALERTING RISKS OF INPUTTING INCORRECT ACCOUNT INFORMATION IN REFILL TRANSACTIONS
A2661US	US	14812806	2015/7/29	SYSTEM AND METHOD FOR DETECTING AND ALERTING RISKS IN REFILL TRANSACTIONS
PCT2704US	US	15325588	2017/1/11	METHODS, APPARATUSES, AND SYSTEMS FOR ACQUIRING LOCAL INFORMATION
A2735US	US	14729913	2015/6/3	METHOD AND SYSTEM FOR PASSWORD SETTING AND AUTHENTICATION
A2735USCI	US	15495939	2017/4/24	METHOD AND SYSTEM FOR PASSWORD SETTING AND AUTHENTICATION
A2769US	US	14817574	2015/8/4	SECURITY VERIFICATION METHOD, APPARATUS, SERVER AND TERMINAL DEVICE
PCT2787US	US	15327639	2017/1/19	METHODS AND APPARATUSES FOR INFORMATION TRANSMISSION
A2873US	US	14931575	2015/11/3	METHOD AND APPARATUS FOR INFORMATION RECOGNITION
A2874US	US	14828274	2015/8/17	INFORMATION EXCHANGE METHOD AND APPARATUS
A2877USCI	US	15/960,485	2018/4/23	METHOD AND SERVER FOR DELIVERING INFORMATION TO USER TERMINAL
A2877US	US	14857586	2015/9/17	METHOD AND SERVER FOR DELIVERING INFORMATION TO USER TERMINAL
A2930USCI	US	15473304	2017/3/29	METHOD AND DEVICE FOR OBTAINING CONTENT OF SERVICE INFORMATION
A2930US	US	14857529	2015/9/17	METHOD AND DEVICE FOR OBTAINING CONTENT OF SERVICE INFORMATION
A2932US	US	14880637	2015/10/12	METHOD, DEVICE, TERMINAL, AND SERVER FOR VERIFYING SECURITY OF SERVICE OPERATION
A2935USCI	US	15730663	2017/10/11	METHOD AND APPARATUS FOR MANAGING BACKGROUND APPLICATION
A2935US	US	14832672	2015/8/21	METHOD AND APPARATUS FOR MANAGING BACKGROUND APPLICATION
PCT2981US	US	15484061	2017/4/10	METHOD, DEVICE, TERMINAL, AND SERVER FOR A SECURITY CHECK
A2994US	US	14841966	2015/9/1	METHOD AND SYSTEM FOR DETERMINING RELATIONSHIP BETWEEN USERS BASED ON PHYSICAL ADDRESSES OF WIRELESS SIGNAL SOURCES
PCT3039US	US	15484082	2017/4/10	METHOD AND APPARATUS FOR GENERATING VOICEPRINT INFORMATION
A3076US	US	14863109	2015/9/23	METHOD AND APPARATUS FOR ADAPTIVELY ADJUSTING USER INTERFACE
A3166US	US	14885584	2015/10/16	SYSTEMS AND METHODS FOR INTERACTION AMONG TERMINAL DEVICES AND SERVERS

PCT3198US	US	15594489	2015/11/3	Two-Dimensional Code Scanning Interaction Methods and Apparatuses
PCT3255US	US	15582322	2017/4/28	METHODS AND APPARATUS FOR REMOVING A DUPLICATED WEB PAGE
PCT3268US	US	15495894	2017/4/24	METHOD AND DEVICE FOR VERIFYING A TRUSTED TERMINAL
A3270US	US	14920716	2015/10/22	METHOD AND APPARATUS FOR FACILITATING THE LOGIN OF AN ACCOUNT
PCT3337US	US	15581752	2017/4/28	METHOD AND APPARATUS FOR IDENTITY AUTHENTICATION
A3406US	US	15051478	2016/2/23	METHODS, APPARATUS, AND SYSTEMS FOR IDENTITY AUTHENTICATION
PCT3414US	US	15625996	2017/6/16	Device Verification Method and Apparatus
PCT3433US	US	15632014	2017/6/23	Method and Apparatuses for Form Operation on a Mobile Terminal
A3468US	US	14993862	2016/1/12	METHODS, SYSTEMS, AND APPARATUS FOR IDENTIFYING RISKS IN ONLINE TRANSACTIONS
PCT3582US	US	15662154	2017/7/27	GROUP CHAT METHOD AND DEVICE
A3594US	US	14939796	2015/11/12	METHOD AND APPARATUS FOR DISPLAYING INFORMATION
A3595US	US	14969244	2015/12/15	METHOD AND APPARATUS FOR DISPLAYING INFORMATION
PCT3794US	US	15675138	2017/8/11	DATA SYNCHRONIZATION METHOD, APPARATUS, AND SYSTEM
A3838US	US	15073229	2016/3/17	Methods, apparatus, and systems for sending information based on user interactions
A3953US	US	14987206	2016/1/4	METHODS, APPARATUS, AND SYSTEMS FOR DISPLAYING NOTIFICATIONS
A3953USC1	US	15853652	2017/12/22	METHODS, APPARATUS, AND SYSTEMS FOR DISPLAYING NOTIFICATIONS
A4031US	US	15002120	2016/1/20	METHODS, APPARATUS, AND SYSTEMS FOR RESOURCE ACCESS PERMISSION MANAGEMENT
PCT4032US	US	15675177	2017/8/11	TEXT ADDRESS PROCESSING METHOD AND APPARATUS
A4091US	US	15000123	2016/1/19	METHOD AND APPARATUS FOR PROCESSING HANDWRITING DATA
A4120US	US	15005427	2016/1/25	METHOD AND DEVICE FOR FACE IN-VIVO DETECTION
PCT4170US	US	15675208	2017/8/11	METHODS AND APPARATUSES FOR PUSHING A MESSAGE
A4316US	US	15014266	2016/2/3	METHOD AND APPARATUS FOR ASSIGNING DEVICE FINGERPRINTS TO INTERNET DEVICES
A4355US	US	15057584	2016/3/1	METHOD AND APPARATUS FOR USER IDENTITY AUTHENTICATION
A6293US	US	15270990	2016/9/20	METHOD AND APPARATUS FOR DISPLAYING DIGITAL OBJECT IDENTIFIER
A2930USC2	US	16/243,030	2019/1/8	METHOD AND DEVICE FOR OBTAINING CONTENT OF SERVICE INFORMATION
A3406USC1	US	16/273,952	2019/2/12	METHODS, APPARATUS, AND SYSTEMS FOR IDENTITY AUTHENTICATION
A3270USC1	US	16/289,477	2019/2/28	METHOD AND APPARATUS FOR FACILITATING THE LOGIN OF AN ACCOUNT
A14544US	US	16/509,594	2019/7/12	"THREE-DIMENSIONAL LIVING-BODY FACE DETECTION METHOD, FACE AUTHENTICATION RECOGNITION METHOD, AND APPARATUSES"
A14545US	US	16/508,639	2019/7/11	IMAGE ACQUISITION METHOD, APPARATUS, SYSTEM, AND ELECTRONIC DEVICE
A14548US	US	16/512,434	2019/7/16	PAYMENT METHOD, APPARATUS, AND SYSTEM
A16450US	US	16/547,735	2019/8/22	IMAGE PROCESSING METHOD AND APPARATUS
A15982US	US	16/537,026	2019/8/9	IDENTIFICATION METHOD AND APPARATUS AND COMPUTER-READABLE STORAGE MEDIUM

A15990US	US	16/559,060	2019/9/3	INFORMATION DETECTION METHOD, APPARATUS, AND DEVICE
A16001US	US	16/558,932	2019/9/3	USER IDENTITY DETERMINING METHOD, APPARATUS, AND DEVICE
A16010US	US	16/561,793	2019/9/5	AUTHENTICATION AND AUTHENTICATION MODE DETERMINATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
A16011US	US	16/561,919	2019/9/5	LIVENESS DETECTION METHOD, APPARATUS AND COMPUTER-READABLE STORAGE MEDIUM
A16016US	US	16/552,683	2019/8/27	METHOD, APPARATUS, AND SYSTEM FOR RESOURCE TRANSFER
A17315US	US	16/572,928	2019/9/17	METHOD AND APPARATUS FOR VEHICLE DAMAGE IDENTIFICATION
A17365US	US	16/698,118	2019/11/27	EFFICIENT DATA UNIT REUSE METHOD AND SYSTEM
A17882US	US	16/723,541	2019/12/20	COMPUTER-EXECUTED METHOD AND APPARATUS FOR ASSESSING VEHICLE DAMAGE
PCT11892US	US	16/686,797	2019/11/18	OFFLINE SHOPPING GUIDE METHOD AND APPARATUS
PCT12081US	US	16/577,100	2019/9/20	Model Training Method, Apparatus, And Device, And Data Similarity Determining Method, Apparatus, And Device
PCT12106US	US	16/661,457	2019/10/23	MERCHANT EVALUATION METHOD AND SYSTEM
PCT12191US	US	16/577,191	2019/9/20	IMAGE PROCESSING METHODS AND DEVICES
PCT12198US	US	16/592,895	2019/10/4	RISK ADDRESS IDENTIFICATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT12211US	US	16/716,992	2019/12/17	DATA PROCESSING METHOD, APPARATUS AND DEVICE
PCT12212US	US	16 / 599,599	2019/10/11	METHOD AND APPARATUS FOR USER AUTHENTICATION BASED ON FEATURE INFORMATION
PCT12220US	US	16/557,360	2019/8/30	DYNAMIC GRAPHIC CODE IMPLEMENTATION METHOD AND APPARATUS
PCT12245US	US	16/749,772	2020/1/22	INDEX ANOMALY DETECTION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT12466US	US	16/719,329	2019/12/18	VEHICLE INSURANCE IMAGE PROCESSING METHOD, APPARATUS, SERVER, AND SYSTEM
A6293USCI	US	16/434,996	2019/6/7	METHOD AND APPARATUS FOR DISPLAYING DIGITAL OBJECT IDENTIFIER
PCT11781US	US	16/435,874	2019/6/10	BUSINESS PROCESS STARTING METHOD AND APPARATUS
PCT11796US	US	16/713,405	2019/12/13	METHODS, DEVICES, SYSTEMS, AND COMPUTER-READABLE STORAGE MEDIUMS FOR LOCATION POSITIONING
PCT11837US	US	16/571,468	2019/9/16	SPEECH WAKEUP METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT11839US	US	16/438,917	2019/6/12	DATA STORAGE AND CALLING METHODS AND DEVICES
PCT11844US	US	16/444,156	2019/6/18	DATA TYPE RECOGNITION, MODEL TRAINING AND RISK RECOGNITION METHODS, APPARATUSES AND DEVICES
PCT11845US	US	16/592,853	2019/10/4	METHOD AND APPARATUS FOR DETERMINING INDEX GRIDS OF GEO-FENCE
PCT11851US	US	16/440,164	2019/6/13	METHOD, APPARATUS AND ELECTRONIC DEVICE FOR IDENTIFYING RISKS PERTAINING TO TRANSACTIONS TO BE PROCESSED
PCT11889US	US	16/552,256	2019/8/27	AUTHENTICATION METHOD AND DEVICE, AND BLOCKCHAIN-BASED AUTHENTICATION DATA PROCESSING METHOD AND DEVICE
PCT11891US	US	16/727,002	2019/12/26	service processing method, device, and system
PCT12037US	US	16/704,358	2019/12/5	DIALOG GENERATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT12182US	US	16/724,457	2019/12/23	Settlement method and apparatus

PCT12296US	US	16/723,362	2019/12/20	OFFLINE TRANSACTION IMPLEMENTATION METHOD AND APPARATUS
PCT19180US	US	16/474,933	2019/2/1	METHODS AND DEVICES FOR ESTABLISHING COMMUNICATION BETWEEN NODES IN BLOCKCHAIN SYSTEM
PCT19181US	US	16/721,265	2019/12/19	METHODS AND DEVICES FOR PERFORMING OFF-CHAIN TESTING ON SMART CONTRACT
PCT19312US	US	16/721,346	2019/12/19	METHODS AND DEVICES FOR TESTING SIGNATURE VERIFICATION FOR BLOCKCHAIN SYSTEM
PCT19954US	US	16/737,071	2020/1/8	METHODS AND DEVICES FOR ACQUIRING AND RECORDING TRACKING INFORMATION ON BLOCKCHAIN
PCT19975US	US	16/717,501	2019/12/17	METHODS AND DEVICES FOR PROVIDING TRANSACTION DATA TO BLOCKCHAIN SYSTEM FOR PROCESSING
PCT19976US	US	16/719,548	2019/12/18	METHODS AND DEVICES FOR PROCESSING CERTIFICATES IN BLOCKCHAIN SYSTEM
PCT19977US	US	16/737,190	2020/1/8	METHODS AND DEVICES FOR PROTECTING SENSITIVE DATA OF TRANSACTION ACTIVITY BASED ON SMART CONTRACT IN BLOCKCHAIN
PCT19310US	US	16/752,356	2020/1/24	METHODS AND DEVICES FOR ESTABLISHING COMMUNICATION BETWEEN BLOCKCHAIN NETWORKS
PCT21717US	US	16/773,187	2020/1/27	METHODS AND DEVICES FOR EXECUTING TRUSTED APPLICATIONS ON PROCESSOR WITH SUPPORT FOR PROTECTED EXECUTION ENVIRONMENTS
PCT19311US	US	16/752,439	2020/1/24	METHODS AND DEVICES FOR VALIDATING TRANSACTION IN BLOCKCHAIN SYSTEM
PCT21718US	US	16/773,235	2020/1/27	METHODS AND DEVICES FOR MANAGING ACCESS TO ACCOUNT IN BLOCKCHAIN SYSTEM
A3838USC1	US	16/599,080	2019/10/10	METHODS, APPARATUS, AND SYSTEMS FOR SENDING INFORMATION
PCT3433US C1	US	16/595,396	2019/10/7	METHODS AND APPARATUSES FOR FORM OPERATION ON A MOBILE TERMINAL
PCT22012US	US	16/775,828	2020/1/29	METHODS AND SYSTEMS FOR AUTOMATIC BLOCKCHAIN DEPLOYMENT BASED ON CLOUD PLATFORM
PCT22014US	US	16/775,869	2020/1/29	METHODS AND DEVICES FOR STORING AND PROCESSING ELECTRONIC MEDICAL RECORD ON BLOCKCHAIN
PCT21998US	US	16/775,791	2020/1/29	METHODS AND DEVICES FOR DATA TRAVERSAL
PCT21119US	US	16/773,405	2020/1/27	METHODS AND DEVICES FOR PROVIDING TRAVERSABLE KEY-VALUE DATA STORAGE ON BLOCKCHAIN
A3166USC1	US	16/711,379	2019/12/11	SYSTEMS AND METHODS FOR INTERACTION AMONG TERMINAL DEVICES AND SERVERS
PCT3337US C1	US	16/740,313	2020/1/10	METHOD AND APPARATUS FOR IDENTITY AUTHENTICATION
A3595USC1	US	16/784,148	2020/2/6	METHOD AND APPARATUS FOR DISPLAYING INFORMATION
A3838USC2	US	16/752,466	2020/1/24	METHODS, APPARATUS, AND SYSTEMS FOR SENDING INFORMATION
PCT3433US C2	US	16/752,563	2020/1/24	METHODS AND APPARATUSES FOR FORM OPERATION ON A MOBILE TERMINAL
A3166USC2	US	16/777,219	2020/1/30	SYSTEMS AND METHODS FOR INTERACTION AMONG TERMINAL DEVICES AND SERVERS
A14544USC1	US	16/774,037	2020/1/28	THREE-DIMENSIONAL LIVING-BODY FACE DETECTION METHOD, FACE AUTHENTICATION RECOGNITION METHOD, AND APPARATUSES
PCT12296US C1	US	16/779,108	2020/1/31	OFFLINE TRANSACTION IMPLEMENTATION METHOD AND APPARATUS
A14545USC1	US	16/774,045	2020/1/28	IMAGE ACQUISITION METHOD, APPARATUS AND SYSTEM AND ELECTRONIC DEVICE

AI4548USC1	US	16/774,063	2020/1/28	PAYMENT METHOD, APPARATUS, AND SYSTEM
AI5982USC1	US	16/774,076	2020/1/28	IDENTIFICATION METHOD AND APPARATUS AND COMPUTER-READABLE STORAGE MEDIUM
AI5990USC1	US	16/775,294	2020/1/29	INFORMATION DETECTION METHOD, APPARATUS, AND DEVICE
AI6001USC1	US	16/775,296	2020/1/29	USER IDENTITY DETERMINING METHOD, APPARATUS, AND DEVICE
PCT12191US CI	US	16/777,696	2020/1/30	IMAGE PROCESSING METHODS AND DEVICES
PCT12198US CI	US	16/775,913	2020/1/29	RISK ADDRESS IDENTIFICATION METHOD AND APPARATUS, AND ELECTRONIC DEVICE
PCT19180US CI	US	16/773,441	2020/1/27	METHODS AND DEVICES FOR ESTABLISHING COMMUNICATION BETWEEN NODES IN BLOCKCHAIN SYSTEM
PCT11889US CI	US	16/777,506	2020/1/30	AUTHENTICATION METHOD AND DEVICE, AND BLOCKCHAIN-BASED AUTHENTICATION DATA PROCESSING METHOD AND DEVICE
PCT12037US CI	US	16/778,995	2020/1/31	DIALOG GENERATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT12081US CI	US	16/777,659	2020/1/30	Model Training Method, Apparatus, And Device, And Data Similarity Determining Method, Apparatus, And Device
PCT12182US CI	US	16/779,064	2020/1/31	SETTLEMENT METHOD AND APPARATUS
PCT12212US CI	US	16/776,047	2020/1/29	METHOD AND APPARATUS FOR USER AUTHENTICATION BASED ON FEATURE INFORMATION
PCT11892US CI	US	16/777,527	2020/1/30	OFFLINE SHOPPING GUIDE METHOD AND APPARATUS
PCT12106US CI	US	16/777,675	2020/1/30	MERCHANT EVALUATION METHOD AND SYSTEM
PCT11844US CI	US	16/774,663	2020/1/28	DATA TYPE RECOGNITION, MODEL TRAINING AND RISK RECOGNITION METHODS, APPARATUSES AND DEVICES
PCT11851US CI	US	16/774,845	2020/1/28	METHOD, APPARATUS AND ELECTRONIC DEVICE FOR IDENTIFYING RISKS PERTAINING TO TRANSACTIONS TO BE PROCESSED
PCT11845US CI	US	16/774,795	2020/1/28	METHOD AND APPARATUS FOR DETERMINING INDEX GRIDS OF GEO-FENCE
PCT11781US CI	US	16/773,582	2020/1/27	BUSINESS PROCESS STARTING METHOD AND APPARATUS
PCT11837US CI	US	16/774,422	2020/1/28	SPEECH WAKEUP METHOD, APPARATUS, AND ELECTRONIC DEVICE
PCT11839US CI	US	16/774,629	2020/1/28	DATA STORAGE AND CALLING METHODS AND DEVICES
AI7315USC1	US	16/776,549	2020/1/30	METHOD AND APPARATUS FOR VEHICLE DAMAGE IDENTIFICATION
AI6010USC1	US	16/775,298	2020/1/29	AUTHENTICATION AND AUTHENTICATION MODE DETERMINATION METHOD, APPARATUS, AND ELECTRONIC DEVICE
AI6011USC1	US	16/775,300	2020/1/29	LIVENESS DETECTION METHOD, APPARATUS AND COMPUTER-READABLE STORAGE MEDIUM
AI6016USC1	US	16/776,541	2020/1/30	METHOD, APPARATUS, AND SYSTEM FOR RESOURCE TRANSFER
AI6450USC1	US	16/776,545	2020/1/30	IMAGE PROCESSING METHOD AND APPARATUS
AI7365USC1	US	16/776,553	2020/1/30	EFFICIENT DATA UNIT REUSE METHOD AND SYSTEM
AI7882USC1	US	16/871,446	2020/5/11	COMPUTER-EXECUTED METHOD AND APPARATUS FOR ASSESSING VEHICLE DAMAGE
PCT19976US CI	US	16/877,205	2020/5/18	METHODS AND DEVICES FOR PROCESSING CERTIFICATES IN BLOCKCHAIN SYSTEM
PCT22012US CI	US	16/887,838	2020/5/29	METHODS AND SYSTEMS FOR AUTOMATIC BLOCKCHAIN DEPLOYMENT BASED ON CLOUD PLATFORM

PCT21717US CI	US	16/887,654	2020/5/29	METHODS AND DEVICES FOR EXECUTING TRUSTED APPLICATIONS ON PROCESSOR WITH SUPPORT FOR PROTECTED EXECUTION ENVIRONMENTS
A6293USC2	US	16/890,322	2020/6/2	METHOD AND APPARATUS FOR DISPLAYING DIGITAL OBJECT IDENTIFIER
A16010USC2	US	16/943,648	2020/7/30	AUTHENTICATION AND AUTHENTICATION MODE DETERMINATION METHOD, APPARATUS, AND ELECTRONIC DEVICE